Basic Filtration

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Filters are indispensable for your routine work in laboratory and industrial applications. Sartorius supplies you with a broad range of filters for a myriad of filtration tasks and supports you with all your filtration challenges.

Our Product Range Covers:
– Filter papers
– Glass and quartz microfiber filters
– Membrane filters
– Blotting & chromatography papers & membranes
– Filtration equipment

Quality Assurance and Quality Control
Sartorius pays particular attention to continuous in-process quality control. Regular checks and exact analyses of the raw materials and each finished product assure constant high quality and product uniformity. We meet the requirements set forth by the ISO 9001 quality management system and the ISO 14001 environmental management system.

How Do Filter Papers Work?

Filter papers are depth filters. Their efficiency is influenced by various parameters: the mechanical particulate retention, adsorption, pH, surface properties, thickness and strength of the filter paper as well as the shape, density and quantity of particles to be retained. The precipitates deposited on the filter form a "cake layer" which – depending on its density – increasingly affects the progress of an ongoing filtration and decisively affects the retention capability. Therefore, it is essential to select the perfect filter paper to ensure the best filtration results. This choice depends on the filtration method as well as on the amount and properties of the medium to be filtered, the size of the particulate solids to be removed and the required degree of clarification.

How Do Membrane Filters Work?

Membrane filters retain particles larger than their pore sizes. Smaller particles pass through the membrane or are captured in the membrane. Such filters are used for the filtration of smaller particles and for critical applications such as sterility testing. The choice of the right membrane type depends on the specifications of the solution to be filtered. The most important parameters for this are adsorption, chemical compatibility and the particle size to be retained.

Ash-free Filter Papers

For Quantitative and Gravimetric Analyses

These filter papers are used for quantitative and gravimetric analyses as well as for pressure or vacuum filtration. They are made out of 100% cotton linters with an α-cellulose content of > 98% and are acid-washed to make the papers ashless and achieve high purity.

Specifications

Grade	Weight (g/m^2)	Thickness (mm)	Particle Retention (µm)	Filtration (s)	Precipitates	Properties
388	84	0.21	12 to 15	10	Coarse crystalline	Wide-pore, loose structure, fast filtering
389	84	0.19	8 to 12	20	Medium-fine crystalline	Medium- to wide-pore, medium fast filtering
389 F	84	0.19	8 to 12	20	Medium-fine crystalline	Medium- to wide-pore, medium fast filtering
392	84	0.17	5 to 8	50	Fine crystalline	Medium dense, medium fast filtering
390	84	0.16	3 to 5	100	Fine crystalline	Narrow-pore, dense, slow filtering
391	84	0.15	2 to 3	180	Very fine crystalline	Fine-pore, dense, very slow filtering
393	100	0.17	1 to 2	300	Very fine crystalline	Very fine-pore, very dense, very slow filtering

Ordering Information

Filter Discs, 100 Pieces

Dia. in mm	Grade 388	Grade 389	Grade 389 F	Grade 390	Grade 391	Grade 392	Grade 393
55	FT-3-101-055	FT-3-102-055	FT-3-112-055	FT-3-103-055	FT-3-104-055	FT-3-105-055	FT-3-127-055
70	FT-3-101-070	FT-3-102-070		FT-3-103-070	FT-3-104-070	FT-3-105-070	FT-3-127-070
90	FT-3-101-090	FT-3-102-090	FT-3-112-090	FT-3-103-090	FT-3-104-090	FT-3-105-090	FT-3-127-090
110	FT-3-101-110	FT-3-102-110	FT-3-112-110	FT-3-103-110	FT-3-104-110	FT-3-105-110	FT-3-127-110
125	FT-3-101-125	FT-3-102-125	FT-3-112-125	FT-3-103-125	FT-3-104-125	FT-3-105-125	FT-3-127-125
150	FT-3-101-150	FT-3-102-150	FT-3-112-150	FT-3-103-150	FT-3-104-150	FT-3-105-150	FT-3-127-150
185	FT-3-101-185	FT-3-102-185	FT-3-112-185	FT-3-103-185	FT-3-104-185	FT-3-105-185	FT-3-127-185
240	FT-3-101-240	FT-3-102-240		FT-3-103-240	FT-3-104-240	FT-3-105-240	FT-3-127-240

Folded Filters, 100 Pieces

Dia. in mm	Grade 388	Grade 389	Grade 389 F	Grade 390	Grade 391	Grade 392
110	FT-4-101-110	FT-4-102-110		FT-4-103-110	FT-4-104-110	FT-4-105-110
125	FT-4-101-125	FT-4-102-125		FT-4-103-125	FT-4-104-125	FT-4-105-125
150	FT-4-101-150	FT-4-102-150		FT-4-103-150	FT-4-104-150	FT-4-105-150
185	FT-4-101-185	FT-4-102-185	FT-4-112-185	FT-4-103-185	FT-4-104-185	FT-4-105-185
240	FT-4-101-240	FT-4-102-240			FT-4-104-240	

Sheets in 580 × 580 mm, 100 Pieces

Grade 388	Grade 389	Grade 390	Grade 391	Grade 392	Grade 393
FT-2-101-580580	FT-2-102-580580	FT-2-103-580580	FT-2-104-580580	FT-2-105-580580	FT-2-127-580580

Other dimensions are available on request

Wet-strengthened Filter Papers

For Qualitative Analyses

These qualitative filter papers are essentially used for analytical purposes and routine analyses, whenever no gravimetric analyses are required. They are wet-strengthened and can be used for pressure and vacuum filtration. They are made of refined pulp and linters with an > 95% α-cellulose content and are very pure with an ash content ≤ 0.1%.

Specifications

Grade	Weight (g/m^2)	Thickness (mm)	Particle Retention (µm)	Filtration (s)	Precipitates	Properties
1288	84	0.21	12 to 15	10	Coarse crystalline	Wide-pore, loose structure, fast filtering
1289	84	0.21	8 to 12	20	Medium-fine crystalline	Medium- to wide-pore, medium fast filtering
1292	84	0.17	5 to 8	50	Fine crystalline	Medium dense, medium fast filtering
1290	84	0.15	3 to 5	100	Fine crystalline	Narrow-pore, dense, slow filtering
1291	84	0.15	2 to 3	180	Very fine crystalline	Fine-pore, dense, very slow filtering
293	80	0.15	1 to 2	300	Very fine crystalline	Very fine-pore, very dense, very slow filtering

Ordering Information

Filter Discs, 100 Pieces

Dia. in mm	Grade 1288	Grade 1289	Grade 1290	Grade 1291	Grade 1292	Grade 293
55	FT-3-206-055	FT-3-207-055	FT-3-208-055	FT-3-209-055	FT-3-210-055	FT-3-211-055
70	FT-3-206-070	FT-3-207-070	FT-3-208-070	FT-3-209-070	FT-3-210-070	FT-3-211-070
90	FT-3-206-090	FT-3-207-090	FT-3-208-090	FT-3-209-090	FT-3-210-090	FT-3-211-090
110	FT-3-206-110	FT-3-207-110	FT-3-208-110	FT-3-209-110	FT-3-210-110	FT-3-211-110
125	FT-3-206-125	FT-3-207-125	FT-3-208-125	FT-3-209-125	FT-3-210-125	FT-3-211-125
150	FT-3-206-150	FT-3-207-150	FT-3-208-150	FT-3-209-150	FT-3-210-150	FT-3-211-150
185	FT-3-206-185	FT-3-207-185	FT-3-208-185	FT-3-209-185	FT-3-210-185	FT-3-211-185
240	FT-3-206-240	FT-3-207-240	FT-3-208-240	FT-3-209-240	FT-3-210-240	

Folded Filters, 100 Pieces

Dia. in mm	Grade 1288	Grade 1289	Grade 1290	Grade 1291	Grade 1292	Grade 293
110	FT-4-206-110	FT-4-207-110	FT-4-208-110	FT-4-209-110	FT-4-210-110	
125	FT-4-206-125	FT-4-207-125	FT-4-208-125	FT-4-209-125	FT-4-210-125	FT-4-211-125
150	FT-4-206-150	FT-4-207-150	FT-4-208-150	FT-4-209-150	FT-4-210-150	FT-4-211-150
185	FT-4-206-185	FT-4-207-185	FT-4-208-185	FT-4-209-185	FT-4-210-185	FT-4-210-185
240	FT-4-206-240	FT-4-207-240	FT-4-208-240	FT-4-209-240	FT-4-210-240	FT-4-211-240

Sheets in 580 × 580 mm, 100 Pieces

Grade 1288	Grade 1289	Grade 1290	Grade 1291	Grade 1292	Grade 293
FT-2-206-580580	FT-2-207-580580	FT-2-208-580580	FT-2-209-580580	FT-2-210-580580	FT-2-211-580580

Other dimensions are available on request

High-Purity Filter Papers

For Qualitative Analyses

These paper grades are used for analytical purposes that require a low ash content. Grades 292 and 292a are especially suitable for soil analyses because they are low in nitrogen. For phosphate or sodium determination, we recommend grades 131 and 132.

Specifications

Grade	Weight (g/m^2)	Thickness (mm)	Particle Retention (µm)	Filtration (s)	Material
292	87	0.18	5 to 8	45	Cotton linters, low-nitrogen and nitrates, ash content ≤ 0.06% according to DIN 54370
292a	97	0.19	4 to 7	60	Cotton linters, low-nitrogen and nitrates, ash content ≤ 0.06% according to DIN 54370
132	80	0.17	5 to 7	55	Cotton linters and refined pulp, low-phosphate and low-potassium, ash content < 0.02% according to DIN 54370
131	80	0.16	3 to 5	100	Cotton linters and refined pulp, low-phosphate and low-potassium, ash content < 0.02% according to DIN 54370

Ordering Information

Filter Discs, 100 Pieces

Dia. in mm	Grade 131	Grade 132	Grade 292	Grade 292a
55		FT-3-329-055	FT-3-205-055	FT-3-215-055
70		FT-3-329-070	FT-3-205-070	FT-3-215-070
90		FT-3-329-090	FT-3-205-090	FT-3-215-090
110		FT-3-329-110	FT-3-205-110	FT-3-215-110
125	FT-3-351-125	FT-3-329-125	FT-3-205-125	FT-3-215-125
150		FT-3-329-150	FT-3-205-150	FT-3-215-150
185		FT-3-329-185	FT-3-205-185	FT-3-215-185
240		FT-3-329-240	FT-3-205-240	FT-3-215-240

Folded Filters, 100 Pieces

Dia. in mm	Grade 131	Grade 132	Grade 292	Grade 292a
110	FT-4-351-110	FT-4-329-110	FT-4-205-110	FT-4-215-110
125	FT-4-351-125	FT-4-329-125	FT-4-205-125	FT-4-215-125
150	FT-4-351-150	FT-4-329-150	FT-4-205-150	FT-4-215-150
185	FT-4-351-185	FT-4-329-185	FT-4-205-185	FT-4-215-185
240		FT-4-329-240	FT-4-205-240	FT-4-215-240

Sheets in 580 × 580 mm, 100 Pieces

Grade 292	Grade 292a
FT-2-205-580580	FT-2-215-580580

Other dimensions are available on request

Filter Papers

For Qualitative-Technical Analyses

These filter papers are used for routine analyses like clarification, determination of substances, but also as discs with a center hole for technical applications. Grades with a wet burst resistance > 30 kPa are referred to as wet-strengthened and are therefore suitable for pressure or vacuum filtration. They are made of refined pulp and linters with an > 95% α-cellulose content, are very pure with an ash content between <0.1 to 0.15%. Below you will find an overview of the most commonly used grades.

Specifications

Grade	Surface	Weight (g/m²)	Thickness (mm)	Particle Retention (µm)	Filtration (s)	Wet Burst Resistance (kPa)	Properties
3 hw	Smooth	65	0.14	8 to 12	20	40	Medium fast filtering, filter paper for routine work in the lab
4 b	Smooth	75	0.15	8 to 12	22	> 15	Medium fast filtering, filtration of coarse precipitates, wick paper for seed testing
603/N	Crêped	75	0.25	> 15	8	≥ 50	Fast filtering, filtration of sugar solutions
6	Smooth	80	0.17	10 to 13	15	30	Fast filtering, degassing beer before analysis, clarification of spirits
100/N	Smooth	85	0.18	6 to 8	30	80	Medium fast filtering, ash content < 0.1%, low potassium and sodium content, determination of the sugar content
5 H/N	Crêped	85	0.28	> 40	3	≥ 40	Very fast filtering, wide-pore, filtration of essential oils
3 S/h	Smooth	200	0.36	5 to 7	55	15	Medium fast to slow filtering, narrow-pore, re-wet test for diapers

Ordering Information

Filter Discs

Dia. in mm	Grade 3 hw (100 Pieces)	Grade 4 b (100 Pieces)	Grade 603/N (100 Pieces)	Grade 6 (100 Pieces)	Grade 100/N (100 Pieces)	Grade 5 H/N (100 Pieces)	Grade 3 S/h (50 Pieces)
55	FT-3-303-055	FT-3-309-055		FT-3-312-055	FT-3-328-055		FT-3-307-055
70	FT-3-303-070	FT-3-309-070		FT-3-312-070	FT-3-328-070		
90	FT-3-303-090	FT-3-309-090	FT-3-335-090	FT-3-312-090	FT-3-328-090	FT-3-423-090	FT-3-307-090
110	FT-3-303-110	FT-3-309-110	FT-3-335-110	FT-3-312-110	FT-3-328-110		FT-3-307-110
125	FT-3-303-125	FT-3-309-125	FT-3-335-125	FT-3-312-125	FT-3-328-125	FT-3-423-125	FT-3-307-125
150	FT-3-303-150	FT-3-309-150	FT-3-335-150	FT-3-312-150	FT-3-328-150	FT-3-423-150	FT-3-307-150
185	FT-3-303-185	FT-3-309-185	FT-3-335-185	FT-3-312-185	FT-3-328-185	FT-3-423-185	FT-3-307-185
240	FT-3-303-240	FT-3-309-240	FT-3-335-240	FT-3-312-240	FT-3-328-240	FT-3-423-240	FT-3-307-240

Folded Filters, 100 Pieces

Dia. in mm	Grade 3 hw	Grade 4 b	Grade 603/N	Grade 6	Grade 100/N	Grade 5 H/N
125	FT-4-303-125	FT-4-309-125	FT-4-335-125	FT-4-312-125		FT-4-423-125
150	FT-4-303-150	FT-4-309-150	FT-4-335-150	FT-4-312-150	FT-4-328-150	FT-4-423-150
185	FT-4-303-185	FT-4-309-185	FT-4-335-185	FT-4-312-185		FT-4-423-185
240	FT-4-303-240	FT-4-309-240	FT-4-335-240	FT-4-312-240	FT-4-328-240	FT-4-423-240
270	FT-4-303-270	FT-4-309-270	FT-4-335-270	FT-4-312-270	FT-4-328-270	FT-4-423-270
320	FT-4-303-320	FT-4-309-320	FT-4-335-320	FT-4-312-320	FT-4-328-320	FT-4-423-320

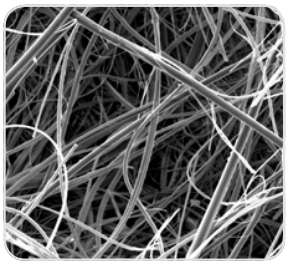
Sheets in 580 × 580 mm, 100 Pieces

Grade 3 hw	Grade 4 b	Grade 603/N	Grade 6	Grade 100/N	Grade 5 H/N
FT-2-303-580580	FT-2-309-580580	FT-2-335-580580	FT-2-312-580580	FT-2-328-580580	FT-2-423-580580

Other dimensions are available on request

Glass Microfiber Filters

Without Binder



Binder-free glass microfiber filters are recommended for analytical and gravimetric analyses and also as prefilters. These filters combine fast flow rates with high load capacity and the retention of very fine particles; they are biologically inert, are resistant to most chemicals and withstand temperatures up to 500°C (grade 550-HA up to 550°C).

Specifications

Grade	Weight (g/m^2)	Thickness (mm)	Penetration 0.3 µm (%)*	Particle retention in liquids (µm)	Filtration speed (mL/min)	Fulfills the requirements in EN 872:2005 (weigh loss)
MGA	54	0.23	< 0.001	1.6	510	Yes
MGB	143	0.70	< 0.001	1.0	210	
MGC	54	0.24	< 0.001	1.2	335	Yes
MGD	120	0.47	< 0.1	2.7	920	
MGF	75	0.38	< 0.001	0.7	110	
MGG	64	0.28	≤ 0.001	1.5	600	
13440	88	0.44		0.7	120	Yes
MG 160	75	0.35	< 0.002	1.2	400	
MG 550-HA	65	0.27		1.5	400	

* Measurement according to EN 143 (0.3 µm, 5.3 cm/s, paraffin oil)

Ordering Information

Filter Discs

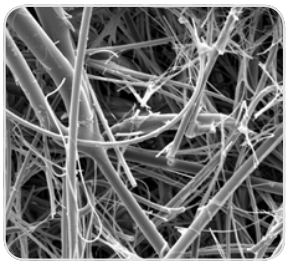
Dia. in mm	MGA (100 Pieces)	MG 160 (50 Pieces)	MGB (50 Pieces)	MGC (100 Pieces)	MGD (50 Pieces)
21			FT-3-1102-021		
25	FT-3-1101-025		FT-3-1102-025	FT-3-1103-025	FT-3-1104-025
37	FT-3-1101-037	FT-3-01110-037			
47	FT-3-1101-047	FT-3-01110-047	FT-3-1102-047	FT-3-1103-047	FT-3-1104-047
50	FT-3-1101-050	FT-3-01110-050	FT-3-1102-050	FT-3-1103-050	FT-3-1104-050
55	FT-3-1101-055		FT-3-1102-055	FT-3-1103-055	
70	FT-3-1101-070	FT-3-01110-070	FT-3-1102-070	FT-3-1103-070	FT-3-1104-070
80	FT-3-1101-080				
90	FT-3-1101-090	FT-3-01110-090	FT-3-1102-090	FT-3-1103-090	FT-3-1104-090
100	FT-3-1101-100	FT-3-01110-100	FT-3-1102-100	FT-3-1103-100	FT-3-1104-100
110	FT-3-1101-110	FT-3-01110-110	FT-3-1102-110	FT-3-1103-110	FT-3-1104-110
125	FT-3-1101-125		FT-3-1102-125	FT-3-1103-125	FT-3-1104-125
150	FT-3-1101-150		FT-3-1102-150	FT-3-1103-150	FT-3-1104-150
293					FT-3-1104-293

Dia. in mm	MGF (100 Pieces)	MGG (100 Pieces)	MG 550-HA (100 Pieces)	13440*
24			FT-3-01147-024	
25	FT-3-1105-025	FT-3-1106-025		
42				13440--42------Q
44				13440--44------Q
47	FT-3-1105-047	FT-3-1106-047	FT-3-01147-047	13440--47------Q
50	FT-3-1105-050	FT-3-1106-050	FT-3-01147-050	13440--50------Q
55	FT-3-1105-055	FT-3-1106-055	FT-3-01147-055	
70	FT-3-1105-070	FT-3-1106-070	FT-3-01147-070	
90	FT-3-1105-090	FT-3-1106-090	FT-3-01147-090	
100				13440-100------K
110	FT-3-1105-110	FT-3-1106-110	FT-3-01147-110	
125	FT-3-1105-125	FT-3-1106-125	FT-3-01147-125	
130				13440-130------K
150	FT-3-1105-150	FT-3-1106-150		13440-150------K
293	FT-3-1105-293			13440-293------K

* Q = 500 pieces | K = 50 pieces
Other dimensions as well as sheets are available on request

Glass Microfiber Filters

With Binder



These filters are mostly used either for monitoring air and gas or as a prefilter. They are manufactured with synthetic binding agents to ensure that the filter has a defined strength.

They are mechanically and chemically stable, have a temperature resistance up to 180°C and – depending on the binding agent used – are either hydrophobic or hydrophilic.

Specifications

Grade	Weight (g/m^2)	Thickness (mm)	Penetration 0.3 µm (%)*	Pressure drop 5.3 cm/s (Pa)	Binding agent
MG 227/1/60	60	0.32	< 0.5	260	Hydrophobic
13430	220	1.25	0.02	360	Hydrophilic
13400	73	0.39	0.015	363	Hydrophilic
MG 227	75	0.40	< 0.01	350	Hydrophobic
MG 161	75	0.40	≤ 0.002	≤ 580	Hydrophilic
MG 400	80	0.38	< 0.001	400	Hydrophilic
MG 1387/1	90	0.37	≤ 0.003	400	Hydrophilic

* Tested and classified according to the Standard EN 143

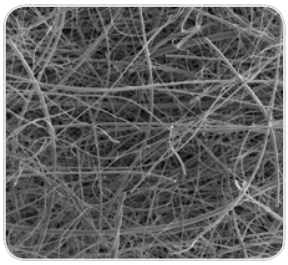
Ordering Information

Filter Discs

Dia. in mm	MG 221/1/60 (100 Pieces)	13430**	13400**	MG 227 (100 Pieces)	MG 1387/1 (50 Pieces)
13			13400--13------S		
20			13400--20------S		
25			13400--25------Q		
42			13400--42------Q		
44			13400--44------Q		
45			13400--45------Q		FT-3-01125-045
47		13430--47------S	13400--47------Q	FT-3-01120-047	FT-3-01125-047
50			13400--50------Q		FT-3-01125-050
55				FT-3-01120-055	FT-3-01125-055
80			13400--80------N		
100		13430-100------K	13400-100------K		
110				FT-3-01120-110	FT-3-01125-110
120			13400-120------K		
124		13430-124------K	13400-124------K		
125					FT-3-01125-125
127		13430-127------K	13400-127------K		
130		13430-130------K	13400-130------K		FT-3-01125-130
142		13430-142------K	13400-142------K		
150	FT-3-01124-150		13400-150------K		
293		13430-293------K	13400-293------K		

** K = 50 pieces, N = 100 pieces, Q = 500 pieces, S = 200 pieces
Other dimensions as well as sheets are available on request

Quartz Microfiber Filters



The quartz microfiber material of the Sartorius pre-heated filters, grade Q3400, is made of high-purity quartz microfibers without any addition of glass microfibers or binding agents. In addition, the Q3400 filter grade is tempered to remove all chemically combined water and to give the filters excellent weight and dimensional stability. Sartorius filters are especially suitable for emissions monitoring at temperatures of up to 900°C and wherever filters of the highest purity are needed.

Specifications

Grade	Material	Weight (g/m^2)	Thickness (mm)	Penetration, 0.3 µm 15 cm/s*	Temperature Resistance
Q3400	100% Quartz microfiber silicium dioxide (SiO_2)	85	0.43	< 0.002	up to 900°C

* Tested and classified according to the Standard EN 143

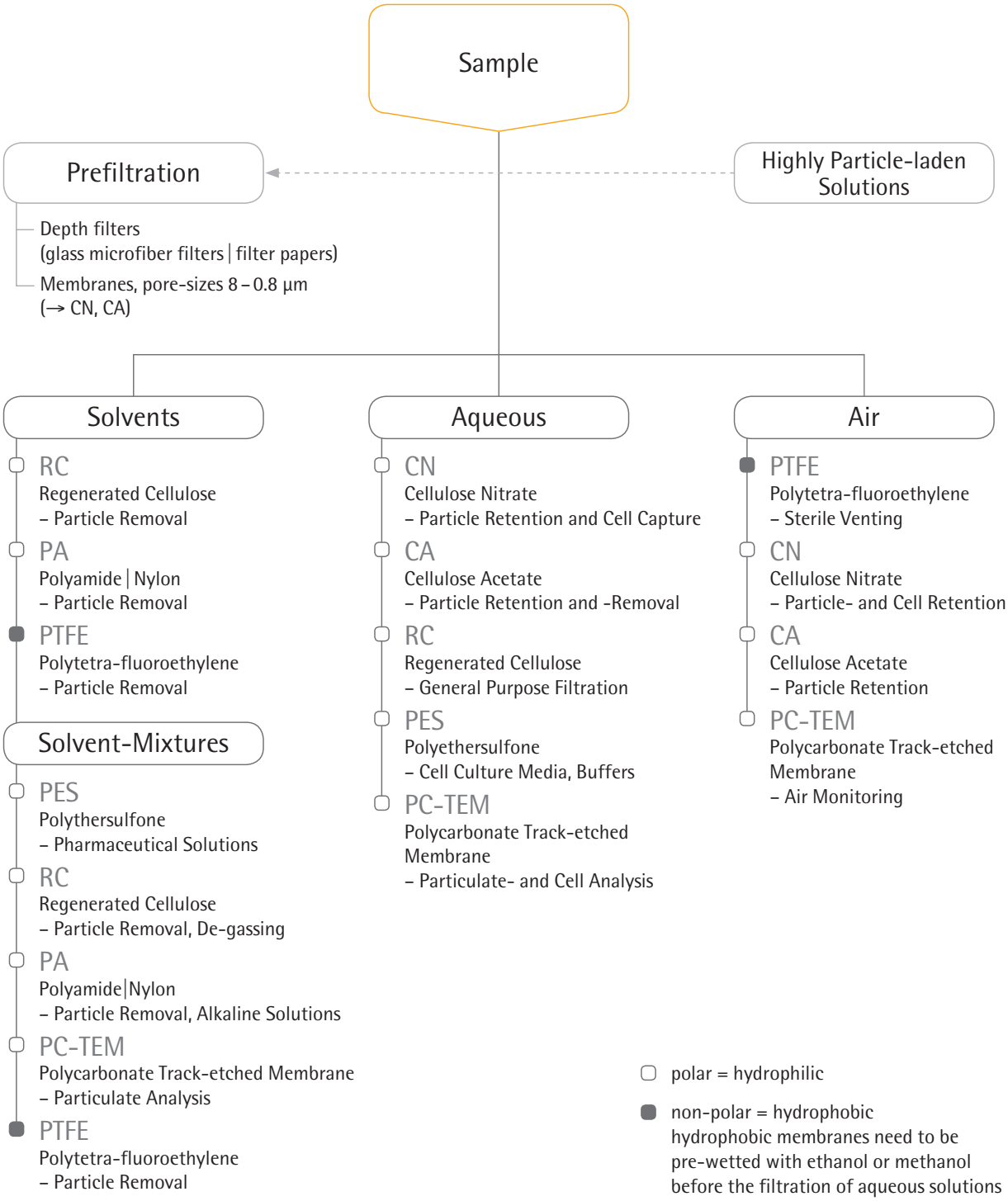
Ordering Information

Filter Discs

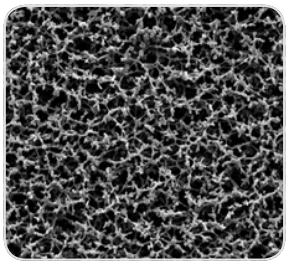
Dia. in mm	Q3400
20	Q3400--20------G
25	Q3400--25------G
30	Q3400--30------G
37	Q3400--37------G
45	Q3400--45------G
47	Q3400--47------G
50	Q3400--50------G
82	Q3400--82------N
90	Q3400--90------N
142	Q3400-142------K
150	Q3400-150------K

* G = 25 pieces, K = 50 pieces, N = 100 pieces
Other dimensions as well as sheets are available on request

Membrane Filtration – Quick Selection Guide



Cellulose Nitrate (Mixed Cellulose Ester)



Cellulose nitrate membrane filters are indicated for many general laboratory applications where a membrane with a high non-specific adsorption is suitable. They are hydrophilic, have high flow rates thanks to their symmetric structure and are compatible with aqueous solutions (pH 4 to 8), hydrocarbons and several other organic solvents. The cellulose nitrate membranes are available in different pore sizes from 0.2 µm to 8 µm.

Specifications

Type	Pore Size (µm)	Thickness (µm)	Bubble Point (bar)	Water Flow Rate (mL/min/cm²/bar)	Burst Pressure (bar)
11327	0.2	130	4.2	25	≥ 0.35
11306	0.45	130	2.4	70	≥ 0.3
11305	0.65	130	2	130	≥ 0.25
11304	0.8	130	1.4	200	≥ 0.2
11303	1.2	130	1	200	≥ 0.2
11302	3	130	0.5	430	≥ 0.2
11342	5	130	0.5	570	≥ 0.15
11301	8	130	0.3	750	≥ 0.1

Ordering Information

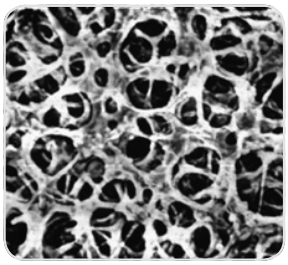
Filter Discs

Dia. in mm	11301 (8 µm)*	11302 (3 µm)*	11303 (1.2 µm)*	11304 (0.8 µm)*
13	11301--13------N	11302--13------N	11303--13------N	11304--13------N
20				11304--20------N
25	11301--25------N	11302--25------N	11303--25------N	11304--25------N
37	11301--37------N			11304--37------N
47	11301--47------N	11302--47------N	11303--47------N	11304--47------N
50	11301--50------N	11302--50------N	11303--50------N	11304--50------N
70	11301--70------G			
90		11302--90------G	11303--90------G	11304--90------G
100	11301-100------N	11302-100------G	11303-100------G	11304-100------G
142	11301-142------G	11302-142------G	11303-142------G	11304-142------G
293	11301-293------G	11302-293------G	11303-293------G	11304-293------G

Dia. in mm	11305 (0.65 µm)*	11306 (0.45 µm)*	11327 (0.2 µm)*	11342 (5 µm)*
13	11305--13------N	11306--13------N	11327--13------N	11342--13------N
20		11306--20------N		
25	11305--25------N	11306--25------N	11327--25------N	11342--25------N
37		11306--37------N		
47	11305--47------N	11306--47------N	11327--47------N	11342--47------N
50	11305--50------N	11306--50------N		11342--50------N
85		11306--85------N		
90		11306--90------N		11342--90------G
100	11305-100------N	11306-100------N		11342-100------G
110		11306-110------N		
142	11305-142------N	11306-142------N	11327-142------N	11342-142------N
293	11305-293------G	11306-293------G		11342-293------G

* G = 25 pieces, N = 100 pieces
Other dimensions and packaging units are available on request

Cellulose Acetate



Cellulose acetate membranes combine high flow rates and thermal stability with very low adsorption characteristics, and are therefore excellently suited for use in pressure filtration devices. They are hydrophilic, have high flow rates thanks to their symmetric structure and are compatible with aqueous solutions (pH 4-8), oils, alcohols and other organic solvents. The 0.2 µm membrane is the filter of choice for sterile filtration of aqueous solutions, such as nutrient media, buffers and sera. The cellulose acetate membranes are available in different pore sizes from 0.2 to 5 µm.

Specifications

Type	Pore Size (µm)	Thickness (µm)	Bubble Point (bar)	Water Flow Rate (mL/min/cm²/bar)	Burst Pressure (bar)
11107	0.2	120	2.9	24	0.8
11106	0.45	120	1.9	69	0.7
11105	0.65	120	1.5	115	0.7
11104	0.8	120	1	200	0.5
12303	1.2	140	0.8	320	0.4
12342	5	140	0.4	570	0.25

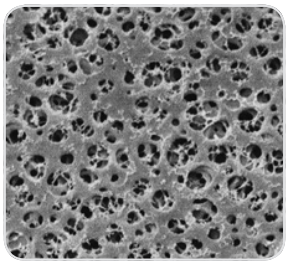
Ordering Information

Filter Discs

Dia. in mm	11104 (0.8 µm)*	11105 (0.65 µm)*	11106 (0.45 µm)*	11107 (0.2 µm)*	12303 (1.2 µm)*	12342 (5 µm)*
13	11104--13------N		11106--13------N	11107--13------N		
25	11104--25------N	11105--25------N	11106--25------N	11107--25------N	12303--25------N	12342--25------N
30			11106--30------N	11107--30------N		
37	11104--37------N		11106--37------N			
45						
47	11104--47------N	11105--47------N	11106--47------N	11107--47------N	12303--47------N	12342--47------N
50	11104--50------N	11105--50------N	11106--50------N	11107--50------N	12303--50------N	
70						
85			11106--85------N			
90	11104--90------N	11105--90------G	11106--90------G	11107--90------G		
100			11106-100------N	11107-100------N	12303-100------G	
110			11106-110------N			
142	11104-142------N	11105-142------N	11106-142------N	11107-142------N	12303-142------G	12342-142------G
293	11104-293------G	11105-293------G	11106-293------G	11107-293------G	12303-293------G	12342-293------G

* G = 25 pieces, N = 100 pieces
Other dimensions and packaging units are available on request

Regenerated Cellulose



The very low adsorption membranes are hydrophilic, solvent-resistant (pH 3-12) and therefore suited for the particle removal from solvents. The membrane is reinforced with nonwoven cellulose. They are available in two pore sizes: 0.45 µm and 0.2 µm.

Specifications

Type	Pore Size (µm)	Thickness (µm)	Bubble Point (bar)	Water Flow Rate (mL/min/cm²/bar)
18407	0.2	170	4.4	15
18406	0.45	170	2.9	30

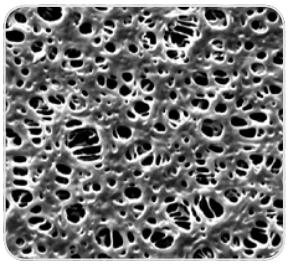
Ordering Information

Filter Discs

Dia. in mm	18406 (0.45 µm)*	18407 (0.2 µm)*
13	18406--13------N	18407--13------N
25	18406--25------N	18407--25------N
47	18406--47------N	18407--47------N
50	18406--50------N	18407--50------N
90	18406--90------G	
100	18406-100------G	18407-100------G
142	18406-142------G	18407-142------G
293	18406-293------G	18407-293------G

* G = 25 pieces, N = 100 pieces
Other dimensions and packaging units are available on request

Polyethersulfone



Polyethersulfone (PES) membrane filters are hydrophilic, have high flow rates, a low non-specific protein adsorption and are chemically resistant over a pH range of 1 – 14. They are therefore recommended for the filtration of aqueous solutions as well for protein filtration. Furthermore, the low level of extractables makes them suitable for environmental analysis.

Specifications

Type	Pore Size (µm)	Thickness (µm)	Bubble Point (bar)	Water Flow Rate (mL/min/cm²/bar)	Burst Pressure (bar)
15458	0.1	150	3.8	10	≥ 0.6
15407MI	0.2	150	3.5	25	≥ 0.5
15406	0.45	150	2.6	46	≥ 0.5

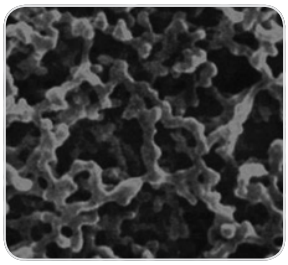
Ordering Information

Filter Discs

Dia. in mm	15406 (0.45 µm)*	15407MI (0.2 µm)*	15458 (0.1 µm)*
25	15406--25------N	15407--25----MIN	15458--25------N
47	15406--47------N	15407--47----MIN	15458--47------N
50	15406--50------N	15407--50----MIN	15458--50------N
90		15407--90----MIK	
142	15406-142------G	15407-142----MIG	15458-142------G
293		15407-293----MIG	15458-293------G

*G = 25 pieces, K = 50 pieces, N = 100 pieces
Other dimensions are available on request

Polyamide



Polyamide membrane filters are hydrophilic and chemically resistant to alkaline solutions and organic solvents. They are therefore recommended for the particle removal from aqueous solutions and solvents for analytical determination such as HPLC, for the sterile filtration of these liquids as well as for applications where a membrane with a relatively high non-specific adsorption is suitable.

Specifications

Type	Pore Size (µm)	Thickness (µm)	Bubble Point (bar)	Water Flow Rate (mL/min/cm²/bar)	Burst Pressure (bar)
25007	0.2	115	3.2	15	≥ 0.25
25006	0.45	115	2.3	35	≥ 0.23

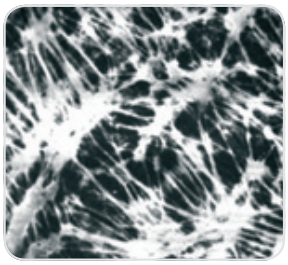
Ordering Information

Filter Discs

Dia. in mm	25006 (0.45 µm)*	25007 (0.2 µm)*
13	25006--13------N	25007--13------N
25	25006--25------N	25007--25------N
47	25006--47------N	25007--47------N
50	25006--50------N	25007--50------N
90	25006--90------G	25007--90------G
142	25006-142------N	25007-142------N
293	25006-293------N	25007-293------N

* G = 25 pieces, N = 100 pieces
Other dimensions and packaging units are available on request

Hydrophobic PTFE



The main application of these membrane filters is the filtration of air, gases or chemicals. They are made of PTFE (polytetra-fluorethylene) only and are therefore permanently hydrophobic. Unlike other (hydrophilic) filter types, they are not wetted by air humidity, allowing unhindered passage of air at low differential pressures as well. PTFE membrane filters have an excellent chemical compatibility (pH 1 to 14), so that they are also used for the filtration of solvents and acids, to which other filter types are not resistant. Due to their hydrophobic characteristics, they must be pre-wetted with ethanol or methanol before the filtration of aqueous media.

Specifications

Type	Pore Size (µm)	Thickness (µm)	Bubble Point (bar)	Isopropanol Flow Rate (mL/min/cm²/bar)
11807	0.2	65	1.4	11
11806	0.45	80	0.9	20
11803	1.2	100	0.45	80
11842	5	100	0.10	250

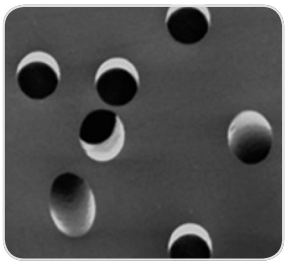
Ordering Information

Filter Discs

Dia. in mm	11803 (1.2 µm)*	11806 (0.45 µm)*	11807 (0.2 µm)*	11842 (5 µm)*
13	11803--13------N	11806--13------N	11807--13------N	
25	11803--25------N	11806--25------N	11807--25------N	11842--25------N
37	11803--37------N	11806--37------N		
42				11842--42------N
47	11803--47------N	11806--47------N	11807--47------N	11842--47------N
50	11803--50------N	11806--50------N	11807--50------N	11842--50------N
90	11803--90------G	11806--90------G	11807--90------G	
100	11803-100------G	11806-100------G	11807-100------G	11842-100------G
142	11803-142------G	11806-142------G	11807-142------G	11842-142------G
293	11803-293------G	11806-293------G	11807-293------G	11842-293------G

* G= 25 pieces, N= 100 pieces
Other dimensions and packaging units are available on request

Polycarbonate Track-Etched



Those white and hydrophilic polycarbonate track-etched membranes are manufactured from high grade polycarbonate film using track-etch technology. Their capillary pore structure is uniform and precise, with a narrow pore size distribution to retain particles on their surface. Track-etched membranes are an excellent choice for accurate fractionation of particulates because of their precise pore size.

Track-etch technology offers the user distinct performance advantages when excellent surface capture and high sample visibility are required. Their main applications are particulate analysis, epifluorescence microscopy, fluid clarification, cytology, cell biology, bioassays, water microbiology and environmental analysis.

Specifications

Type	Pore Size (µm)	Thickness (µm)	Bubble Point (bar)	Water Flow Rate (mL/min/cm²/0.7 bar)	Burst Pressure (bar)
23058	0.1	25	7.0	≥ 0.5	≥ 0.7
23007	0.2	25	3.5	≥ 10	≥ 0.7
23006	0.4	25	2.0	≥ 30	≥ 0.7
23004	0.8	25	0.6	≥ 40	≥ 0.7

Ordering Information

Filter Discs, 100 Pieces

Dia. in mm	23004 (0.8 µm)	23006 (0.4 µm)	23007 (0.2 µm)	23058 (0.1 µm)
25	23004--25------N	23006--25------N	23007--25------N	23058--25------N
47		23006--47------N	23007--47------N	23058--47------N
50			23007--50------N	

Other dimensions are available on request

Blotting | Chromatography Papers

These papers are made of cotton linters only with α-cellulose content of > 98%. These highly pure papers are not only ideal for blotting and chromatography, but also for a wide range of absorption applications like those common in the life sciences and diagnostics. Below you will find an overview of the most commonly used grades.

Specifications

Grade	Weight (g/m²)	Thickness (mm)	Capillary Rise (mm/30 min)	Capillary Rise (mm/10 min)	Properties
FN 4	125	0.24	95		Chromatography paper, ash content < 0.04%
FN 7	150	0.32	145		Chromatography paper, ash content < 0.04%
FN 30	320	0.90	240		Chromatography paper, ash content < 0.04%, paper for antibiotic test strips
FN 100	195	0.35	115	70	The most commonly used chromatography and blotting paper
BF 3	330	0.76	30	130	Blotting paper to increase and maintain the transport of liquids

Ordering Information

Sheets in 580 × 600 mm

Grade FN 4 (100 Sheets)	Grade FN 7 (50 Sheets)	Grade FN 30 (25 Sheets)	Grade FN 100 (50 Sheets)	Grade BF 3 (50 Sheets)
FT-2-504-580600N	FT-2-507-580600K	FT-2-526-580600G	FT-2-527-580600K	FT-2-520-580600K

Other dimensions and shapes are available on request

Nitrocellulose Membrane for Blotting

Sartorius nitrocellulose membranes are available in two pore sizes, 0.22 µm and 0.45 µm. Both versions combine the advantages of high protein binding capacity with low background and high membrane stability, which ensures easy handling. Due to its large surface area, the 0.22 µm membrane version is recommended for small proteins. Sartorius blotting membranes are ideal for western blotting, DNA blotting as well as dot or slot blots. They have been optimized for all protein blotting systems, such as electrotransfer, semi-dry or simple capillary blotting.

Specifications

	0.22 µm	**0.45 µm**
Material	Cellulose nitrate	Cellulose nitrate
Thickness	130 µm	130 µm
Water flow rate	27 mL/(min.cm^2 bar)	70 mL/(min.cm^2 bar)
Bubble point	4.4 bar	2.4 bar
Wettability in water	≤ 1 s	≤ 1 s
Extractable content in water	≤ 1%	≤ 1%
Burst pressure	0.8 bar	0.2 bar
Binding capacity for IgG	200 µg/cm^2	200 µg/cm^2

Ordering Information

	Roll Size	**Order No.**
NC 0.22 µm	30 cm × 3 m	11327------41BL
NC 0.45 µm	30 cm × 3 m	11306------41BL

All indicated data to be understood as typical average values

Re-usable, 13 mm Syringe Filter Holders

For the Ultracleaning of Small Volumes Up to About 10 mL

PTFE Holder for Solvents and Chemicals
Made completely of PTFE, this holder is unaffected by chemicals and contains no trace elements which could be released into the liquid being filtered. It is therefore extremely well suited for particle removal from samples and reagents for analytical methods, such as NMR samples. Other benefits of this application are the low hold-up volume, the easy cleaning and the drying at a temperature of 180°C. The construction of the holder ensures leak proof sealing without a sealing ring, and avoids twisting of the membrane filter when the top is tightened onto the base.

Specifications

Connectors	Female Luer Lock inlet, luer slip outlet
Chemical compatibility	As for PTFE
Filtration area	0.5 cm^2
Materials	PTFE top and bottom parts
Max. operating pressure	5 bar | 500 kPa | 72.5 psi
Membrane filter diameter	13 mm
Sterilization	By autoclaving (max. 134°C) or by dry heat (max. 180°C)
Hold-up volume	Less than 0.03 mL after overcoming the bubble point (0.3 mL before)

Ordering Information

Description	Order No.
13 mm PTFE Syringe Filter Holder	16574

Polycarbonate Holder for Aqueous Solutions
This inexpensive filter holder is made of clear, autoclavable polycarbonate. The silicone gasket enables a leak-free filtration at pressures of up to 7 bar by simply screwing it together manually. Filter supports in the top and bottom parts allow filtration in either direction.

Specifications

Connectors	Female Luer Lock inlet, luer slip outlet
Chemical compatibility	As for polycarbonate and silicone
Filtration area	0.5 cm^2
Materials	Polycarbonate top and bottom part, silicone gasket
Max. operating pressure	7 bar | 700 kPa | 101.5 psi
Membrane filter diameter	13 mm
Sterilization	By autoclaving at 121°C
Hold-up volume	Less than 0.2 mL after overcoming the bubble point (0.3 mL before)

Ordering Information

Description	Order No.
13 mm Polycarbonate Syringe Filter Holder, pack of 12	16514----------E
Silicon gasket, 10 × 14.9 × 0.5 mm, pack of 10	6980569

Re-usable 25 mm Syringe Filter Holders

For the Ultracleaning and Sterilizing Filtration of Volumes of Up to About 100 mL

Stainless Steel Holder for Solvents and Chemicals
Made of stainless steel, this holder is heat-resistant, and the chemical compatibility depends only on the inserted filter type.

The top part can easily be mounted on the bottom part using the enclosed tightening tool. Filter supports in the top and bottom parts allow filtration in either direction.

Specifications

Connectors	Female Luer Lock inlet, luer slip outlet
Chemical compatibility	As for stainless steel
Filtration area	3 cm^2
Materials	Stainless steel (1.4305) top and bottom parts
Max. operating pressure	7 bar | 700 kPa | 101.5 psi
Membrane filter diameter	25 mm
Sterilization	By autoclaving (max. 134°C) or by dry heat (max. 180°C)
Hold-up volume	Less than 0.1 mL after overcoming the bubble point (0.3 mL before)

Ordering Information

Description	Order No.
25 mm Stainless Steel Holder	16214
Tightening tool, Polyman 24/5	6980595

Polycarbonate Holder for Aqueous Solutions
This inexpensive filter holder is made of clear, autoclavable polycarbonate. The silicone gasket enables a leak-free filtration at pressures of up to 7 bar by simply screwing it together manually. Filter supports in the top and bottom parts allow filtration in either direction.

Specifications

Connectors	Female Luer Lock inlet, luer slip outlet
Chemical compatibility	As for polycarbonate and silicone
Filtration area	3 cm^2
Materials	Polycarbonate top and bottom parts, silicone gasket
Max. operating pressure	7 bar | 700 kPa | 101.5 psi
Membrane filter diameter	25 mm
Sterilization	By autoclaving at 121°C
Hold-up volume	Less than 0.3 mL after overcoming the bubble point (0.6 mL before)

Ordering Information

Description	Order No.
25 mm Polycarbonate Syringe Filter Holder, pack of 12	16517----------E
Silicone gasket, 20.5 × 26.5 × 0.5 mm, pack of 10	6980570

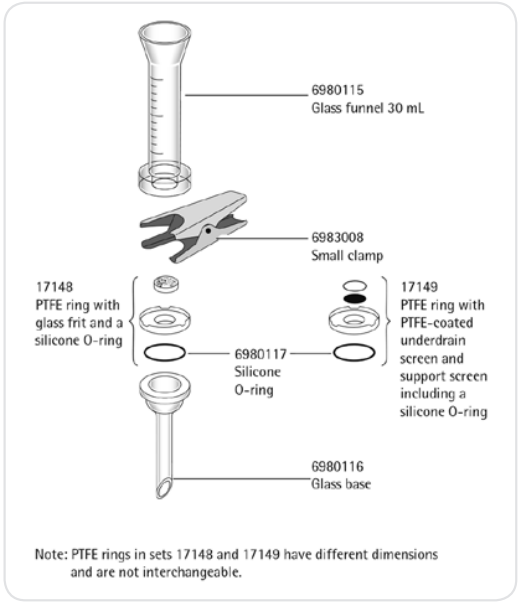
25 mm Glass Vacuum Filter Holder

For Hybridization Tests, Particle Testing and Clarification

This filter holder is available in two versions differing from each other only in the type of the filter support. The filter with glass frit ensures uniform distribution of retained particles and is therefore recommended when the residue on the filter surface is of interest. Because it is easy to clean, the device with the PTFE-coated screen support is preferable when the filtrate is required, or when liquids difficult to remove from glass frits must be examined. The PTFE ring, which holds the glass frit and the screen support, allows for the autoclaving of the devices with a filter in position and protects the edge of the glass frit from breakage and potential leakage. It has a rim around the upper edge to simplify the positioning of the membrane filter when inserted and a silicone O-ring in the underside for a leak-proof seal on the filtrate side. The funnel-shaped top part simplifies filling in the sample.

Specifications

Outlet spout	12 mm dia.
Parts and materials	Borosilicate glass funnel and base PTFE | glass filter support (type 16306) or PTFE | stainless steel filter support, coated with PTFE (type 16315) Silicone O-ring 25 × 3 mm Anodized Aluminium clamp
Chemical compatibility	As for glass, PTFE and silicone. The silicone O-ring can be replaced by a fluoroelastomer O-ring (order no. 00118)
Funnel capacity	30 mL
Filtration area	3 cm^2
Max. operating pressure	Only for vacuum
Suitable membrane filter diameter	25 mm (or 24 mm)
Sterilization	By autoclaving (max. 134°C) or by dry heat (max. 180°C)



Note: PTFE rings in sets 17148 and 17149 have different dimensions and are not interchangeable.

Ordering Information

Description	Order No.
Glass vacuum filtration holder for 25 mm (or 24 mm) membrane filter, with glass frit filter support	16306
Glass vacuum filtration holder for 25 mm (or 24 mm) membrane filter, with PTFE-coated screen filter support	16315

Replacement parts are shown in the diagram.

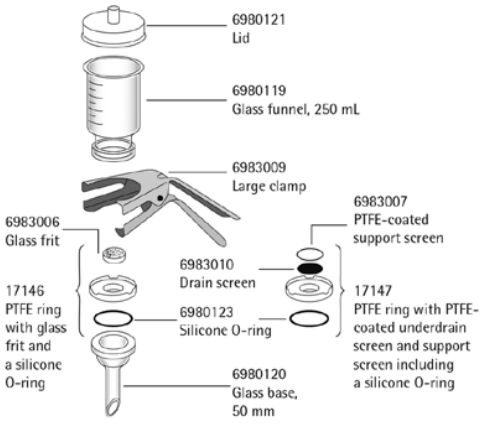
50 mm Glass Vacuum Filter Holder

For Particle Testing or Clarification and Sterile Filtration

This filter holder is available in two versions differing from each other only in the type of the filter support. The device with glass frit ensures uniform distribution of retained particles and is therefore recommended, when the residue on the filter surface is of interest. Because it is easy to clean, the device with the PTFE-coated screen support is preferable when the filtrate is required, or when liquids difficult to remove from glass frits must be examined. The PTFE ring, which holds the glass frit and the screen support, allows the autoclaving of the devices with a filter in position and protects the edge of the glass frit from breakage and potential leakage. It has a rim around the upper edge to simplify the positioning of the membrane filter when inserted and a silicone O-ring in the underside for a leak-proof seal on the filtrate side.

Specifications

Outlet spouts	15 mm dia.
Parts and materials	Borosilicate glass funnel and base Silicone caoutchouc lid PTFE | glass filter support (type 16307) or PTFE | stainless steel filter support, coated with PTFE (type 16316) Silicone O-ring 45 × 3 mm Anodized Aluminium clamp
Chemical compatibility	As for glass, PTFE and silicone. The silicone O-ring can be replaced by a fluoroelastomer O-ring (order no. 00124).
Funnel capacity	250 mL
Filtration area	12.5 cm^2
Max. operating pressure	Only for vacuum
Suitable membrane filter diameter	50 mm (or 47 mm)
Sterilization	By autoclaving (max. 134°C) or by dry heat (max. 180°C)



Note: PTFE rings in sets 17146 and 17147 have different dimensions and are not interchangeable.

Ordering Information

Description	Order No.
Glass vacuum filtration holder for 50 mm (or 47 mm) membrane filter, with glass frit filter support	16307
Glass vacuum filtration holder for 50 mm (or 47 mm) membrane filter, with PTFE-coated screen filter support	16316

Replacement parts are shown in the diagram.

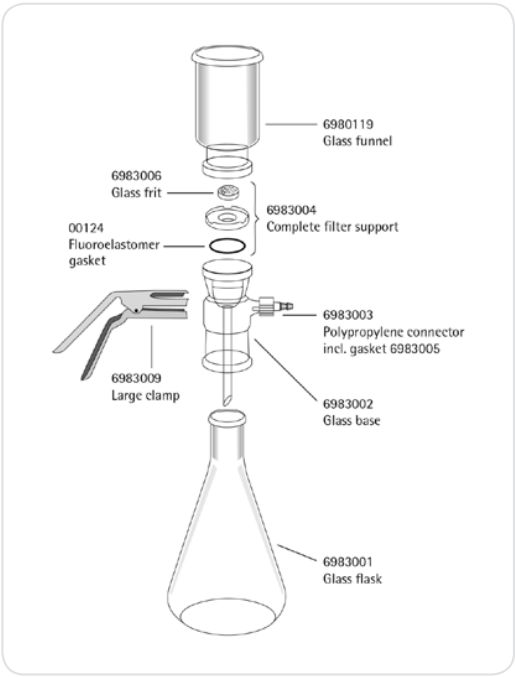
All-Glass Vacuum Filter Holder

For Analytical Determinations, Particle Removal from Solvents

All areas, where liquid and device can come into direct contact, are made of glass or PTFE. The device, in combination with solvent-resistant, hydrophilic RC-membranes, is therefore ideal for ultracleaning and degassing solvents and solvent mixtures for HPLC, GC and AA. Convenience of handling is ensured by several beneficial features. A 6 mm wide non-ground rim above the ground glass neck of the suction flask prevents the filtrate from contacting grease on the ground glass surface and so avoids its contamination while being poured out of the flask. The hose nipple connector is made of polypropylene for safe connection of the vacuum hose. The filtrate outlet spout ends well below the entrance to this hose nipple.

Specifications

Parts and materials	Borosilicate glass funnel, base and flask, sintered glass frit in a PTFE ring and fluoroelastomer O-ring (45 × 3 mm) underneath, anodized aluminium clamp
Chemical compatibility	As for glass and PTFE
Funnel capacity	250 mL
Capacity of the filtrate flask	1 liter
Filtration area	12.5 cm^2
Max. operating pressure	Only for vacuum
Suitable membrane filter diameter	50 mm (or 47 mm), 40 or 42 mm prefilter
Sterilization (without connector)	By autoclaving (max. 134°C) or by dry heat (max. 180°C)



Ordering Information

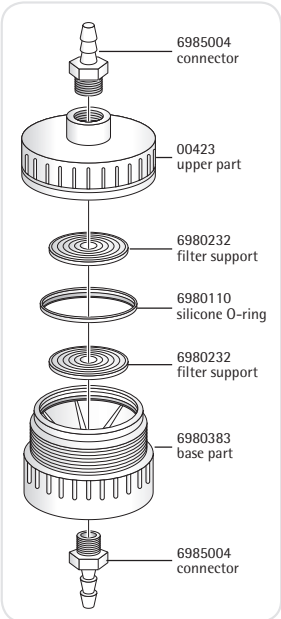
Description	Order No.
All-glass vacuum filter holder for 50 mm (or 47 mm) membrane filter, with vacuum-resistant flask, capacity 1 liter	16309

Replacement parts are shown in the diagram.

Polycarbonate In-Line Filter Holder

For the Filtration of Liter Volumes of Aqueous Solutions

This holder is made of stable, autoclavable polycarbonate. This practical holder is suitable for many simple laboratory filtrations. It can be connected to a peristaltic pump or a pressure container. The bell-shaped base protects the filtrate from repeated contamination while flowing in a receiver. The holder is characterized by an excellent resistance to pressure and density setting by simple hand-tightening. The transparent top part allows the visual control of the correct fit of the O-ring. The hose nipples can be replaced by luer connectors to use it as a large area syringe filter holder.



Specifications

Chemical compatibility	As for polycarbonate, polypropylene and silicone
Filtration area	12.5 cm^2
Weight	83 g
Threads for connectors	M 12 × 1 female thread
Materials	Polycarbonate top part, base part and hose nipple, polypropylene filter support, silicone O-ring (40 × 5 mm)
Max. operating pressure	7 bar | 700 kPa | 101.5 psi
Suitable membrane filter diameter	50 mm (40 or 42 mm prefilter)
Sterilization	By autoclaving at 121°C The material withstands repeated cycles, provided aggressive cleaning agents are completely washed off and that the boiler water does not contain anti-corrosive or anti-scaling additives.

Ordering Information

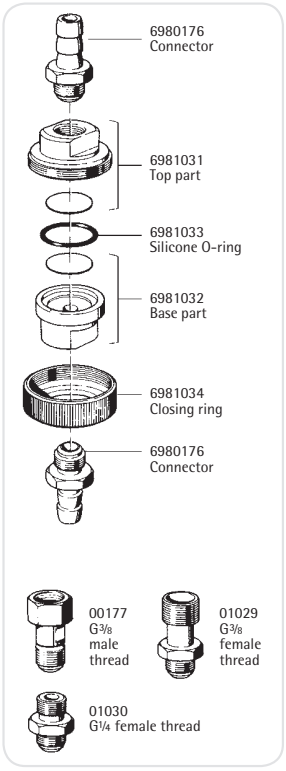
Description	Order No.
Polycarbonate in-line filter holder for 50 mm membrane filter, pack of 5.	16508----------B

Replacement parts are shown in the diagram.

25 mm Stainless Steel Filter Holder

For In-Line Filtration

The G¼ connection threads with density barrel, guarantee leak-proof sealing of the hose nipple and the holder without sealing rings. Other connectors, available as accessories, fit the holder onto reducing valves or pumps with G¼ female thread (order no. 01030) or G⅜ female thread order no. 01029) or onto pressure tanks with G⅜ male thread (order no. 00177).



Specifications

Connectors	Hose nipples DN10
Filtration area	3 cm^2
Weight	ca. 170 g
Materials	Stainless steel, except silicone O-ring (21 × 2 mm) and aluminium closing ring
Max. operating pressure	5 bar | 500 kPa | 72.5 psi
Suitable membrane filter	25 mm (20 mm prefilter for the filtration of liquids only)
Sterilization	By autoclaving (max. 134°C) or by dry heat (max. 180°C)

Ordering Information

Description	Order No.
Stainless steel pressure filter holder for 25 mm dia. membrane filter.	16251

Replacement parts are shown in the diagram.

47 mm Stainless Steel Filter Holder

For In-Line Filtration

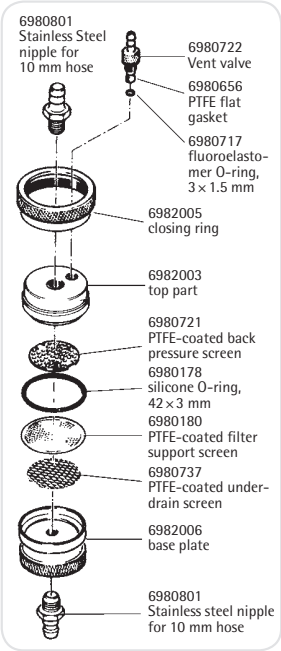


Diagram for 16254

The filter holder is suitable for a pressure of up to 20 bar. The inlet side valve is convenient for the intermittent run-off of waste water. Other connectors, available as accessories, fit the holder onto reducing valves or pumps with G3/8 female thread (order no. 17089) or onto pressure tanks with G3/8 male thread (order no. 17069) or on taps with G3/4 male thread (order no. 17068).

Specifications

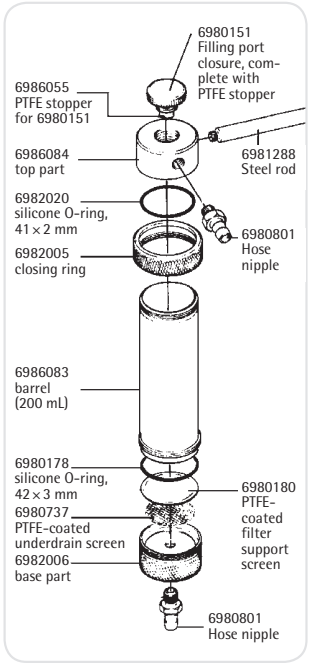
Connectors	Hose nipples DN10
Connection thread	M12 × 1
Filtration area	13 cm^2
Weight	ca. 490 g
Materials	Stainless steel, except silicone O-ring (42 × 3 mm), PTFE and fluoroelastomer valve seals
Max. operating pressure	20 bar | 2,000 kPa | 290 psi
Suitable membrane filter	47 mm (40 or 42 mm prefilter)
Sterilization	By autoclaving (max. 134°C) or by dry heat (max. 180°C)

Ordering Information

Description	Order No.
Stainless steel filter holder for 47 mm membrane filter (with adapter M12 × 1 male thread to hose barb DN10, Mat. 316, ref. 6980801) – Replacement parts are shown in the diagram	16254
Stainless steel filter holder for 47 mm membrane filter (with adapter M12 × 1 male thread to hose barb DN 4 to 5, Mat. 316, ref. 6981132)	16278
Stainless steel back pressure screen	6980721-----1
Stainless steel filter support screen	6980180-----1
Stainless steel underdrain screen	00181
Stainless steel connector M12 × 1 male thread to hose barb DN 4-5	6981132
Adapter Quick connect nipple length 60 mm male part to male thread M12 × 1, Mat 316	17090-----1

Stainless Steel Pressure Filter Holder

For the Filtration of Up to 5 Liter Volumes



A practical filter holder for many laboratory filtrations. It can be attached to a tripod with the help of a steel rod which can be screwed in. The hose nipple is screwed into the side of the top part, leaving room for a large filling opening. This makes pouring in the sample easier, and the sample can be refilled without removing the tube connection to the pressure source. Leak-proof sealing is achieved by hand-tightening the closing ring. For the filtration of small volumes (up to about 200 ml of soil samples or viscous liquids, such as oils), the holder is connected directly to a pressure source. For the filtration of up to 5 liter volumes of relatively easily filterable liquids (e.g. buffer solutions, solutions for cell counters and tissue culture solutions), it is used in combination with a pressure tank.

Specifications

Chemical compatibility	As for stainless steel, PTFE and silicone. If required, the silicone O-ring in the filter support can be replaced by a fluoroelastomer O-ring 00179 or a PTFE O-ring 17038 (by reducing the max. operating pressure to 4 bar | 58 psi); the silicone O-ring in the top part can be replaced by a fluoroelastomer O-ring 17145.
Filtration area	13 cm^2
Weight	960 g
Threads for connectors	M 12 × 1 female thread
Materials	Top part, barrel, base part, corrugated iron, closing ring, closure cap, back pressure screen and stainless steel hose nipples 1.4401 (AISI 316), PTFE-coated stainless steel filter support, silicone O-rings, 41 × 2 mm (top part) and 42 × 3 mm (filter support), PTFE-sealing (cap).
Max. operating pressure	10 bar | 1,000 kPa | 145 psi
Suitable membrane filter diameter	47 mm (40 or 42 mm prefilter)
Sterilization	By autoclaving (max 134°C) or by dry heat (180°C)

Ordering Information

Description	Order No.
Stainless steel pressure filter holder	16249
Stainless steel pressure filter holder with double jacket	16249-----3

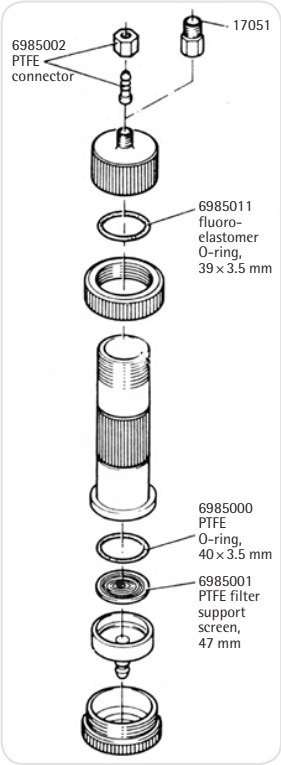
Replacement Parts

Description	Order No.
Fluoroelastomer O-ring, 42 × 3 mm	00179
PTFE O-ring, 42 × 3 mm	17038
Fluoroelastomer O-ring for upper part, 41 × 2 mm	17145

Other replacement parts are shown in the diagram or on page 139.

Chemical-resistant PTFE Filter Holder

For the Filtration of Aggressive Liquids



The holder hinders the release of trace elements into the filtrate and is resistant to almost all chemicals. The fluoroelastomer O-ring in the top part allows easy hand tightening, and can be replaced by a PTFE O-ring, order no. 17039. The 6 mm outlet nipple is an integral part of the base, the 10 mm inlet hose nipple can be replaced by a G⅜ connector, order no. 17051.

Specifications

Chemical compatibility	As for PTFE and fluoroelastomer
Filtration area	12.5 cm^2
Thread for inlet connector	M 14 × 1.5 male thread
Materials	Top part, barrel, base part: corrugated iron, hose nipples and filter support with 40 × 3.5 mm O-ring: PTFE, locking rings: aluminium 39 × 3.5 mm fluoroelastomer O-ring (top part)
Max. operating pressure	5 bar | 500 kPa | 72.5 psi
Suitable membrane filter diameter	47 mm
Sterilization	By autoclaving (max 134°C) or by dry heat (180°C)

Ordering Information

Description	Order No.
PTFE pressure filter holder, 47 mm, with 200 mL capacity.	16579

Replacement Parts

Description	Order No.
PTFE O-ring, 39 × 3.5 mm	17039

Other replacement parts are shown in the diagram.

Combisart® Manifolds

1-, 3- and 6-Branch

Made of high-grade stainless steel (B.S. 304S3 | AISI 304); accommodates any type of vacuum funnel. Stainless steel three-way valves (taps) allow the vacuum for each filter holder to be individually controlled and each holder to be sterilely vented. The low height of the manifold ports is particularly advantageous for working on a clean bench.

Ordering Information

Combisart® Manifolds, without Base Support and Frit	Order No.
Combisart® 1-branch manifold	16844
Combisart® 3-branch manifold	16842
Combisart® 6-branch manifold	16843

Combisart® Sets, Stainless Steel Capacity	Order No.
1-branch 1 × 100 mL	16844-CS
1-branch 1 × 500 mL	16845-CS
3-branch 3 × 100 mL	16824-CS
3-branch 3 × 500 mL	16828-CS
6-branch 6 × 100 mL	16832-CS
6-branch 6 × 500 mL	16831-CS

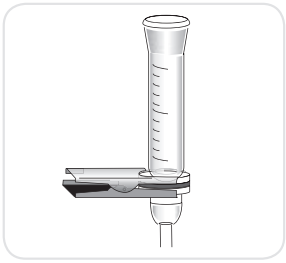
In each set stainless steel funnels with lids are preassembled.

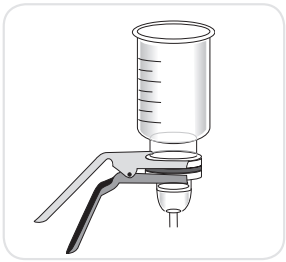
Accessories and Replacement Parts

Description	Pack Size	Order No.
Plug, conical, to close the venting hole beside the 3-way valve	10	6980225
Silicone O-ring for manifold female threads	3	6980235
Rubber tubing, 1 m	1	16623

Glass Filter Holders; 30, 250 mL

For Particle Counting

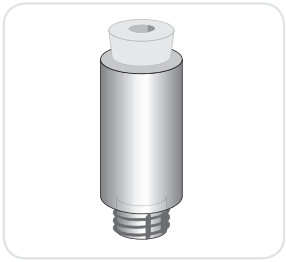




Glass Filter Holders
Two compact vacuum filter holders for easy particulate analysis. Both the top and bottom part of the filter holders are easily and securely fastened together using the metal clamp. The centering rim on the filter support ensures correct positioning of the membrane filter. The glass frit filter support guarantees uniform distribution of retained particles on the filter surface.

Ordering Information

Description		Order No.
Glass filter holder	30 mL	16306
Filter diameter	25 mm (or 24 mm) Prefilter, 20 mm	
Filtration area	3 cm^2	
Capacity	30 mL	
Outlet	12 mm outer diameter	
Glass filter holder	250 mL	16307
Filter diameter	47 mm (or 50 mm) Prefilter, 40 mm	
Filtration area	12.5 cm^2	
Capacity	250 mL	
Outlet	15 mm outer diameter	



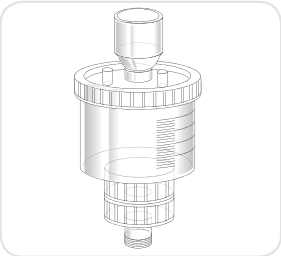
Adapter, 16836 | Adapter, 16837
For use of a glass filter holder, 16306 or 16307, on a Combisart® stainless steel manifold.

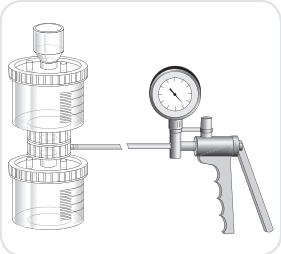
Ordering Information

Description	Order No.
Adapter with 11 mm opening in stopper; for using filter holder 16306 on a Combisart® manifold	16836
Replacement stopper for 16836	00280
Adapter with 14 mm opening in stopper; for using filter holder 16307 on a Combisart® manifold	16837
Replacement stopper for 16837	00281

Polycarbonate Filter Holders

For Particle Counting





Polycarbonate Filter Holder, 250 mL
This reusable, practical filter holder made of autoclavable plastic is ideal for analytical testing outside the laboratory. For use with 47 mm membrane filters.

Outlet: TR 20 × 2 mm male thread

Ordering Information

Description	Order No.
Polycarbonate filter holder without receiver flask	16511
Polycarbonate filter holder with receiver flask	16510
Hand vacuum pump with gauge and 60 cm PVC tubing	16673

Ready-to-Use Biosart® 250 Funnels

For Particle Counting

Biosart® 250 Funnel

The Biosart® 250 Funnel has been specially designed for analytical quality assurance. The sterile 250 mL plastic funnel guarantees fast filtration and high sample throughputs during routine testing. Its large inner diameter allows high flow rates, and the tapered inner walls permit thorough flushing of the funnel, after filtration.

Ordering Information

Description	Order No.
Biosart® 250 Funnel, 50 units, sterile-packaged	16407-25-ALK

Single Support, 16840

For adapting a Biosart® 250 Funnel for use on a Combisart® stainless steel manifold.

Ordering Information

Description	Order No.
Stainless steel filter support for stainless steel manifold.	16840

Replacement

Description	Order No.
Stainless steel frit for 50 mm membrane filters	6980102
Stainless steel frit for 47 mm membrane filters	6980103
Silicone flat gasket underneath the frit	6980124
PTFE flat gasket underneath the frit	6980104
Silicone O-ring for 16840 male thread	6980274