

Q-Max® RR Syringe Filters

Q-Max® RR Syringe Filters

- This second generation of **Q-Max®** syringe filters, **Q-Max® RR**, consists of 13 mm and 25 mm filters with a choice of seven different built-in filtration media.
- Choose between six membrane types and two types of glass micro fibers (GF).
- Each filtration media type*, has its own colour code. Pore size (nominal retention for GF) is printed on each filter.
- **Q-Max® RR** syringe filters are supplied in plastic jars with 100 pcs. and in bulk packed boxes with 500 pcs.
- All **Q-Max® RR** syringe filters undergoes HPLC extractable tests.
- **Q-Max® RR** syringe filters are manufactured in accordance with ISO 9001.

* Both types of PTFE, hydrophobic and hydrophilic, have the same colour.



Specifications

	Q-Max® RR 13	Q-Max® RR 25
Housing material	Polypropylene	Polypropylene
Filtration area [cm²]	0.92	2.98
Hold-up volume [µl]	<10	<30
Max. operating temp [°C]	50	50
Max. operating pressure [bar]	6	6
Recommended sample volume [ml]	<10	<50
Connections [inlet/outlet]	Female luer lock/male luer	Female luer lock/male luer

Q-Max® RR NY

Nylon – naturally hydrophilic and mechanically strong membrane type with a low level of extractables. Suitable for filtration of aqueous and solvent based samples which makes this type ideal and a good choice for filtration of HPLC samples.



Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13NY022-100
13	0.22	500	13NY022-500
13	0.45	100	13NY045-100
13	0.45	500	13NY045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25NY022-100
25	0.22	500	25NY022-500
25	0.45	100	25NY045-100
25	0.45	500	25NY045-500

Q-Max® RR CA

Cellulose Acetate membrane – ideal for filtration of aqueous based liquids, most alcohols and liquids containing proteins. CA membranes are considered as being the lowest protein binding membrane type available.



Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13CA022-100
13	0.22	500	13CA022-500
13	0.45	100	13CA045-100
13	0.45	500	13CA045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25CA022-100
25	0.22	500	25CA022-500
25	0.45	100	25CA045-100
25	0.45	500	25CA045-500

Q-Max® RR PES

PES – Polyethersulphone membrane is a naturally hydrophilic membrane type and is among the most porous types available. Furthermore, this type is asymmetrical, which means that the pores are larger on the inlet side which gives a high throughput. It is ideal for filtration of aqueous based samples and has a low protein binding. PES is also recommended for ion chromatography.



Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13PE022-100
13	0.22	500	13PE022-500
13	0.45	100	13PE045-100
13	0.45	500	13PE045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25PE022-100
25	0.22	500	25PE022-500
25	0.45	100	25PE045-100
25	0.45	500	25PE045-500

Q-Max® RR Syringe Filters

Q-Max® RR PVDF

Polyvinylidene Difluoride membrane – slightly hydrophobic. Good solvent and acid resistance makes this type suitable for filtration of HPLC samples. Not recommended for filtration of aqueous based samples.



Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13PV022-100
13	0.22	500	13PV022-500
13	0.45	100	13PV045-100
13	0.45	500	13PV045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25PV022-100
25	0.22	500	25PV022-500
25	0.45	100	25PV045-100
25	0.45	500	25PV045-500

Q-Max® RR GF

Glass micro fibers. The choice for final filtration of samples with a large number of particles or as a pre-filter for syringe filters with built-in membranes.



Size [mm]	Nominal Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.7	100	13GF070-100
13	0.7	500	13GF070-500
13	1.0	100	13GF100-100
13	1.0	500	13GF100-500

Size [mm]	Nominal Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.7	100	25GF070-100
25	0.7	500	25GF070-500
25	1.0	100	25GF100-100
25	1.0	500	25GF100-500

Q-Max® RR Syringe Filters



Q-Max® RR PTFE

Polytetrafluoroethylene membrane – naturally **hydrophobic** with excellent resistance against solvents, bases and acids.

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13PT022-100
13	0.22	500	13PT022-500
13	0.45	100	13PT045-100
13	0.45	500	13PT045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25PT022-100
25	0.22	500	25PT022-500
25	0.45	100	25PT045-100
25	0.45	500	25PT045-500

Q-Max® RR PTFE/L

Hydrophilic PTFE membrane with solvent, base and acid resistance like the hydrophobic type, but also suitable for filtration of aqueous samples which makes this type extremely versatile.

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
13	0.22	100	13PL022-100
13	0.22	500	13PL022-500
13	0.45	100	13PL045-100
13	0.45	500	13PL045-500

Size [mm]	Pore Size [µm]	Packing [pcs.]	Cat. No.
25	0.22	100	25PL022-100
25	0.22	500	25PL022-500
25	0.45	100	25PL045-100
25	0.45	500	25PL045-500

SYRINGE FILTERS

Q-Max® GPF Syringe Filters

Q-Max® GPF Syringe Filters

- **Q-Max® GPF** 25 mm syringe filters with built-in glass fiber pre-filters are specially designed to filter samples with many particles.
- Available with Cellulose Acetate membranes for aqueous based liquids and Nylon membranes for solvents and/or aqueous based liquids.
- Pore sizes 0.22 µm and 0.45 µm.
- Available in boxes of 100 pcs. or bulk packed in boxes of 500 pcs.



Specifications

Q-Max® GPF	
Housing material	Polypropylene
Filtration area [cm²]	2.98
Hold-up volume [µl]	<30
Max. operating temp [°C]	50
Max. operating pressure [bar]	6
Recommended sample volume [ml]	<100
Connections [inlet/outlet]	Female luer lock/male luer

Ordering information

With Cellulose Acetate membranes

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	25CAGF022-100
0.22	500	25CAGF022-500
0.45	100	25CAGF045-100
0.45	500	25CAGF045-500

With Nylon membranes

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	25NYGF022-100
0.22	500	25NYGF022-500
0.45	100	25NYGF045-100
0.45	500	25NYGF045-500

Q-Max® CA-LS & Q-Max® CA-Plus Sterile Syringe Filters

Q-Max® CA-LS

- Sterile 25 mm syringe filters with low protein binding Cellulose Acetate membranes.
- Main application is sterile filtration of aqueous solutions in volumes up to approx. 50 ml.
- Available pore sizes are 0.22 µm and 0.45 µm.
- Q-Max® CA-LS syringe filters are sterilized by radiation and are manufactured in accordance with ISO 9001.

Q-Max® CA-Plus

- Sterile 25 mm syringe filters with low protein binding Cellulose Acetate membranes and built-in glass fiber pre-filter.
- Main application is sterile filtration of aqueous solutions in volumes up to approx. 100 ml.
- Available pore sizes are 0.22 µm and 0.45 µm.
- Q-Max® CA-Plus syringe filters are sterilized by radiation and are manufactured in accordance with ISO 9001.



Specifications

	Q-Max® CA-LS	Q-Max® CA-Plus
Housing material	Polypropylene	Polypropylene
Filtration area [cm²]	2.98	2.98
Hold-up volume [µl]	<30	<30
Max. operating temp [°C]	50	50
Max. operating pressure [bar]	6	6
Recommended sample volume [ml]	<50	<100
Connections [inlet/outlet]	Female luer lock/male luer	Female luer lock/male luer

Ordering information

Q-Max® CA-LS

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	CALS2502100S
0.45	100	CALS2504100S

Q-Max® CA-Plus

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	CAPS2502100S
0.45	100	CAPS2504100S

SYRINGE FILTERS

Q-Max® PES Sterile Syringe Filters

Q-Max® PES

Q-Max® PES sterile 25 mm syringe filters with low protein binding Polyethersulfone (PES) membranes.

- Main application is sterile filtration of aqueous solutions in volumes up to approx. 50 ml.
- Available pore sizes are 0.22 µm and 0.45 µm.
- Q-Max® PES syringe filters are sterilized by radiation and are manufactured in accordance with ISO 9001.



Specifications

	Q-Max® PES
Housing material	Polypropylene
Filtration area [cm²]	2.98
Hold-up volume [µl]	<30
Max. operating temp [°C]	90
Max. operating pressure [bar]	6.5
Sample volume [ml]	<50
Connections [inlet/outlet]	Female luer lock/male luer

Ordering information

Pore Size [µm]	Packing [pcs.]	Cat. No.
0.22	100	PES2502100S
0.45	100	PES2504100S

Q-Max® CA and CA-Plus Syringe Filters

Q-Max® 30 mm CA syringe filter with a filtration area which is approximately 50% larger than in standard 25 mm Q-Max® syringe filters.

Available with Cellulose Acetate membrane which is ideal for filtration of aqueous based liquids and some alcohols.

Q-Max® 30 mm CA

- Pore size 0.45 µm
- Available in packs of 100 pcs. and in bulk packs of 500 pcs.

Q-Max® 30 mm CA-Plus

- Built-in glass fiber pre-filters increases the total throughput.
- Pore size 0,22 and 0.45 µm (membrane)
- Available in packs of 100 pcs.



Specifications

	Q-Max® 30 mm CA	Q-Max® 30 mm CA-Plus
Housing material	Polypropylene	Polypropylene
Filtration area [cm²]	4.6	4.9
Hold-up volume [µl]	<100	<150
Max. operating pressure [bar]	5	6
Connections [inlet/outlet]	Female luer lock/male luer	Female luer lock/male luer

Ordering information

Q-Max® 30 mm CA

Packing [pcs.]	Cat. No.
100	CA30045-100
500	CA30045-500

Q-Max® 30 mm CA-Plus

Pore size (µm)	Packing [pcs.]	Cat. No.
0.22	100	30CAGF022-100
0.45	100	30CAGF045-100

SYRINGE FILTERS

Q-Max® 4 mm Syringe Filters

- For volumes <1 ml
- Low hold up volume
- Six different membrane materials
- Pore sizes 0.22 and 0.45 µm
- Packings of 200 pcs.



Specifications

Housing material	Polypropylene
Filtration area [cm²]	0.125
Hold-up volume [µl]	<5
Max. operating pressure [bar]	6
Recommended sample volume [ml]	<1
Connections [inlet/outlet]	Female luer lock/Male luer

Membrane Types

Cellulose Acetate	Hydrophilic low protein binding membrane. Suitable for aqueous solutions and most alcohols.
Nylon	Hydrophilic and versatile membrane. For aqueous and most solvent based solutions e.g. Methanol and Acetonitrile.
Polyethersulfone	Hydrophilic low protein binding membrane. For aqueous and solvent based solutions. Broad pH resistance.
PVDF	Hydrophobic membrane suitable for filtration of solvents and some acids. Not recommended for filtration of water samples.
PTFE, hydrophobic	Suitable for filtration of strong solvents, acids and bases. Not recommended for filtration of water samples.
PTFE, hydrophilic	Very versatile membrane type. Used for filtration of water, solvents, acids and bases.

Ordering information

Membrane	Pore size [µm]	Cat. No.
Cellulose Acetate	0.22	4CA022-200
Cellulose Acetate	0.45	4CA045-200
Nylon	0.22	4NY022-200
Nylon	0.45	4NY045-200
Polyethersulfone	0.22	4PE022-200
Polyethersulfone	0.45	4PE045-200
PVDF	0.22	4PV022-200
PVDF	0.45	4PV045-200
PTFE hydrophobic	0.22	4PT022-200
PTFE hydrophobic	0.45	4PT045-200
PTFE hydrophilic	0.22	4PL022-200
PTFE hydrophilic	0.45	4PL045-200

50 mm Vent Filter

Applications

- Sterile venting of vessels e.g. carboys, fermenters etc.
- In-line sterilization of and particulate removal from air and gasses
- Autoclave venting
- Water trap
- Filtration of gas for incubators
- Filtration of non-aqueous fluids



Specifications

50 mm Vent Filter	
Filter Media	Hydrophobic PTFE reinforced with polypropylene
Pore Size [µm]	0.22 or 0.45
Housing	Polypropylene
Connections	6-12 mm stepped hose barb
Filter area [cm²]	19.6
Air flow rate 0.20 µm	27 L/min at 1 bar
Air flow rate 0.45 µm	32 L/min at 1 bar
Housing diameter [mm]	63
Housing length [mm]	53
Max. pressure	3.5 bar (approx. 50 psi)
Autoclavable	up to 10 times – 121°C for 20 min.

Ordering information

Pore Size [µm]		Packing [pcs.]	Cat. No.
0.22	Non-sterile	20	50PT022-20
0.22	Sterile	20	50PT022S-20
0.45	Non-sterile	20	50PT045-20
0.45	Sterile	20	50PT045S-20