FILTER TECHNOLOGY

SYRINGE AND SYRINGELESS FILTERS

FILTER TECHNOLOGY

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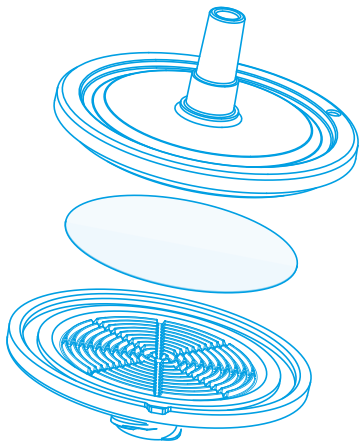
The GVS Life Sciences Syringe Filters Family

ABLU cameo

GVS Life Sciences offers a range of disposable syringe filter devices designed to provide fast and efficient filtration of aqueous and organic solutions. They are available in a wide variety of sizes and membranes, with a polypropylene or acrylic housing, for both sterile and non sterile laboratory applications.

Features and Benefits

- Lower hold-up volume - due to an improved flow channel design and reduced spacing between the supports within the housing, for better handling of small sample volumes or costly samples
- Increased operating pressure - up to 130 psi due to the over-mold that prevents sample leaking at the seam and keeps the filter unit from bursting in half
- Strict quality control - syringe filters are integrity tested to ensure a proper fit and weld to eliminate any potential filter by-pass
- Accurate labeling - each filter is labeled with the specific filter material and pore size for easy identification even if the syringe filter is not in its original packaging
- Multifunctional connectors - equipped with male luer-lock or male slip and female luer-lock connections
- Polypropylene or Acrylic housing
- Modified Acrylic housing to bidirectionally support the membrane allowing sample injection or aspiration
- Sterile or Non-Sterile options
- Bulk-packages or individual blisters
- Customized product and packaging on request
- Manufactured in the USA - GVS Life Sciences devices are manufactured in our ISO9001 certified plant in Sanford, Maine, USA, using proprietary microporous membranes from our plant in Westborough, Massachussets, USA.



13 mm ABLUO Syringe Filters

Characteristics

Membrane Materials: Cellulose Acetate, Nitrocellulose (MCE), Nylon 66, PE, PES, PTFE, PVDF, Regenerated Cellulose
Membrane Diameter: 13 mm
Effective Filtration Area: 0.76 cm²
Housing Diameter: 18 mm
Housing Materials: Acrylic, Polypropylene, Ultrasonically welded
Inlet / Outlet: FLL / MLL-MLS
Holdup Volume: <50 microliter
Maximum Operating Temperature:
PP Abluo - 90°C / 194°F, Acrylic Abluo 50°C / 122°F
Maximum Operating Pressure: 80 psi
Sterile: No

Typical Applications

- Filtration of Aqueous, Organic and Alcohol Solutions
- Analytical Sample Preparation
- IC Chromatography
- Fuel Hydraulic Fluids and Machined Parts
- Clarification
- Protein Chemistry
- Cell Culture

Ordering information

Membrane Material	Pore Size (µm)	End Fitting	Housing Material	Color	Product Code
					Packaging 500/pk
Cellulose Acetate (CA)	0.22	FLL/MLL	Acrylic	Blue	FJ13ANCCA002DD01
Cellulose Acetate (CA)	0.45	FLL/MLL	Acrylic	Yellow	FJ13ANCCA004FD01
Cellulose Acetate (CA)	0.80	FLL/MLL	Acrylic	Green	FJ13ANCCA008ED01
Cellulose Acetate (CA)	1.20	FLL/MLL	Acrylic	Red	FJ13ANCCA012CD01
Cellulose Acetate (CA)	5.00	FLL/MLL	Acrylic	Brown	FJ13ANCCA050PD01
Nylon 66 (NY)	0.22	FLL/MLS	Polypropylene	Transparent	FJ13BNPNY002AD01
Nylon 66 (NY)	0.45	FLL/MLS	Polypropylene	Transparent	FJ13BNPNY004AD01
Nylon 66 (NY)	5.0	FLL/MLL	Acrylic	Transparent	FJ13ANCNY050AD01
Mixed Cellulose Esters (MCE)	0.22	FLL/MLS	Acrylic	Transparent	FJ13BNCNC002AD01
Mixed Cellulose Esters (MCE)	0.45	FLL/MLS	Acrylic	Transparent	FJ13BNCNC004AD01
Polyethersulfone (PES)	0.22	FLL/MLS	Polypropylene	Transparent	FJ13BNPPS002AD01
Polyethersulfone (PES)	0.45	FLL/MLS	Polypropylene	Transparent	FJ13BNPPS004AD01
Polytetrafluoroethylene Hydrophilic (PTFE HP)	0.22	FLL/MLS	Polypropylene	Transparent	FJ13BNPPH002AD01
Polytetrafluoroethylene Hydrophilic (PTFE HP)	0.45	FLL/MLS	Polypropylene	Transparent	FJ13BNPPH004AD01
Polyethylene (PE)	0.22	FLL/MLS	Polypropylene	Transparent	FJ13BNPPE002AD01
Polyethylene (PE)	0.50	FLL/MLS	Polypropylene	Transparent	FJ13BNPPE005AD01
Regenerated Cellulose (RC)	0.22	FLL/MLS	Polypropylene	Transparent	FJ13BNPRC002AD01
Regenerated Cellulose (RC)	0.45	FLL/MLS	Polypropylene	Transparent	FJ13BNPRC004AD01
Polyvinylidene Fluoride (PVDF)	0.22	FLL/MLS	Polypropylene	Transparent	FJ13BNPPV002AD01
Polyvinylidene Fluoride (PVDF)	0.45	FLL/MLS	Polypropylene	Transparent	FJ13BNPPV004AD01
Polytetrafluoroethylene (PTFE)	0.22	FLL/MLS	Polypropylene	Transparent	FJ13BNPPT002AD01
Polytetrafluoroethylene (PTFE)	0.45	FLL/MLS	Polypropylene	Transparent	FJ13BNPPT004AD01

17 mm CAMEO Syringe Filters

Characteristics

Membrane Materials: Cellulose Acetate, Nylon, Glass Fiber, PES, Polypropylene, PTFE, PVDF
Membrane Diameter: 17 mm
Effective Filtration Area: 1.4 cm^2
Housing Diameter: 22 mm
Housing Material: Polypropilene Overmolded
Inlet / Outlet: FLL-MLS
Holdup Volume: <40 microliter
Maximum Operating Temperature: 82°C / 180°F
Maximum Operating Pressure: 80 psi
Sterile: No

Typical Applications

- Analytical Sample Preparation
- Dissolution testing
- Content uniformity
- Environmental samples
- Composite assays
- Food analysis
- Biofuel analysis

Ordering information

Membrane Material	Pore Size (µm)	End Fitting	Housing Material	Color	Product Code			
					Packaging 50/pk	Packaging 200/pk	Packaging 500/pk	Packaging 1000/pk
Cellulose Acetate (CA)	0.22	FLL/MLS	Polypropylene	Transparent	1225617	1225618	1225619	1233871
Cellulose Acetate (CA)	0.45	FLL/MLS	Polypropylene	Transparent	1225620	1225622	1225623	1233882
Nylon 66 (NY)	0.22	FLL/MLS	Polypropylene	Transparent	1224746	1224747	1224748	1229460
Nylon 66 (NY)	0.45	FLL/MLS	Polypropylene	Transparent	1224753	1224754	1224755	1229462
Nylon 66 (NY)	1.20	FLL/MLS	Polypropylene	Transparent	1224760	1224761		
Nylon 66 (NY)	5.00	FLL/MLS	Polypropylene	Transparent	1224763	1224764	1224765	1229464
Polyethersulfone (PES)	0.22	FLL/MLS	Polypropylene	Transparent	1233547			1233544
Polyethersulfone (PES)	0.45	FLL/MLS	Polypropylene	Transparent	1233548			1233545
Polypropylene (PP)	0.22	FLL/MLS	Polypropylene	Transparent	1224808	1224809	1224810	1229452
Polypropylene (PP)	0.45	FLL/MLS	Polypropylene	Transparent	1224811	1224812	1224813	1229454
Polytetrafluoroethylene (PTFE)	0.22	FLL/MLS	Polypropylene	Transparent	1224780	1224781	1224782	1229447
Polytetrafluoroethylene (PTFE)	0.45	FLL/MLS	Polypropylene	Transparent	1224787	1224788	1224789	1229449
Polyvinylidene Fluoride (PVDF)	0.22	FLL/MLS	Polypropylene	Transparent				3049952
Polyvinylidene Fluoride (PVDF)	0.45	FLL/MLS	Polypropylene	Transparent	3023135			3023187
Glass Fiber/Nylon (GF/NY)	0.22	FLL/MLS	Polypropylene	Transparent	1224766	1224767	1224768	
Glass Fiber/Nylon (GF/NY)	0.45	FLL/MLS	Polypropylene	Transparent	1224773	1224774	1224775	1229479
Glass Fiber/Polypropylene (GF/PP)	0.22	FLL/MLS	Polypropylene	Transparent	1224814	1224815		1229473
Glass Fiber/Polypropylene (GF/PP)	0.45	FLL/MLS	Polypropylene	Transparent	1224817	1224818		
Glass Fiber/PTFE	0.22	FLL/MLS	Polypropylene	Transparent	1224794	1224795	1224796	1229469
Glass Fiber/PTFE	0.45	FLL/MLS	Polypropylene	Transparent	1224801	1224802	1224803	1229471

33 mm ABLUO Syringe Filters

Characteristics

Membrane Materials: Cellulose Acetate, Glass Fiber, Nitrocellulose, Nylon, PES, Polyethylene, PTFE, PVDF, Regenerated Cellulose
Housing Diameter: 33 mm
Membrane Diameter: 25 mm
Effective Filtration Area: 4.6 cm²
Housing Materials: Acrylic, Polypropylene Ultrasonically welded
Inlet / Outlet: FLL / MLL-MLS
Holdup Volume: <100 microliter
Maximum Operating Temperature:
PP Abluo - 90°C / 194°F, Acrylic Abluo 50°C / 122°F
Maximum Operating Pressure: 80 psi
Sterile: No

Typical Applications

- Analytical sample preparation
- Biological fluids
- Buffer solutions
- Sterile filtering of tissue culture media
- Protein aqueous solutions
- Biofuel analysis
- HPLC sample preparation
- Pesticide testing
- Cannabis potency testing
- Neutraceutical sample preparation

Ordering information

Membrane Material	Pore Size (µm)	End Fitting	Housing Material	Color	Product Code
					Packaging 500/pk
Cellulose Acetate (CA)	0.22	FLL/MLL	Acrylic	Blue	FJ25ANCCA002DD01
Cellulose Acetate (CA)	0.45	FLL/MLL	Acrylic	Yellow	FJ25ANCCA004FD01
Cellulose Acetate (CA)	0.80	FLL/MLL	Acrylic	Green	FJ25ANCCA008ED01
Cellulose Acetate (CA)	1.20	FLL/MLL	Acrylic	Red	FJ25ANCCA012CD01
Cellulose Acetate (CA)	5.00	FLL/MLL	Acrylic	Brown	FJ25ANCCA050PD01
Nylon 66 (NY)	0.22	FLL/MLS	Polypropylene	Transparent	FJ25BNPNY002AD01
Nylon 66 (NY)	0.45	FLL/MLS	Polypropylene	Transparent	FJ25BNPNY004AD01
Polyethersulfone (PES)	0.22	FLL/MLS	Polypropylene	Transparent	FJ25BNPPS002AD01
Polyethersulfone (PES)	0.45	FLL/MLS	Polypropylene	Transparent	FJ25BNPPS004AD01
Mixed Cellulose Esters (MCE)	0.22	FLL/MLS	Polypropylene	Transparent	FJ25BNPNC002AD01
Mixed Cellulose Esters (MCE)	0.45	FLL/MLS	Polypropylene	Transparent	FJ25BNPNC004AD01
Regenerated Cellulose (RC)	0.22	FLL/MLS	Polypropylene	Transparent	FJ25BNPRC002AD01
Regenerated Cellulose (RC)	0.45	FLL/MLS	Polypropylene	Transparent	FJ25BNPRC004AD01
Polyvinylidene Fluoride (PVDF)	0.22	FLL/MLS	Polypropylene	Transparent	FJ25BNPPV002AD01
Polyvinylidene Fluoride (PVDF)	0.45	FLL/MLS	Polypropylene	Transparent	FJ25BNPPV004AD01
Polytetrafluoroethylene (PTFE)	0.22	FLL/MLS	Polypropylene	Transparent	FJ25BNPPT002AD01
Polytetrafluoroethylene (PTFE)	0.45	FLL/MLS	Polypropylene	Transparent	FJ25BNPPT004AD01
Polytetrafluoroethylene Hydrophilic (PTFE HP)	0.22	FLL/MLS	Polypropylene	Transparent	FJ25BNPPH002AD01
Polytetrafluoroethylene Hydrophilic (PTFE HP)	0.45	FLL/MLS	Polypropylene	Transparent	FJ25BNPPH004AD01
Polyethylene (PE)	0.22	FLL/MLS	Polypropylene	Transparent	FJ25BNPPE002AD01
Polyethylene (PE)	0.50	FLL/MLS	Polypropylene	Transparent	FJ25BNPPE005AD01
Glass Fiber (GF)	0.70	FLL/MLS	Polypropylene	Transparent	FJ25BNPGF007AD01
Glass Fiber (GF)	1.00	FLL/MLS	Polypropylene	Transparent	FJ25BNPGF010AD01
Glass Fiber (GF)	1.20	FLL/MLS	Polypropylene	Transparent	FJ25BNPGF012AD01
Glass Fiber (GF)	3.10	FLL/MLS	Polypropylene	Transparent	FJ25BNPGF031AD01

33 mm CAMEO PLUS Syringe Filters

Characteristics

Membrane Material: Cellulose Acetate, Glass Fiber, Nylon, PES, Polypropylene, PTFE, PVDF
Housing Diameter: 33 mm
Membrane Diameter: 30 mm
Effective Filtration Area: 4.8 cm^2
Housing Material: Polypropilene Overmolded
Inlet / Outlet: FLL-MLS
Holdup Volume: <100 microliter
Maximum Operating Temperature: 82°C / 180°F
Maximum Operating Pressure: 80 psi
Sterile: No

Typical Applications

- Analytical sample preparation
- Dissolution testing
- Content uniformity
- Environmental samples
- Composite assays
- Food analysis
- Biofuel analysis

Ordering information

Membrane Material	Pore Size (µm)	End Fitting	Housing Material	Color	Product Code			
					Packaging 50/pk	Packaging 200/pk	Packaging 500/pk	Packaging 1000/pk
Cellulose Acetate (CA)	0.22	FLL/MLS	Polypropylene	Transparent	1213641	1213192	1214014	1229443
Cellulose Acetate (CA)	0.45	FLL/MLS	Polypropylene	Transparent	1214778	1214932	1214966	1229444
Cellulose Acetate (CA)	0.80	FLL/MLS	Polypropylene	Transparent	1226939	1226941	1226940	1229445
Glass Fiber (GF)	1.00	FLL/MLS	Polypropylene	Transparent	1227204		1227205	1229451
Glass Fiber (GF)	0.70	FLL/MLS	Polypropylene	Transparent	1227207			1227208
Nylon 66 (NY)	0.10	FLL/MLS	Polypropylene	Transparent	1224100	1224101	1224103	
Nylon 66 (NY)	0.22	FLL/MLS	Polypropylene	Transparent	1224104	1224105	1224106	1229461
Nylon 66 (NY)	0.45	FLL/MLS	Polypropylene	Transparent	1224112	1224113	1224114	1226917
Nylon 66 (NY)	1.20	FLL/MLS	Polypropylene	Transparent	1224119	1224120	1224121	1229463
Nylon 66 (NY)	5.00	FLL/MLS	Polypropylene	Transparent	1224124	1224125	1224126	1229465
Polyethersulfone (PES)	0.22	FLL/MLS	Polypropylene	Transparent	1233549			1233541
Polyethersulfone (PES)	0.45	FLL/MLS	Polypropylene	Transparent	1233550		1233551	1233543
Polypropylene (PP)	0.22	FLL/MLS	Polypropylene	Transparent	1224172	1224173	1224174	
Polypropylene (PP)	0.45	FLL/MLS	Polypropylene	Transparent	1224310	1224311	1224312	1229458
Polytetrafluoroethylene (PTFE)	0.22	FLL/MLS	Polypropylene	Transparent	1224143	1224144	1224145	1229448
Polytetrafluoroethylene (PTFE)	0.45	FLL/MLS	Polypropylene	Transparent	1224150	1224151	1237721	1229450
Polyvinylidene Fluoride (PVDF)	0.22	FLL/MLS	Polypropylene	Transparent	3038551			3038552
Polyvinylidene Fluoride (PVDF)	0.45	FLL/MLS	Polypropylene	Transparent	3020528		3020351	3023084
Glass Fiber/Cellulose Acetate	0.22	FLL/MLS	Polypropylene	Transparent	1226942		1226943	1229466
Glass Fiber/Cellulose Acetate	0.45	FLL/MLS	Polypropylene	Transparent	1226945		1226946	1229467
Glass Fiber/Cellulose Acetate	0.80	FLL/MLS	Polypropylene	Transparent			1226950	
Glass Fiber/Nylon 66	0.10	FLL/MLS	Polypropylene	Transparent				1229480
Glass Fiber/Nylon 66	0.22	FLL/MLS	Polypropylene	Transparent	1224127	1224128	1224129	1229478
Glass Fiber/Nylon 66	0.45	FLL/MLS	Polypropylene	Transparent	1224135	1224136	1224137	1226916
Glass Fiber/Polyethersulfone	0.45	FLL/MLS	Polypropylene	Transparent	3050121		3050122	
Glass Fiber/Polypropylene	0.22	FLL/MLS	Polypropylene	Transparent	1224175	1224176	1224177	
Glass Fiber/Polypropylene	0.45	FLL/MLS	Polypropylene	Transparent	1224313	1224314	1224315	
Glass Fiber/PTFE	0.22	FLL/MLS	Polypropylene	Transparent	1224157	1224158	1224159	
Glass Fiber/PTFE	0.45	FLL/MLS	Polypropylene	Transparent	1224164	1224165	1224166	1229472

13 mm STERILE ABLUO Syringe Filters

Characteristics

Membrane Materials: Cellulose Acetate, PES, PVDF
Housing Diameter: 18 mm
Membrane Diameter: 13 mm
Effective Filtration Area: 0.76 cm²
Housing Material: Acrylic Ultrasonically welded
Inlet / Outlet: FLL / MLL-MLS
Holdup Volume: <50 microliter
Maximum Operating Temperature: 50°C / 122°F
Maximum Operating Pressure: 80 psi
Sterile: Yes

Typical Applications

- Filtration of Aqueous Solutions
- Analytical Sample Preparation
- IC Chromatography
- Sterile Filtration and Clarification
- Protein Chemistry
- Cell Culture
- Clarification

Ordering information

Membrane Material	Pore Size (µm)	End Fitting	Housing Material	Color	Product Code
					Packaging 50/pk
Cellulose Acetate (CA)	0.22	FLL/MLL	Acrylic	Blue	FJ13ASCCA002DL01
Cellulose Acetate (CA)	0.45	FLL/MLL	Acrylic	Yellow	FJ13ASCCA004FL01
Cellulose Acetate (CA)	0.80	FLL/MLL	Acrylic	Green	FJ13ASCCA008EL01
Cellulose Acetate (CA)	1.20	FLL/MLL	Acrylic	Red	FJ13ASCCA012CL01
Cellulose Acetate (CA)	5.00	FLL/MLL	Acrylic	Brown	FJ13ASCCA050PL01
Polyethersulfone (PES)	0.22	FLL/MLS	Acrylic	Transparent	FJ13BSCPS002AL01
Polyethersulfone (PES)	0.45	FLL/MLS	Acrylic	Transparent	FJ13BSCPS004AL01
Polyvinylidene Fluoride (PVDF)	0.22	FLL/MLS	Acrylic	Transparent	FJ13BSCPV002AL01
Polyvinylidene Fluoride (PVDF)	0.45	FLL/MLS	Acrylic	Transparent	FJ13BSCPV004AL01

33 mm STERILE ABLUO Syringe Filters

Characteristics

Membrane Materials: Cellulose Acetate, Nylon, PES, PVDF
Housing Diameter: 33 mm
Membrane Diameter: 25 mm
Housing Material: Acrylic Ultrasonically welded
Effective Filtration Area: 4.6 cm²
Inlet / Outlet: FLL / MLL-MLS
Holdup Volume: <100 microliter
Maximum Operating Temperature: 50°C / 122°F
Maximum Operating Pressure: 80 psi
Sterile: Yes

Typical Applications

- Filtration of Aqueous and Alcohol Solutions
- Sterile Filtration and Clarification
- Cell Culture
- Analytical Sample Preparation
- IC Chromatography
- Clarification
- Protein Chemistry
- Filtration of Aqueous and Organic Solutions

Ordering information

Membrane Material	Pore Size (µm)	End Fitting	Housing Material	Color	Product Code
					Packaging 50/pk
Cellulose Acetate (CA)	0.22	FLL/MLS	Acrylic	Transparent	FJ25BSCCA002AL01
Cellulose Acetate (CA)	0.45	FLL/MLS	Acrylic	Transparent	FJ25BSCCA004AL01
Cellulose Acetate (CA)	0.80	FLL/MLS	Acrylic	Transparent	FJ25BSCCA008AL01
Cellulose Acetate (CA)	0.22	FLL/MLL	Acrylic	Blue	FJ25ASCCA002DL01
Cellulose Acetate (CA)	0.45	FLL/MLL	Acrylic	Yellow	FJ25ASCCA004FL01
Cellulose Acetate (CA)	0.80	FLL/MLL	Acrylic	Green	FJ25ASCCA008EL01
Cellulose Acetate (CA)	1.20	FLL/MLL	Acrylic	Red	FJ25ASCCA012CL01
Cellulose Acetate (CA)	5.00	FLL/MLL	Acrylic	Brown	FJ25ASCCA050PL01
Mixed Cellulose Esters (MCE)	0.22	FLL/MLS	Acrylic	Transparent	FJ25BSCNC002AL01
Mixed Cellulose Esters (MCE)	0.45	FLL/MLS	Acrylic	Transparent	FJ25BSCNC004AL01
Nylon 66 (NY)	0.10	FLL/MLS	Acrylic	Transparent	FJ25BSCNY001AL01
Nylon 66 (NY)	0.22	FLL/MLS	Acrylic	Transparent	FJ25BSCNY002AL01
Nylon 66 (NY)	0.45	FLL/MLS	Acrylic	Transparent	FJ25BSCNY004AL01
Nylon 66 (NY)	1.20	FLL/MLS	Acrylic	Transparent	FJ25BSCNY012AL01
Nylon 66 (NY)	5.00	FLL/MLS	Acrylic	Transparent	FJ25BSCNY050AL01
Polyethersulfone (PES)	0.80	FLL/MLS	Acrylic	Transparent	FJ25BSCPS008AL01
Polyethersulfone (PES)	0.22	FLL/MLS	Acrylic	Transparent	FJ25BSCPS002AL01
Polyethersulfone (PES)	0.45	FLL/MLS	Acrylic	Transparent	FJ25BSCPS004AL01
Polyvinylidene Fluoride (PVDF)	0.22	FLL/MLS	Acrylic	Transparent	FJ25BSCPV002AL01
Polyvinylidene Fluoride (PVDF)	0.45	FLL/MLS	Acrylic	Transparent	FJ25BSCPV004AL01

Syringeless Filters - SEPARA®

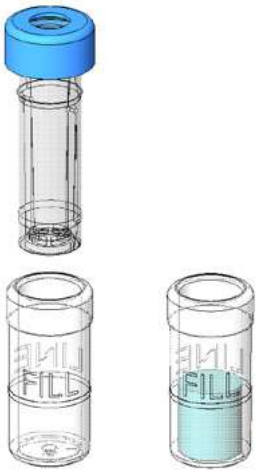
Save time and money in sample preparation process with SEPARA® syringeless filters. The single step filtering process is efficient, simple to use, easy to press and fast.

Features and Benefits

- Rapid sample preparation
- Single step process, filtering with a plunger in the vial
- Sample ready to use after filtration
- Pre-slitted cap ensures easy and clean sample transfer
- Replace syringe, syringe filter, glass vial and cap, reducing waste
- Increase sample integrity with all-in vial and filter
- Compatible with most auto-samplers
- Compatible with most multi-compressors

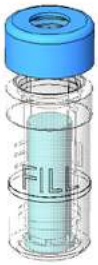
Characteristics

Dimensions: 12 mm diameter x 32 mm height
Materials: Polypropylene, Septa, PTFE and silicone
Fill Line Volume: 480 microliter
Filtering Capacity: 450 microliter
Dead Volume: 30 microliter
Compression Force: 8 psi (0.6 bar)
Maximum operating temperature: 120°F (50°C)



sample filling

press down to filter sample



filtered sample ready for analysis

Ordering information

Membrane Material	Pore Size (µm)	Color	Product Code 100/pk
Polytetrafluoroethylene (PTFE)	0.20	Pink	MV32ANPPT002TC01
Polytetrafluoroethylene (PTFE)	0.45	Red	MV32ANPPT004CC01
Regenerated Cellulose (RC)	0.20	Gray	MV32ANPRC002GC01
Regenerated Cellulose (RC)	0.45	Black	MV32ANPRC004LC01
Nylon (NY)	0.20	Light Blue	MV32ANPNY002BC01
Nylon (NY)	0.45	Blue	MV32ANPNY004UC01
Polyvinylidene Fluoride (PVDF)	0.20	Yellow	MV32ANPPV002FC01
Polyvinylidene Fluoride (PVDF)	0.45	Orange	MV32ANPPV004IC01
Polyethersulfone (PES)	0.20	Light Green	MV32ANPPS002EC01
Polyethersulfone (PES)	0.45	Dark Green	MV32ANPPS004WC01

Filter Holders

To insure precise filtration, GVS Life Sciences offers a selection of filter holders that are designed to work with different types of membranes and built to exacting standards.
Filter holders are available for a wide variety of applications including air analysis, chemotaxis, tissue culturing and general aqueous and solvent filtration.

13 mm Filter Holder
Excellent for small volume (1-5 mL) particulate removal from fluids dispensed with a syringe. It is used in filtering biofluids, ophthalmics, gas chromatography samples, and lubricants that must be applied dust free to critical parts such as bearing. The holder is resistant to alcohols, esters, ethers, glycols aromatic hydrocarbons, halogenated hydrocarbons, ketones, oils, photoresists and many other chemicals.
Although suitable for most weak acids and bases, we recommend that you test for compatibility with acids.

25 mm Filter Holder
Very useful for ultra cleaning and sterilizing small volumes of liquids from a syringe. Due to the polypropylene construction, they can be used over a wide temperature range with excellent chemical compatibility. The 25 mm filter holder can be used to filter up to 50 mL of sample. The dual support screens prevent membrane rupture and also allows for bi-directional sample flow.

47 mm Filter Holder
Designed especially for ultra cleaning and sterilizing of liquids under positive pressure. In addition, this holder can be used for aseptic sampling of liquid or gases at point of use or when samples must be collected and processed on-site. The 47 mm filter holder has dual support screens, which allow for flow in either direction. The inlet cap design and exterior locking ring allow the unit to be assembled quickly and efficiently without tearing the membrane. The 47 mm can filter up to 1 liter depending upon the viscosity of the sample. Conforms with EPA Method 1311 for Toxicity Characteristic leaching Procedure, 40 CFR, Part 261, 1991 Hazardous Waster Compliance Guide.

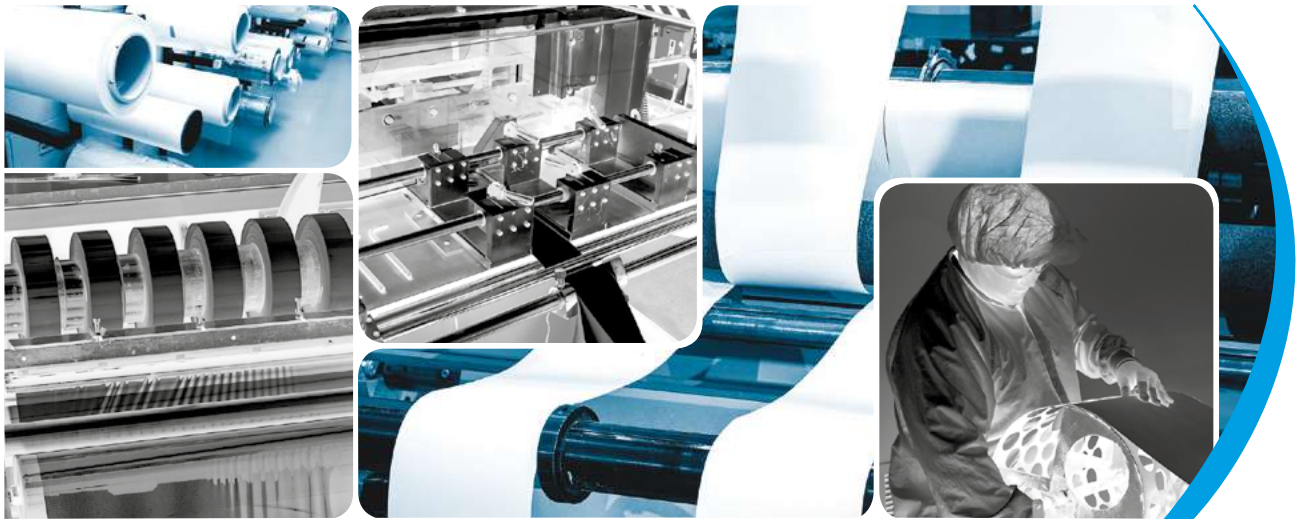
Specifications

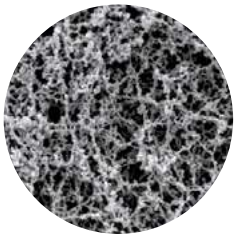
	13 mm	25 mm	47 mm
Materials	Celcon	Polypropylene	Polypropylene
O-rings	PTFE	Silicone	Silicone
Filter Size	13 mm	25 mm	47 mm
Prefilter Cap Size	10 mm	22 mm	42 mm
Filtration Area	0.8 cm^2	3.5 cm^2	13.5 cm^2
Diameter	16 mm (0.6 in)	30 mm (1.2 in)	63.5 mm (2.5 in)
Height	35mm (1.4in)	30mm (1.2in)	50mm (2.0in)
Max Liquid Temperature	80°C (176°F)	80°C (176°F)	80°C (176°F)
Max Operating Pressure	2.8 bar (40 psi)	2.9 bar (42 psi)	1.9 bar (71 psi)
Autoclaving	15min/121°C/15psi	20min/121°C/15psi	20min/121°C/15psi
Connections, Inlet	Female Threaded Luer	Female LuerLok	1/4" NPTM, FLS
Connections, Outlet	Male Luer Slip	Male Luer Slip	1/4" NPTM, FLS

Ordering Informations

Item	Description
1220950	Filter Holder Swinney 13mm 5/Pk
1214250	Filter Holder Polypropylene 25mm 10/Pk
1214526	Filter Holder Polypropylene Support Screen 25mm 10/Pk
1262579	Filter Holder Polypropylene 47mm 1/Pk
1214260	Filter Holder Polypropylene 47mm 10/Pk

Filtration Membranes





Cellulose Acetate (CA)

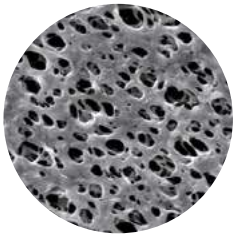
GVS Life Sciences Cellulose Acetate (CA) Filtration Membrane is a supported, hydrophilic membrane that exhibits naturally low protein binding. Composed of cellulose acetate internally supported by an inert polyester web, the resulting membrane has dimensional stability. Low protein binding, Ideal for protein, cell culture media and enzymes filtrations, tissue culture media sterilization, biological fluid filtration and other filtration applications where maximum recovery of proteins is critical.

Characteristics

- Low protein binding, 3.8 µg/cm²
- Hydrophilic
- High throughput
- Superior strength and stability
- Uniform pore structure, consistent flow rates
- Burst strength of 130 psi

Applications

- Protein and enzyme filtration
- Biological fluid filtration sterilization
- Tissue culture media sterilization
- Clarification of aqueous and alcohol solutions
- Cell Culture



Nylon (NY)

GVS Life Sciences Nylon (NY) Membrane is a supported, naturally hydrophilic membrane designed to wet out evenly and retain its superior strength during use in general filtration. Superior strength, resistant to a range of organic solvents. Low extractables. High protein binding capacity.

Characteristics

- Naturally hydrophilic
- Wide chemical compatibility range
- Strength and dimensional stability
- Low extractables

Applications

- Sterilization, clarification of aqueous and organic solvent solutions
- Analytical sample preparation
- Chromatography
- Hydraulic Fluids and Machined Parts

Polyethersulfone (PES)

Hydrophilic membrane. designed to remove particulates during general filtration, low protein and drug binding characteristics make it ideally suited for use in life science applications. Its strength and durability are advantageous during usage that involves aggressive handling or auto- mated equipment. Low protein and drug binding characteristics maximize recovery of critical drugs used in I.V. therapy, chemotherapy and open-heart surgery.

Characteristics

- Very Low Protein Binding
- Fast Flow Rates
- Low Extractables
- Wide Chemical Compatibility Range
- Strength and Dimensional Stability
- Autoclavable

Applications

- Protein and enzyme filtration sterilization
- Biological fluid filtration sterilization
- Tissue culture media sterilization
- Pharmaceutical sterilizing filtration
- Environmental water studies
- Filtration of Aqueous Solutions
- Analytical Sample Preparation
- IC Chromatography
- Sterile Filtration and Clarification
- Cell Culture

Asymmetric Polyethersulfone (PES)

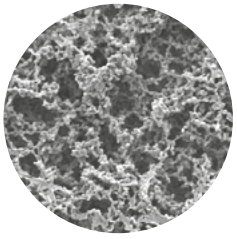
Asymmetric PES enables the fast filtration of aqueous solutions with greater throughput. The PES membrane has low drug and protein binding properties with aqueous solutions. Low ion and metals extractables provide for ideal analysis by ion chromatography and ICP MS.

Characteristics

- Fast flow rate
- High filter capacity
- Low protein binding
- Extended filtration capacity and lifetime
- Higher particle loads and protein concentrations tolerance

Applications

- Prefiltration and Clarification
- Liquid filtration and sterilization
- Ion chromatography
- Gas separation



Nitrocellulose Mixed Esters (NC)

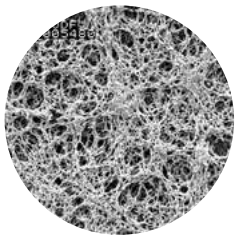
NC membranes are naturally hydrophilic with a rapid flow rate and high throughput, these membranes are composed of a mixture of inert cellulose nitrate and cellulose acetate polymers. This memebrane has a consisten high flow rate for faster filtration, with an uniform pore structure for selectivity. GVS Nitrocellulose membrane has an high binding capacity Manufactured thickness within 10 microns on the same run.

Characteristics

- Hydrophilic for aqueous clarification and particulate capture
- Consistent high flow rate for faster filtration
- Uniform pore structure for selectivity
- Hydrophilic, inert cellulose nitrate
- High binding capacity
- Manufactured thickness within 10 microns

Applications

- Filtration of Aqueous and Organic Solutions
- Analytical Sample Preparation
- Chromatography
- Clarification



Polyvinylidene Difluoride (PVDF)

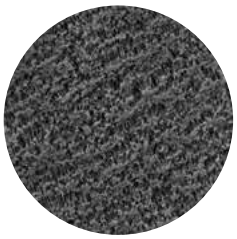
GVS PVDF membrane is naturally hidrophilic memebrane suitable for the sterilization and calrification of biological soluztion. With his high flow rate and low level of extractables, GVS PVDF has a broad chemical compatibility as well as a very low protein binding.

Characteristics

- Hydrophilic for aqueous clarification and particulate capture
- Consistent high flow rate for faster filtration
- Uniform pore structure for selectivity
- Hydrophilic, inert cellulose nitrate
- High binding capacity
- Manufactured thickness within 10 microns

Typical Applications

- Filtration of Aqueous and Organic Solutions
- Analytical Sample Prep, uHPLC
- Chromatography
- Clarification



Polytetrafluoroethylene (PTFE)

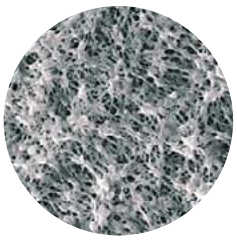
This hydrophobic membrane is chemically and biologically inhert with a superiori strenght to aggressive chemical solvent. GVS PTFE can withstand at high temperature.

Characteristics

- Naturally hydrophobic
- Compatible with strong acids and aggressive solutions
- Improved durability and handling

Typical Applications

- Filtration of strong acids and aggressive solutions
- Venting applications
- Phase separations
- Aerosol sampling



Hydrophilic Polytetrafluoroethylene (PTFE HP)

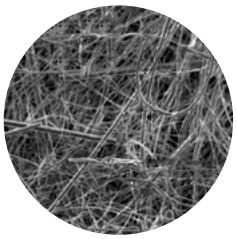
PTFE HP membrane is compatible with organic solvents, acids, and basic solutions. Hydrophilic PTFE membrane has low drug and protein binding properties with excellent aqueous and solvent compatibility. High sample recoveries and low ion and UV extractables provide for ideal analysis by µHPLC and LC/ MS.

Characteristics

- No need to pre-wet the membrane
- No need to flush membrane of pre-wetting chemicals
- No pre-wetting means production time reduction
- Reduce potential interference with biological processes
- Longer shelf life because the filters are stored and shipped dry

Applications

- Molecular identification
- Structural determination
- Pharmacokinetics
- Drug discovery and development
- Drug testing
- Environmental monitoring
- Food safety monitoring
- Oil composition determination



Glass Fiber (GF)

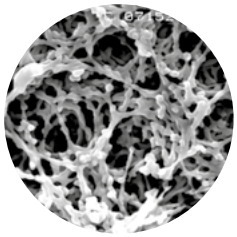
GVS Glass Fiber has en excellent wet strenght for each handling, and the elimination of sample comtamination increase the memebrane integrity. This hydrophilic material is used also as pre filter to extend the membrane life.

Characteristics

- Acrylic binder
- High dirt holding capacity
- Biologically inert
- Bonding reduces media migration

Applications

- Filtration of Aqueous and Organic Solutions
- Analytical Sample Preparation
- Difficult to Filter Solutions
- Fuel Hydraulic Fluids and Machined Parts



Regenerated Cellulose (RC)

Hydrophilic membrane. Resistant to a very wide range of solvents. Suitable for use with either aqueous solutions or organic solvents. Compatible with HPLC solvents. Very low protein binding capacity and hence excellent for protein recovery applications.

Characteristics

- Hidrophilic membrane
- Suitable for major applications
- Low non specific adsorption

Applications

- Filtration of Aqueous and Organic Solutions
- Analytical Sample Prep
- Chromatography
- Clarification
- Protein Chemistry

Polypropylene (PP)

GVS Polyethilene membrane is an universal media for all analytical applications. This media is resistant to aggressive organic solvent, and is highly recomended for filtering HPLC solution, as well as for the Ion Chromatography.

Characteristics

- High flexibility
- High Strenght, virtually indestructible
- No need for pre-wetting
- Compatible with organic solvents

Applications

- Aqueous and organic solvent filtration
- Analytical Sample Preparation requiring low detection levels
- Ion chromatography
- Total digest for heavy metals

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