

# Syringe Filter Guide

**Microlab Scientific Co., Ltd** provides more than seven series of syringe filters under the brand "**Microlab Scientific**", and products produced in our own plant named Wenzhou Maikai Laboratory Co., Ltd in China. The syringe filter ranges with various membrane materials, pore sizes, diameters and special designs to match all of your requirements.

## Hot sales Series:

Easyfil™, Chromfil™, Biofil™, Microfil™, Bestfil™, GDXfil™, DLLfil™.

## Membrane Material:

Nylon, PES, CA, MCE, PTFE, PVDF, PP, PC, PVDF/L, PTFE/L, GF, RC, Mesh.

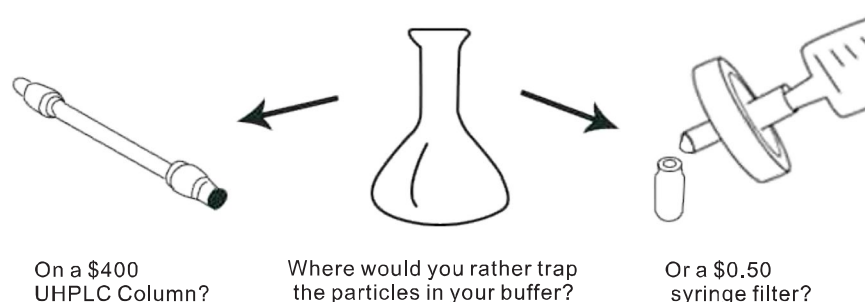
## Pore Size:

Ranges from 0.1µm~10µm.

## Diameter:

4mm, 13mm, 17mm, 25mm, 30/33mm, 50mm and so on.

## Why use syringe filters?



## How to select the syringe filter?

Step one: choose the suitable filter media

Solvents		Aqueous			
Non-Aqueous	Aqueous Mixtures	Hydrophilic			
Hydrophobic	Hydrophilic	Biological Samples	Sterilization Microbial Analysis	HPLC and GC Biological Sample	Solvent Mixtures Sample Prep
PTFE, PVDF	Nylon, PTFE/L, PVDF/L, RC	PES, CA, PVDF/L, GF	MCE/NC	PVDF/L, RC	Nylon, PTFE/L, PVDF/L, RC

Step two: choose the right diameter

Series	Diameter (mm)	Filtration Area(cm <sup>2</sup> )	Holdup Volume(µl)	Sample Volume(ml)	Burst Pressure(psi)	Housing Material
Biofil	4	0.125	5	1	87	PP
Chromfil/Easyfil	13	0.92	10	10	87	PP
Biofil	13	1.09	20	10	87	PP
Microfil	17	1.65	20	20	87	PP
Chromfil/Easyfil	25	2.98	50	100	87	PP
Biofil	25	4.08	100	100	87	PP
DLLfil	28	5	200	150	87	PC
Bestfil	33	4.6	80	120	87	MBS
Microfil	33	4.9	100	120	87	PP



### Biofil™ Syringe Filter

- ▶ Diameter: 4mm, 13mm, 25mm.
- ▶ PP/GF prefilter structure: suitable for high particulate filtration.

### Chromfil™ Syringe Filter

- ▶ Diameter: 13mm, 25mm.
- ▶ Color coding with rim easy for identification and holding.
- ▶ One layer membrane structure, low extractable.



### Microfil™ Syringe Filter

- ▶ Diameter: 17mm, 33mm.
- ▶ Color coding easy for identification.
- ▶ PP/GF prefilter structure: suitable for high particulate filtration.



### GDXfil™ Syringe Filter

- ▶ Diameter: 25mm.
- ▶ Four layers membrane structure: best choice for high particulate filtration.



### DLLfil™ Syringe Filter

- ▶ Diameter: 28mm.
- ▶ PC housing resistance for high aggressive and high temperature solutions.
- ▶ PP/GF prefilter structure: suitable for high particulate filtration.



### Bestfil™ Syringe Filter

- ▶ Diameter: 33mm.
- ▶ Color coding easy for identification.
- ▶ Resistance high pressure.

# Filter Series

## Biofil™ Syringe Filter

Lab Filtration



### Introduction

- ▶ Three diameters: 4mm, 13mm, 25mm.
- ▶ Ultrasonic welding: bigger effective filtration area than injection molding.
- ▶ Code marked: easy to identify the pore size and filter media.
- ▶ Prefilter design: ideal for high throughput filtration of particle-laden solutions.

### Application

- ▶ Chromatography sample preparation.
- ▶ Particle-laden solutions filtration.
- ▶ General particulate removal.

## Technical Specification

Filter Media	Nylon/CA/MCE/PES/GF/RC/PP/PTFE /Hydrophilic PTFE/ PVDF/Hydrophilic PVDF		
Housing	PP		
Diameter	4mm	13mm	25mm
Pore Size	0.1µm, 0.22µm, 0.45µm, 1.0µm, 3.0µm, 5.0µm		
Sealing Technology	Ultrasonic welding		
Filtration Area	0.125cm <sup>2</sup>	1.09cm <sup>2</sup>	4.08cm <sup>2</sup>
Inlet/Outlet Connections	Female inlet lock / Male outlet slip		
Max. Operation Pressure	6bar@23°C		

## Order Information

	4mm		13mm		25mm	
	0.22µm	0.45µm	0.22µm	0.45µm	0.22µm	0.45µm
Nylon	S04NY022B	S04NY045B	S13NY022B	S13NY045B	S25NY022B	S25NY045B
CA	S04CA022B	S04CA045B	S13CA022B	S13CA045B	S25CA022B	S25CA045B
MCE	S04MCE022B	S04MCE045B	S13MCE022B	S13MCE045B	S25MCE022B	S25MCE045B
PES	S04PES022B	S04PES045B	S13PES022B	S13PES045B	S25PES022B	S25PES045B
PTFE	S04PTB022B	S04PTB045B	S13PTB022B	S13PTB045B	S25PTB022B	S25PTB045B
Hydrophilic PTFE	S04PTL022B	S04PTL045B	S13PTL022B	S13PTL045B	S25PTL022B	S25PTL045B
PVDF	S04PVB022B	S04PVB045B	S13PVB022B	S13PVB045B	S25PVB022B	S25PVB045B
Hydrophilic PVDF	S04PVL022B	S04PVL045B	S13PVL022B	S13PVL045B	S25PVL022B	S25PVL045B
RC	S04RC022B	S04RC045B	S13RC022B	S13RC045B	S25RC022B	S25RC045B
PP	S04PP022B	S04PP045B	S13PP022B	S13PP045B	S25PP022B	S25PP045B
	0.7µm	1.0µm	0.7µm	1.0µm	0.7µm	1.0µm
GF	S04GF070B	S04GF100B	S13GF070B	S13GF100B	S25GF070B	S25GF100B

Note: 1. Package: 100pcs/pk; Non Sterile.  
2. Other pore sizes are available.

# Filter Series

## Chromfil™ Syringe Filter



### Introduction

- ▶ Diameter: 13mm, 25mm.
- ▶ Injection molding: high pressure resistant.
- ▶ Color coding with rim: more popular and easier to identify the pore size and filter media.

### Application

- ▶ Chromatography sample preparation.
- ▶ General particulate removal.

## Technical Specification

Filter Media	Nylon/CA/MCE/PES/GF/RC/PP/ PTFE/Hydrophilic PTFE/ PVDF/Hydrophilic PVDF	
Housing	PP	
Diameter	13mm	25mm
Pore Size	0.1µm, 0.22µm, 0.45µm, 1.0µm, 3.0µm, 5.0µm	
Sealing Technology	Injection molding	
Filtration Area	1.09cm <sup>2</sup>	4.08cm <sup>2</sup>
Inlet/Outlet Connections	Female inlet lock / Male luer slip	
Max. Operation Pressure	6bar@23°C	

## Order Information

	13mm		25mm	
	0.22µm	0.45µm	0.22µm	0.45µm
Nylon	S13NY022C	S13NY045C	S25NY022C	S25NY045C
CA	S13CA022C	S13CA045C	S25CA022C	S25CA045C
MCE	S13MCE022C	S13MCE045C	S25MCE022C	S25MCE045C
PES	S13PES022C	S13PES045C	S25PES022C	S25PES045C
PTFE	S13PTB022C	S13PTB045C	S25PTB022C	S25PTB045C
Hydrophilic PTFE	S13PTL022C	S13PTL045C	S25PTL022C	S25PTL045C
PVDF	S13PVB022C	S13PVB045C	S25PVB022C	S25PVB045C
Hydrophilic PVDF	S13PVL022C	S13PVL045C	S25PVL022C	S25PVL045C
RC	S13RC022C	S13RC045C	S25RC022C	S25RC045C
PP	S13PP022C	S13PP045C	S25PP022C	S25PP045C
	0.7µm	1.0µm	0.7µm	1.0µm
GF	S13GF070C	S13GF100C	S25GF070C	S25GF100C

Note: 1. Package: 100pcs/pk; Non Sterile. 2. Other pore sizes are available.  
Color: Nylon(Purple); CA/MCE(Blue); PES(Green); PTFE(Red);  
PVDF/RC/(Purplish Red); GF/PP(Brown).

# Filter Series

## Microfil™ Syringe Filter

Lab Filtration



### Introduction

- ▶ Diameter: 17mm, 30/33mm.
- ▶ Injection molding: High pressure resistant.
- ▶ Color coding: More popular and easier to identify the pore size and filter media.
- ▶ Larger filtration areas: (bigger than 33mm) increased sample throughput.

### Application

- ▶ Chromatography sample preparation.
- ▶ Environmental samples.
- ▶ General particulate removal.
- ▶ Dissolution testing.
- ▶ Removal of protein precipitates.

## Technical Specification

Filter Media	Nylon/CA/MCE/PES/GF/RC/PP/PTFE/ Hydrophilic PTFE/PVDF/Hydrophilic PVDF
Housing	PP
Diameter	17mm/33mm
Pore Size	0.1µm, 0.22µm, 0.45µm, 1.0µm, 3.0µm, 5.0µm
Sealing Technology	Injection molding
Filtration Area	1.65cm <sup>2</sup> 5.39cm <sup>2</sup>
Inlet/Outlet Connections	Female luer lock / Male luer slip
Max. Operation Temperature	50°C
Max. Operation Pressure	6bar@23°C

## Order Information

	17mm		33mm	
	0.22µm	0.45µm	0.22µm	0.45µm
Nylon	S17NY022M	S17NY045M	S33NY022M	S33NY045M
CA	S17CA022M	S17CA045M	S33CA022M	S33CA045M
MCE	S17MCE022M	S17MCE045M	S33MCE022M	S33MCE045M
PES	S17PES022M	S17PES045M	S33PES022M	S33PES045M
PTFE	S17PTB022M	S17PTB045M	S33PTB022M	S33PTB045M
Hydrophilic PTFE	S17PTL022M	S17PTL045M	S33PTL022M	S33PTL045M
PVDF	S17PVB022M	S17PVB045M	S33PVB022M	S33PVB045M
Hydrophilic PVDF	S17PVL022M	S17PVL045M	S33PVL022M	S33PVL045M
RC	S17RC022M	S17RC045M	S33RC022M	S33RC045M
PP	S17PP022M	S17PP045M	S33PP022M	S33PP045M
	0.7µm	1.0µm	0.7µm	1.0µm
GF	S17GF070M	S17GF100M	S33GF070M	S33GF100M

Note: 1. Package: 100pcs/pk; Non Sterile. 2. Other pore sizes are available.  
Color: Nylon (Yellow); CA/MCE (Blue); PES (Green); PTFE (Red);  
PVDF/RC (Purplish Red); GF/PP (Brown).

# Filter Series

## GDXfil™ Syringe Filter



### Introduction

- ▶ Diameter: 25mm.
- ▶ Novel prefiltration stack of 100% borosilicate.
- ▶ Glass fibers: facilitates exceptional loading capacity with fast flow rates.
- ▶ Code marked: easy to identify the pore size and filter media.
- ▶ Big volume design: processes three to seven times more sample volume.

### Application

- ▶ Dissolution testing.
- ▶ Concentration analysis.
- ▶ Environmental samples.
- ▶ Chromatography sample preparation.
- ▶ General particulate removal.

## Technical Specification

Filter Media	Nylon/CA/MCE/PES/RC/PTFE/PVDF/ Hydrophilic PTFE/Hydrophilic PVDF
Housing	PP
Diameter	25mm
Pore Size	0.22µm, 0.45µm
Sealing Technology	Ultrasonic Welding
Filtration Area	4.6cm <sup>2</sup>
Inlet/Outlet Connections	Female luer lock / Male luer slip
Max. Operation Pressure	5.2bar@23°C

## Order Information

Pore Size	Nylon	CA	PTFE	Hydrophilic PTFE	PVDF
0.22	S25NY022G	S25CA022G	S25PTB022G	S25PTL022G	S25PVB022G
0.45	S25NY045G	S25CA045G	S25PTB045G	S25PTL045G	S25PVB045G
Hydrophilic PVDF	PES	RC	GF	PP	MCE
S25PVL022G	S25PES022G	S25RC022G	S25GF022G	S25PP022G	S25MCE022G
S25PVL045G	S25PES045G	S25RC045G	S25GF045G	S25PP045G	S25MCE045G

Note: Other Pore size and Filter Media is available.

# Filter Series

## DLLfil™ Syringe Filter

Lab Filtration



### Introduction

- ▶ Diameter: 28mm even bigger than millipore's 33mm syringe filter.
- ▶ PC housing: high temperature resistance and broad chemical resistance.
- ▶ Double luer lock.
- ▶ Prefilter options: PP, GF.
- ▶ Sterilization available.

### Application

- ▶ HPLC sample preparation.
- ▶ Environmental samples.
- ▶ General particulate removal.
- ▶ Removal of protein precipitates.
- ▶ High temperature liquid filtration.

### Technical Specification

Filter Media:	CA/PES/PTFE/PVDF/ Hydrophilic PTFE/Hydrophilic PVDF
Housing	PC
Diameter	28mm
Pore Size	0.22µm, 0.45µm
Sealing Technology	Ultrasonic Welding
Filtration Area	5cm <sup>2</sup>
Inlet/Outlet Connections	Female Luer Lock Inlet /Male Luer Lock Outlet
Max. Operation Pressure	6bar@23°C

### Order Information

Pore Size	Nylon	CA	PTFE	Hydrophilic PTFE	PVDF
0.22	S28NY022D	S28CA022D	S28PTB022D	S28PTL022D	S28PVB022D
0.45	S28NY045D	S28CA045D	S28PTB045D	S28PTL045D	S28PVB045D
Hydrophilic PVDF	PES	RC	GF	PP	MCE
S28PVL022D	S28PES022D	S28RC022D	S28GF022D	S28PP022D	S28MCE022D
S28PVL045D	S28PES045D	S28RC045D	S28GF045D	S28PP045D	S28MCE045D

Note: Other pore size and filter media is available.



# Filter Series

## Bestfil™ Syringe Filter



### Introduction

- ▶ **Faster flow rate .**  
The larger filter surface area increases flow rate and throughput. It also makes it easier to filter solutions because it reduces the pressure required to empty the syringe.
- ▶ **Higher operating pressure.**  
Bestfil™ have a maximum housing pressure of 10bar (145 psi), which means you can filter solutions faster than before.
- ▶ **Color-coded.**  
The color-coded band on the Bestfil™ housing clearly indicates which membrane is inside.

### Application

- ▶ HPLC sample preparation.
- ▶ Biological solutions filtration.
- ▶ General particulate removal.
- ▶ Removal of protein precipitates.

### Technical Specification

Filter Media	Nylon/CA/GF/PES/PTFE/RC/MCE Hydrophilic PTFE/Hydrophilic PVDF		
Pore Size	0.1µm, 0.22µm, 0.45µm, 1.0µm, 3.0µm,5.0µm		
Connections	Inlet:Female Luer Lock    Outlet:Male Luer Slip		
Housing	MBS	Diameter	33mm
Sealing Technology	Injection molding	Filtration Area	5.39cm <sup>2</sup>
Holdup Volume(µl)	<200	Sample Volume(ml)	<200
Maximum Operating Temperature(°C)	50	Max. Operation Pressure	87psi (6.0 bar) at 20

### Order Information

Pore Size	Nylon	CA	PTFE	Hydrophilic PTFE	PVDF
0.22	S33NY022B	S33CA022B	S33PTB022B	S33PTL022B	S33PVB022B
0.45	S33NY045B	S33CA045B	S33PTB045B	S33PTL045B	S33PVB045B
Hydrophilic PVDF	PES	RC	GF	PP	MCE
S33PVL022B	S33PES022B	S33RC022B	S33GF022B	S33PP022B	S33MCE022B
S33PVL022B	S33PES045B	S33RC045B	S33GF045B	S33PP045B	S33MCE045B

Note: 1. Diameter:33mm;package:100pcs/pk.  
2.Other pore size and Filter Media is available.

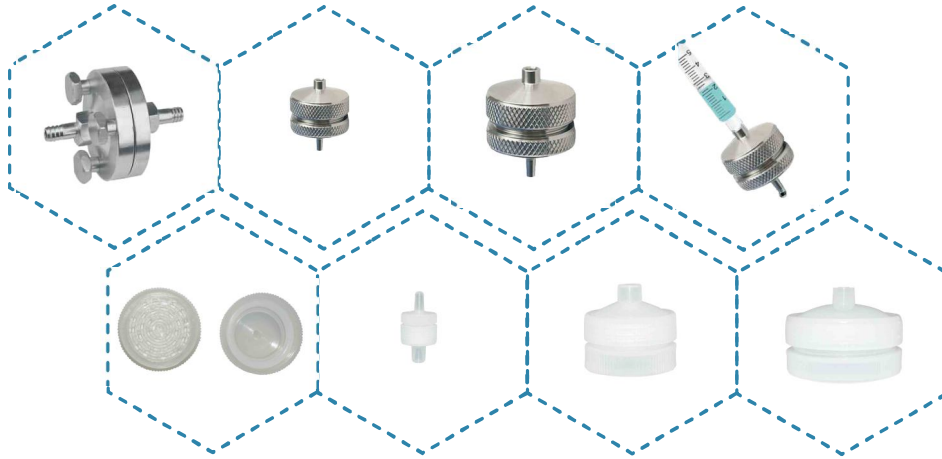


# Filter Series

## Reusable Syringe Filter Holder

### Introduction

- ▶ Plastic syringe filter holder made of pure polypropylene.
- ▶ Stainless steel syringe filter holder made of 316L stainless steel.



### Order Information

P/N	Description	Packing
SFH013P	Reusable Syringe Filter Holder, PP Dia. 13mm	10
SFH025P	Reusable Syringe Filter Holder, PP Dia. 25mm	10
SFH050P	Reusable Syringe Filter Holder, PP Dia. 50mm	10
SFH013S	Reusable Syringe Filter Holder, 316L Stainless Steel Dia. 13mm	1
SFH025S	Reusable Syringe Filter Holder, 316L Stainless Steel Dia. 25mm	1
SFH047S	Reusable Syringe Filter Holder, 316L Stainless Steel Dia. 47mm	1

# Filter Series

## Vent Filter



### Introduction

50mm vent filters are sterilizing filter for venting and liquid solutions.

### Application

- ▶ Sterile venting of carboys, filling vessels, fermentation tanks, bioreactors.
- ▶ Protect pump components from liquid damage by using between a pump and receiving vessel.
- ▶ Chromatography solutions.

## Technical Specification

Filter Media	PTFE/ PES/Nylon66 /PP/GF/PVDF
Housing	PP
Diameter	50mm
Pore Size, $\mu\text{m}$	0.22 $\mu\text{m}$ , 0.45 $\mu\text{m}$
Sealing Technology	Thermal Bonding, No Adhesives
Filtration Area	$\geq 0.021\text{ft}^2$
Inlet/Outlet Connections	7~13 mm stepped hose barb connection with 6:100 Luer slip
Max.Operation Pressure	Forward: 3.5 bar @ 23°C and 3.0 bar @ 60°C for liquid; 3.0 bar @ 23°C and 2.5 bar @ 60°C for air & gas.
Sterilization	By EO or 3 autoclave cycles of 30 min at 123°C

## Order Information

Pore Size	Nylon	CA	PTFE	Hydrophilic PTFE	PVDF	Hydrophilic PVDF	PES
0.22	S50NY022	S50CA022	S50PTB022	S50PTL022	S50PVB022	S50PVL022	S50PES022
0.45	S50NY045	S50CA045	S50PTB045	S50PTL045	S50PVB045	S50PVL045	S50PES045

Note: 1. Diameter:50mm;package:25pcs/pk.  
2. Other pore size and Filter Media is available.



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