

Syringe Filters

Whatman offers a comprehensive range of disposable syringe filter devices designed to provide fast and efficient filtration of aqueous and organic solutions. They are made with a wide variety of membrane filters with a polypropylene or polycarbonate housing using the most advanced methods and design features available today. These syringe filters are suitable for numerous applications in pharmaceutical, environmental, biotechnology, food/beverage, and agricultural testing laboratories.

Whatman syringe filters are composed of either pure polypropylene or polycarbonate housing, and heat sealed without the use of glues or sealants.

Safety – Applicable to ALL Syringe Filters

Syringe use can result in high pressure. The smaller the syringe, the higher the pressure that can be generated. As a general guide, the following pressures can be obtained by hand with the syringes indicated:

- 20 ml – 30 psi (2 bar)
- 10 ml – 50 psi (3.4 bar)
- 5 ml – 75 psi (5.2 bar)
- 3 ml – 100 psi (6.9 bar)
- 1 ml – 150 psi (10.3 bar)

Individual users should determine the pressure they generate by hand with a specific size syringe and take appropriate safety precautions not to exceed the recommended rating for the device used. If the limitations are exceeded, the device may burst.

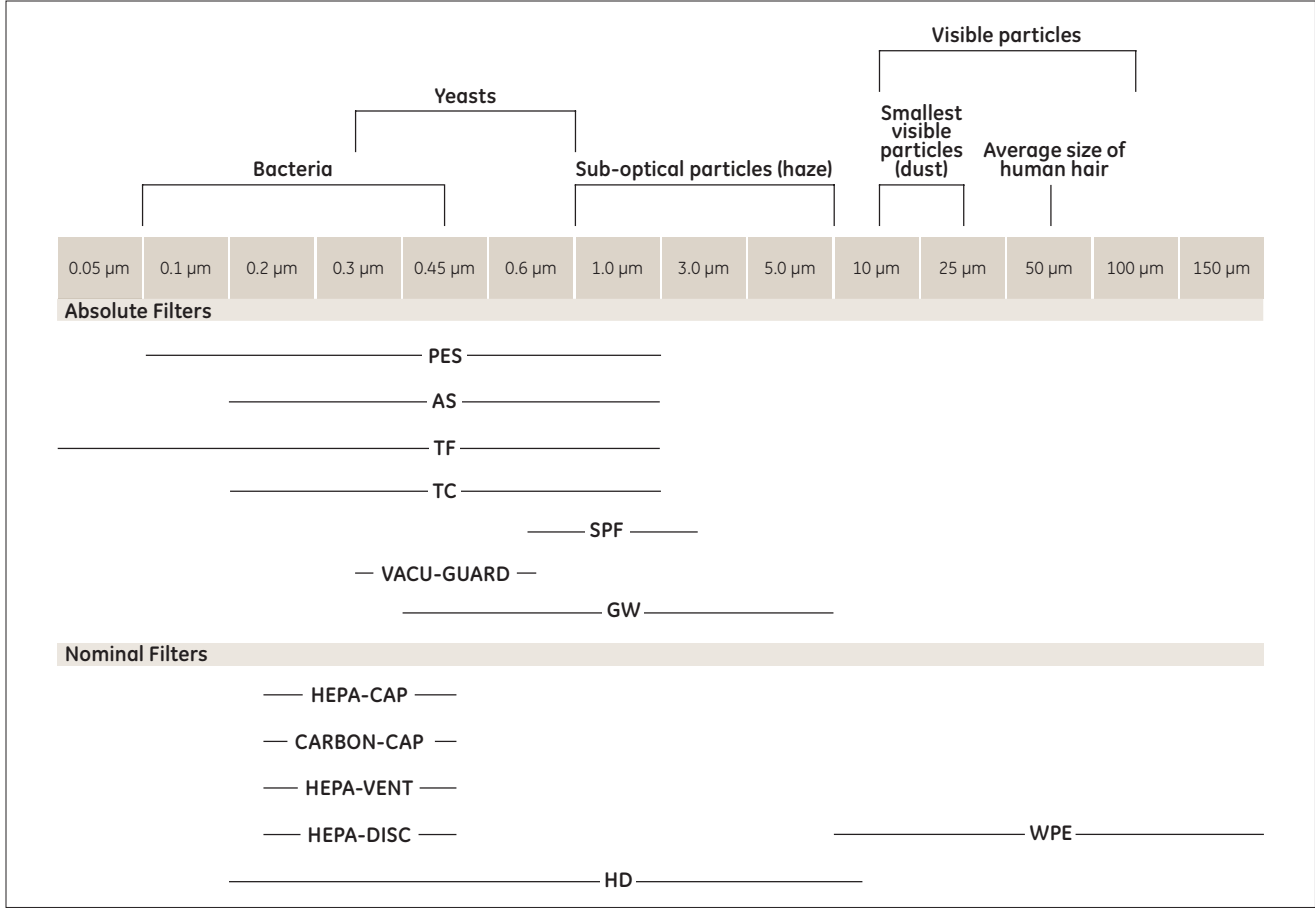
Product Overview – Syringe Filters

Diameter (mm)	Filters	Features	Media
10, 25	Anotop	<ul style="list-style-type: none"> Made of Anopore membrane 	Anopore
10, 25	Anotop Plus	<ul style="list-style-type: none"> Suitable for ion chromatography Low levels of anion leaching 	Anopore
13, 25	GD/X	<ul style="list-style-type: none"> Contains proprietary prefiltration stack of Whatman GMF 150 and Grade GF/F 3x flow rates compared to unprotected membrane 	CA, PTFE, Nylon, PP, PES, PVDF, GMF, RC
25	GD/XP	<ul style="list-style-type: none"> Contains proprietary polypropylene prefiltration stack Suitable for inorganic ion analysis 	Nylon, PVDF, PP, PES, PTFE, Depth Polypropylene
4, 13, 25	Puradisc	<ul style="list-style-type: none"> Designed for manual operation 	PTFE, Nylon, PP, PES, CA PVDF, GMF
30	Puradisc FP	<ul style="list-style-type: none"> Polycarbonate housing 	CA, CN
25	Roby 25	<ul style="list-style-type: none"> Designed to be compatible with the major dissolution test systems 	CA, Nylon, RC, GMF
13, 30	ReZist	<ul style="list-style-type: none"> PTFE for HPLC sample prep 	PTFE
13, 30	SPARTAN	<ul style="list-style-type: none"> Optimized for HPLC sample prep, HPLC certified, batch certificate can be downloaded. Compatible with organic and aqueous solvents 	RC
13	ZC	<ul style="list-style-type: none"> Designed to be Caliper (Zymark) compatible (ZC) for automated robotic systems 	Nylon, PVDF, PTFE

CA – Cellulose Acetate
 CN – Cellulose Nitrate
 GMF – Glass Microfiber

PES – Polyethersulfone
 PP – Polypropylene
 PTFE – Polytetrafluoroethylene

PVDF – Polyvinylidene Difluoride
 RC – Regenerated Cellulose



Syringe filters are available in 4, 10, 13, 25, and 30 mm sizes – not all combinations may be available.

GD/X Syringe Filters

The GD/X™ range is specifically designed for high particulate loaded samples. Constructed of a pigment-free polypropylene housing with a prefiltration stack of Whatman GMF 150 (graded density) and GF/F glass microfiber media, these filters eliminate sample contamination and allow you to filter even the most difficult samples with less hand pressure. GD/X syringe filters can process three to seven times more sample volume than standard syringe filters.

GMF 150 and GF/F are produced from 100% borosilicate glass microfiber. The innovative, graded density GMF 150 medium has a coarse top layer meshed with a fine bottom layer that retains particles to 1.0 µm. A GF/F filter then retains particles down to 0.7 µm. The prefilter stack ends with a final membrane.



GD/X Syringe filter

GD/X filter construction facilitates exceptional loading capacity with fast flow rates. This prevents the build up of back pressure typically caused by the blocking of an unprotected membrane.

Features

- 13 and 25 mm diameter syringe filters
- 13 mm devices for samples up to 10 ml and 25 mm devices for samples greater than 10 ml (however, the volume of sample that can be filtered through each filter depends on the characteristics of the sample)
- Sterile options
- Pigment-free polypropylene housing
- Prefiltration stack of Whatman GMF 150 (graded density) and GF/F glass microfiber media

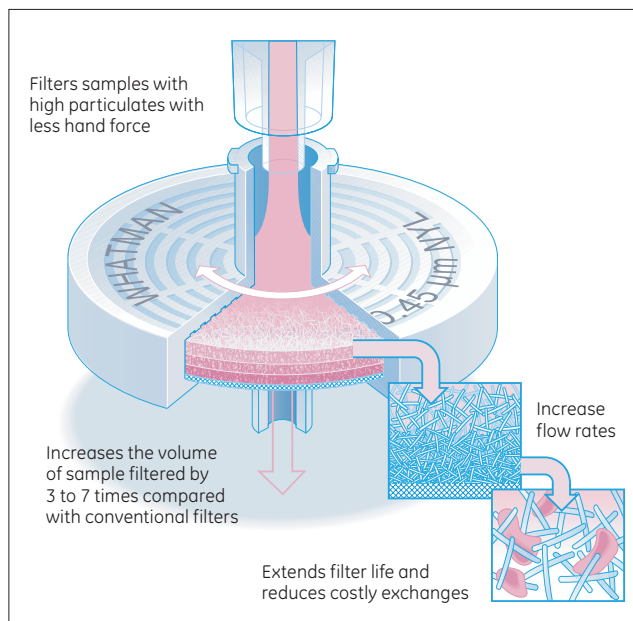
Benefits

- Eliminates sample contamination
- Requires less hand pressure, even with the most difficult samples
- Processes three to seven times more sample volume

Applications

GD/X syringe filters are excellent for heavily particulate-laden samples found in:

- Dissolution testing
- Content uniformity
- Concentration analysis
- Routine sample preparation
- Food analysis
- Environmental samples
- Composite assay



Typical Data – GD/X Syringe Filters

	GD/X 13 mm	GD/X 25 mm
Housing	Polypropylene (pigment free)	Polypropylene (pigment free)
Filtration area	1.3 cm ²	4.6 cm ²
Maximum pressure	100 psi (6.9 bar)	75 psi (5.2 bar)
Volume hold-up – full housing – with air purge	0.5 ml 50 µl (approx)	1.4 ml 250 µl (approx)
Dimensions	21.6 × 29.8 mm	20.8 × 29.8 mm
Weight	3 g (approx)	3 g (approx)
Flow direction	Flow should enter from the inlet	Flow should enter from the inlet
Inlet connection	Female luer lock	Female luer lock
Outlet connection	Male luer	Male luer
Sterilization	Autoclave at 121°C (131°C max) at 15 psi (1 bar) for 20 min.	Autoclave at 121°C (131°C max) at 15 psi (1 bar) for 20 min.
Biosafe	All materials pass USP Class VI	All materials pass USP Class VI
Glass microfiber prefiltration media	100% borosilicate glass fiber GMF 150 10 µm: 1 µm GF/F 0.7 µm	100% borosilicate glass fiber GMF 150 10 µm: 1 µm GF/F 0.7 µm

Ordering Information – GD/X Syringe Filters

Pore Size (µm)	Catalog Number	Media	Quantity/Pack
GD/X 13 mm – Nonsterile			
0.2	6880-1302	CA	150
0.45	6880-1304	CA	150
0.2	6870-1302	Nylon	150
0.2	6871-1302	Nylon	1500
0.45	6870-1304	Nylon	150
0.45	6871-1304	Nylon	1500
0.2	6876-1302	PES	150
0.45	6876-1304	PES	150
0.2	6872-1302	PVDF	150
0.45	6872-1304	PVDF	150
0.45	6873-1304	PVDF	1500
0.2	6878-1302	PP	150
0.45	6878-1304	PP	150
0.2	6874-1302	PTFE	150
0.2	6875-1302	PTFE	1500
0.45	6874-1304	PTFE	150
0.45	6875-1304	PTFE	1500
1.6*	6882-1316	GF/A**	150
1.0*	6884-1310	GF/B**	150
1.2*	6886-1312	GF/C**	150

* Glass microfiber particle retention rating

** Contains GMF 150 without the GF/F prefilter

cont.

CA – Cellulose Acetate
GF – Glass Fiber

PES – Polyethersulfone
PP – Polypropylene

PTFE – Polytetrafluoroethylene
PVDF – Polyvinylidene Difluoride

FILTRATION DEVICES | SYRINGE FILTERS

Pore Size (µm)	Catalog Number	Media	Quantity/Pack
GD/X 13 mm – Nonsterile			
2.7*	6888-1327	GF/D**	150
0.7*	6890-1307	GF/F**	150
0.45*	6894-1304	GMF	150
GD/X 25 mm – Nonsterile			
0.2	6880-2502	CA	150
0.2	6881-2502†	CA	1500
0.45	6880-2504	CA	150
0.45	6881-2504	CA	1500
0.2	6869-2502	Nylon high charge (positive)	150
0.45	6869-2504	Nylon high charge (positive)	150
0.2	6870-2502	Nylon	150
0.2	6871-2502	Nylon	1500
0.45	6870-2504	Nylon	150
0.45	6871-2504	Nylon	1500
5.0	6870-2550	Nylon	150
5.0	6871-2550	Nylon	1500
0.2	6876-2502	PES	150
0.2	6905-2502	PES	1500
0.45	6876-2504	PES	150
0.45	6905-2504	PES	1500
0.2	6872-2502	PVDF	150
0.2	6873-2502	PVDF	1500
0.45	6872-2504	PVDF	150
0.45	6873-2504	PVDF	1500
0.2	6878-2502	PP	150
0.45	6878-2504	PP	150
0.45	6879-2504	PP	1500
0.2	6874-2502	PTFE	150
0.2	6875-2502	PTFE	1500
0.45	6874-2504	PTFE	150
0.45	6875-2504	PTFE	1500
0.45	6882-2504	RC	150
0.45	6883-2504	RC	1500
1.6*	6882-2516	GF/A**	150
1.6*	6883-2516	GF/A**	1500
1.0*	6884-2510	GF/B**	150
1.2*	6886-2512	GF/C**	150
2.7*	6888-2527	GF/D**	150
0.7*	6890-2507	GF/F**	150
0.7*	6891-2507	GF/F**	1500
0.45*	6894-2504	GMF**	150
0.45*	6895-2504	GMF**	1500
1.5*	6892-2515	934-AH**	150
0.2	6901-2502	CA	50
0.45	6901-2504	CA	50
0.2	6896-2502	PES	50

cont.

Pore Size (µm)	Catalog Number	Media	Quantity/Pack
GD/X 25 mm – Sterile			
0.45	6896-2504	PES	50
0.2	6897-2502	PES	500
0.45	6897-2504	PES	500
0.2	6900-2502	PVDF	50
0.45	6900-2504	PVDF	50
0.45*	6902-2504	GMF**	50

* Glass microfiber particle retention rating

** Contains GMF 150 without the GF/F prefilter

† Product is only available in the Americas

CA – Cellulose Acetate

GF – Glass Fiber

GMF – Glass Microfiber

PES – Polyethersulfone

PP – Polypropylene

PTFE – Polytetrafluoroethylene

PVDF – Polyvinylidene Difluoride

RC – Regenerated Cellulose

GD/XP Syringe Filters

Whatman GD/XP™ disposable syringe filters are designed for use with samples that require inorganic ion analysis, as levels of ion extractables are minimized. They are also an alternative choice for users requiring a filter that exhibits extremely low protein binding characteristics.

GD/XP syringe filters contain a two layer prefilter stack comprised of 20 µm and 5 µm polypropylene filters. The last stage of filtration is a choice of membrane, which is positioned below the prefilter stack.

Applications

- HPLC sample preparation
- Trace metal analysis
- Sample preparation prior to determination of dissolved heavy metals



Typical Data – GD/XP Syringe Filters

	GD/XP 25 mm
Housing	Polypropylene (pigment free)
Filtration area	4.6 cm ²
Maximum pressure	75 psi (5.2 bar)
Volume hold-up full housing with air purge	1.4 ml 250 µl (approx)
Dimensions	20.8 × 30.0 mm
Weight	3 g (approx)
Flow direction	Flow should enter from the inlet
Inlet connection	Female luer lock
Outlet connection	Male luer
Sterilization	Autoclave at 121°C (131°C max) at 15 psi (1 bar) for 20 min.
Biosafe	All materials pass USP Class VI
Prefiltration media	PP 20 µm: 5 µm

Ordering Information – GD/XP Syringe Filters

Diameter (mm)	Pore Size (µm)	Catalog Number	Media	Hydrophilic	Quantity/Pack
25	0.45	6970-2504	Nylon	Yes	150
25	0.45	6971-2504	Nylon	Yes	1500
25	0.45	6994-2504	PES	Yes	150
25	0.45	6995-2504	PES	Yes	1500
25	0.45	6972-2504	PVDF	Yes	150
25	0.45	6973-2504	PVDF	Yes	1500
25	0.45	6978-2504	PP	No	150
25	0.45	6993-2504	PP	No	1500
25	0.45	6974-2504	PTFE	No	150
25	0.45	6993-2504	DpPP	No	1500

DpPP – Polypropylene Depth Filter
PES – Polyethersulfone
PP – Polypropylene

PVDF – Polyvinylidene Difluoride
PTFE – Polytetrafluoroethylene

Puradisc Syringe Filters

Puradisc™ syringe filters combine premium quality and economy. They are used for the quick, efficient filtration of samples up to 100 ml volume.

Puradisc filters are produced from pigment-free polypropylene or polycarbonate with standard inlet (female luer lock) and outlet (male luer) connections (unless otherwise stated). Options include a sterile, medical-grade blister pack for critical applications and a special tube tip outlet that allows the sample to be accurately dispensed into a micro-vial, eliminating air lock.

Features and Benefits

- Pigment-free polypropylene (polycarbonate for Puradisc 30 and Aqua 30)
- Standard inlet and outlet luer connectors
- Optional sterile, medical-grade blister pack
- Tube-tip format (optional) for accurate dispensing into a micro-vial
- Choice of membrane or glass microfiber filter media
- Choice of filter sizes (4, 13 or 30 mm) to minimize sample loss
- Sterile option for critical applications
- Wide range of membranes

Puradisc 4

Features

- 4 mm diameter syringe filter
- Sample volume up to 2 ml
- Low hold-up volume < 10 µl ensures maximum sample recovery
- Tube-tip format (optional)

Applications

- HPLC samples containing low solid content – filtration will improve column life
- CE (Capillary Electrophoresis) samples – filtration will eliminate spurious peaks
- Sterile filtration of low volume samples
- UV/Vis samples – filter directly into cuvette using tube tip
- Refractometry – filter samples to prevent damage to instrument optics and improve accuracy of results
- Minimizing nonspecific binding to membrane (due to small membrane size)

Puradisc 13

Features

- 13 mm diameter syringe filter
- Sample volume up to 10 ml
- Low hold-up volume < 25 µl ensures maximum sample recovery
- Glass microfiber option available
- Tube-tip format (optional)

Applications

- Biological sample preparation
- HPLC sample preparation



Puradisc 4 syringe filters

Puradisc 25

Features

- 25 mm diameter syringe filter
- Sample volume up to 100 ml
- Low hold-up volumes for maximum sample recovery
- Glass microfiber option available

Applications

- HPLC aqueous sample preparation
- Biological sample preparation
- Buffer solutions
- Salt solutions
- Tissue culture media
- Irrigation solutions
- Sterile isolation



Puradisc 13 syringe filters with tube tip

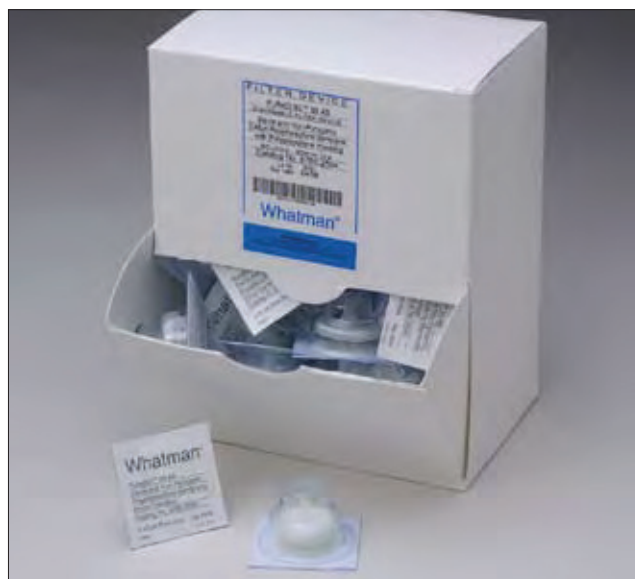
Puradisc 30

Features

- 30 mm diameter
- Larger filtration area (44% greater in comparison with 25 mm)
- Designed for aqueous samples

Applications

- Filtration of protein-containing solutions with minimal protein loss (CA membrane)
- Removal of cellular constituents from solution



Puradisc 25 syringe filters

Puradisc Aqua 30

Specifically designed for filtration of environmental samples prior to COD and DOC analysis. The membranes used in these devices are prewashed prior to assembly of the filters so as to reduce the organic carbon level.



Puradisc 30 syringe filter

Typical Data – Puradisc Syringe Filters

	Puradisc 4	Puradisc 13	Puradisc 25	Puradisc 30/Aqua 30
Housing	Polypropylene	Polypropylene	Polypropylene	Polycarbonate
Filtration area	0.2 cm ²	1.3 cm ²	4.2 cm ²	5.7 cm ²
Maximum pressure	75 psi (5.2 bar)	75 psi (5.2 bar)	75 psi (5.2 bar)	100 psi (6.9 bar)
Volume hold-up full housing with air purge	< 10 µl	< 25 µl	< 100 µl	< 50 µl
Dimensions	10.1 × 23.5 mm	16.3 × 19.8 mm	22.9 × 28.4 mm	26 × 34 mm
Weight	0.55 g	0.95 g	2.7 g	4.7 g
Volume throughput	up to 2 ml	up to 10 ml	up to 100 ml	up to 100 ml
Inlet connection	Female luer lock	Female luer lock	Female luer lock	Female luer lock
Outlet connection	Male luer	Male luer	Male luer	Male luer
Sterilization	Autoclave at 121°C (131°C max)	Autoclave at 121°C (131°C max)	Autoclave at 121°C (131°C max)	Autoclave at 121°C (131°C max)

Ordering Information – Puradisc 4 mm Syringe Filters

Pore Size (µm)	Media			Quantity/Pack
	Nylon	PVDF	PTFE	
Nonsterile with Tube Tip				
0.2	-	6777-0402	-	50
0.45	-	6777-0404	-	50
Sterile without Tube Tip				
0.2	6786-0402	6791-0402	-	50
Nonsterile without Tube Tip				
0.2	6789-0402	6779-0402	6784-0402	100
0.2	6790-0402	6792-0402	6783-0402	500
0.45	6789-0404	6779-0404	6784-0404	100
0.45	6790-0404	6792-0404	6783-0404	500

PTFE – Polytetrafluoroethylene

PVDF – Polyvinylidene Difluoride

Ordering Information – Puradisc 13 mm Syringe Filters (Nonsterile)

Pore Size (µm)	Media CA	Nylon	PES	PVDF	PP	PTFE	GMF	Quantity/Pack
With Tube Tip								
0.1	-	-	-	-	-	6784-1301	-	50
0.2	-	-	-	6777-1302	-	6775-1302	-	50
0.2	-	-	-	6778-1302	-	-	-	50
0.2	-	-	-	6760-1302	-	6761-1302	-	500
0.45	-	-	-	6777-1304	-	6775-1304	-	50
0.45	-	-	-	6796-1304	-	-	-	100
0.45	-	-	-	6760-1304	-	6761-1304	-	500
Without Tube Tip								
0.1	-	6789-1301	-	-	-	-	-	100
0.2	-	6789-1302	6782-1302	6779-1302	6788-1302	6784-1302	-	100
0.2	-	6790-1302	-	6792-1302	6785-1302	6783-1302	-	500
0.2	-	6768-1302	-	6765-1302	-	6766-1302	-	2000
0.45	6771-1304	6789-1304	6782-1304	6779-1304	6788-1304	6784-1304	-	100
0.45	-	6790-1304	6781-1304	6792-1304	6785-1304	6783-1304	6818-1304	500
0.45	6763-1304	6768-1304	-	6765-1304	-	6766-1304	-	2000
1.0	-	-	-	-	-	6784-1310	-	100
5.0	-	-	-	-	-	6784-1350	-	100
GF/F 0.7*	-	-	-	-	-	-	6825-1307	100
GF/B 1.0*	-	-	-	-	-	-	6821-1310	100
GF/C 1.2*	-	-	-	-	-	-	6822-1312	100
GF/A 1.6*	-	-	-	-	-	-	6820-1316	100
GF/A 1.6	-	-	-	-	-	-	6806-1316	500
GF/D 2.7*	-	-	-	-	-	-	6823-1327	100
934-AH 1.5*	-	-	-	-	-	-	6827-1315	100
934-AH 1.5*	-	-	-	-	-	-	6816-1315	2000

* Particle retention rating

CA – Cellulose Acetate
GMF – Glass Microfiber

PES – Polyethersulfone
PP – Polypropylene

PTFE – Polytetrafluoroethylene
PVDF – Polyvinylidene Difluoride

Ordering Information – Puradisc 13 mm Syringe Filters (Sterile)

Pore Size (µm)	Media Nylon	PVDF	PES	Quantity/Pack
Without Tube Tip				
0.1	6786-1301	-	-	
0.2	6786-1302	6791-1302	6780-1302	50
0.45	-	6791-1304	6780-1304	50

PES – Polyethersulfone

PVDF – Polyvinylidene Difluoride

Ordering Information – Puradisc FP 13 Syringe Filters (Sterile)

Pore Size (µm)	Media: RC (Regenerated Cellulose)	Quantity/Pack
With Mini Tip		
0.2	10462940	50
Without Mini Tip		
0.2	10462945	50

Ordering Information – Puradisc 25 mm Syringe Filters

Pore Size (µm)	Media Nylon	PES	PVDF	PP	PTFE	GMF	DpPP	Quantity/Pack
Sterile Membrane								
0.2	-	6780-2502	-	-	-	-	-	50
0.2	-	6794-2512	-	-	-	-	-	1000
0.45	-	6780-2504	-	-	-	-	-	50
0.45	-	6794-2514	-	-	-	-	-	1000
1.0	-	6780-2510	-	-	-	-	-	50
Nonsterile Membrane								
0.1	-	-	-	-	6784-2501	-	-	50
0.1	-	-	-	-	6798-2501	-	-	1000
0.2	6750-2502	-	6746-2502	6786-2502	6784-2502	-	-	50
0.2	6751-2502	6781-2502	6747-2502	6788-2502	6785-2502	-	-	200
0.2	-	6759-2502	-	-	-	-	-	300
0.2	6753-2502	6794-2502	-	6790-2502	6798-2502	-	-	1000
0.2	-	6794-2512	-	-	-	-	-	1000
0.2	-	6794-2512	-	-	-	-	-	1000
0.45	6750-2504	-	6746-2504	-	6784-2504	-	6786-2504	50
0.45	6751-2504	6781-2504	6747-2504	6788-2504	6785-2504	-	6788-2504	200
0.45	-	6759-2504	-	-	-	-	-	300
0.45	6752-2504	-	-	-	-	-	-	500
0.45	6753-2504	6794-2504	6749-2504	-	6798-2504	-	6790-2504	1000
0.45	-	6794-2514	-	-	-	-	-	1000
0.7 GF/F*	-	-	-	-	-	6825-2517	-	50
0.7 GF/F*	-	-	-	-	-	6825-2527	-	200
0.7 GF/F*	-	-	-	-	-	6787-2520	-	1000
1.0	6750-2510	-	-	-	6784-2510	-	-	50
1.0	6751-2510	6781-2510	-	-	-	-	-	200
1.0	6753-2510	6794-2510	-	-	6798-2510	-	-	1000
1.0 GD 1*	-	-	-	-	-	6783-2510	-	100
1.0 GD 1*	-	-	-	-	-	6792-2510	-	1000
2.0 GD 2*	-	-	-	-	-	6783-2520	-	100

* Particle retention rating

DpPP – Polypropylene Depth Filter

GD – Graded Density

GMF – Glass Microfiber

PES – Polyethersulfone

PP – Polypropylene

PTFE – Polytetrafluoroethylene

PVDF – Polyvinylidene Difluoride

Ordering Information – Puradisc 30 mm Syringe Filters

Pore Size (µm)	Catalog Number	Description	Media Housing	Connection In/Out	Color Code	Quantity/Pack
0.2	10462200*	FP 30 CN-S	CA/PC	FLL/ML	Red	50
0.2	10462701	FP 30 CA	CA/PC	FLL/ML	Red	50
0.2	10462710	FP 30 CA	CA/PC	FLL/ML	Red	100
0.2	10462700	FP 30 CA	CA/PC	FLL/ML	Red	500
0.45	10462100*	FP 30 CA-S**	CA/PC	FLL/ML	White	50
0.45	10462601	FP 30 CA	CA/PC	FLL/ML	White	50
0.45	10462610	FP 30 CA	CA/PC	FLL/ML	White	100
0.45	10462600	FP 30 CA	CA/PC	FLL/ML	White	500

cont.

Pore Size (µm)	Catalog Number	Description	Media Housing	Connection In/Out	Color Code	Quantity/Pack
0.8	10462240*	FP 30 CA-S**	CA/PC	FLL/ML	Green	50
0.8	10462241	FP 30 CA	CA/PC	FLL/ML	Green	50
0.8	10462260*	FP 30 CA-S	CA/PC	FLL/ML	Orange	50
0.8	10462243	FP 30 CA	CA/PC	FLL/ML	Green	500
1.2	10462261	FP 30 CA	CA/PC	FLL/ML	Orange	50
1.2	10462263	FP 30 CA	CN/PC	FLL/ML	Orange	500
5.0	10462000*	FP 30 CN-S	CN/PC	FLL/ML	Black	50
5.0	10462520	FP 30 CN	CN/PC	FLL/ML	Black	50
5.0	10462510	FP 30 CN	CN/PC	FLL/ML	Black	100
5.0	10462500	FP 30 CN	CN/PC	FLL/ML	Black	500
Luer-Lock Outlet						
0.2	10462205*	FP 30 CA-S**	CA/PC	FLL/MLL	Red	50
0.2	10462206	FP 30 CA	CA/PC	FLL/MLL	Red	500
0.2	10462300*	FP 30	PTFE/PC	FLL/ML	-	50
0.2	10462800	FP 30 PTFE	PTFE/PC	FLL/ML	-	500
0.2	10462960*	FP 30 RC-S	RC/PC	FLL/ML	-	50
0.45	10462950*	FP 30 RC-S	RC/PC	FLL/ML	-	50

* Sterile

** Edotoxin-free according to LAL test (USPXXII), sensitivity: 0.25 EU/ml

CA – Cellulose Acetate
CN – Cellulose Nitrate

FLL – Female Luer Lock
ML – Male Luer

MLL – Male Luer Lock
PC – Polycarbonate

RC – Regenerated Cellulose

Ordering Information – Puradisc Aqua 30 mm Syringe Filters

Pore Size (µm)	Catalog Number	Description	Media Housing	Connection In/Out	Color Code	Quantity/Pack
0.45	10462656	Aqua 30 CA	CA/PC	FLL/ML	White	50
0.45	10462655	Aqua 30 CA	CA/PC	FLL/ML	White	100
0.45	10462650	Aqua 30 CA	CA/PC	FLL/ML	White	500

CA – Cellulose Acetate
CN – Cellulose Nitrate

PC – Polycarbonate
FLL – Female Luer Lock

ML – Male Luer
MLL – Male Luer Lock

SPARTAN – HPLC Certified

SPARTAN™ syringe filters ensure reproducible results from the filtration of organic or aqueous solutions for HPLC. For batch-to-batch consistency, the SPARTAN range of filters is tested and certified for the absence of UV-absorbing substances at wavelengths of 210 and 254 nm with water, methanol, and acetonitrile.

Technical Tip:

Download your SPARTAN 13 and 30 batch certificate from the Internet to document the unequalled purity of each batch.

To download, visit the Support section of www.whatman.com. Enter the lot number, and you will receive the lot specific chromatogram and test conditions.



Features

- Ready-to-use filter unit with a hydrophilic, low protein-binding membrane made of regenerated cellulose
- Excellent chemical resistance against the standard aqueous and organic HPLC solvents
- 13 mm diameter with Mini-Tip
- SPARTAN syringe filters are tested and certified for the absence of UV-absorbing substances at wavelengths of 210 and 254 nm with water, methanol, and acetonitrile
- 13 mm diameter with extremely low dead volume < 10 µl

Benefits

- Versatile: Use for any application requiring a chemically resistant, hydrophilic, low protein-binding membrane
- Documented batch-to-batch quality and consistency ensure reproducible results
- 13 mm diameter with Mini-Tip outlet is ideal for filtration into very small sample bottles

Applications

- Filtration of organic and aqueous solutions in HPLC with reproducible results
- Purification of aqueous and organic solutions
- Filtration of protein solutions



SPARTAN 13 with Mini-Tip



SPARTAN 30

Ordering Information – SPARTAN – HPLC Certified Syringe Filters

Diameter (mm)	Pore Size (µm)	Catalog Number	Media/Housing	Connection (In/Out)	Color Code	Quantity/Pack
13	0.2	10463040	RC/PP	FLL/Mini-Tip	Dark Brown	100
13	0.2	10463042	RC/PP	FLL/Mini-Tip	Dark Brown	500
13	0.2	10463100	RC/PP	FLL/ML	Dark Brown	100
13	0.2	10463102	RC/PP	FLL/ML	Dark Brown	500
13	0.45	10463030	RC/PP	FLL/Mini-Tip	Light Brown	100
13	0.45	10463032	RC/PP	FLL/Mini-Tip	Light Brown	500
13	0.45	10463110	RC/PP	FLL/ML	Light Brown	100
13	0.45	10463112	RC/PP	FLL/ML	Light Brown	500
30	0.2	10463060	RC/PP	FLL/ML	Dark Brown	100
30	0.2	10463062	RC/PP	FLL/ML	Dark Brown	500
30	0.45	10463053	RC/PP	FLL/ML	Light Brown	50
30	0.45	10463050	RC/PP	FLL/ML	Light Brown	100
30	0.45	10463052	RC/PP	FLL/ML	Light Brown	500

FLL – Female Luer Lock
ML – Male Luer

PP – Polypropylene
RC – Regenerated Cellulose

ReZist Syringe Filters

The Whatman ReZist™ range of syringe filters has been specifically designed to be resistant to organic solvents. These filters are suitable for the clarification of aggressive organic solvents. ReZist 30 mm filters can also be used as a venting filter for small vessels.

ReZist for HPLC Sample Preparation

Features

- Hydrophobic PTFE membrane is laminated with polypropylene
- 13 mm diameter with Mini-Tip
- 13 mm diameter with extremely low dead volume < 10 µl

Benefits

- Excellent chemical resistance against standard organic HPLC solvents
- 13 mm diameter with Mini-Tip outlet permits filtration into very small sample bottles
- Permits optimal utilization of small sample volumes

ReZist for Air Venting

Features

- Integral, permanently hydrophobic PTFE membranes
- Polypropylene support

Benefits

- Extremely high chemical resistance

Typical Applications – ReZist

Filtration of organic solutions in HPLC	ReZist 13 and 30
Filtration of aggressive solutions	ReZist 13 and 30
1 µm membrane for prefiltration of high solid content solutions	ReZist 13 and 30
Moisture barrier when venting	ReZist 30

Aerosol separation for protecting vacuum pumps	ReZist 30
Sterile venting of small volumes	ReZist 30
Prefiltration of difficult-to-filter aqueous or organic solutions containing particles	ReZist 30/GF92
Air sterilization for tubing systems	ReZist 30

Ordering Information – ReZist

Diameter (mm)	Pore Size (µm)	Catalog Number	Media/Housing	Connection (In/Out)	Color Code	Quantity/Pack
13	0.2	10463703	PTFE/PP	FLL/Mini-Tip	White	100
13	0.45	10463713	PTFE/PP	FLL/Mini-Tip	Green	100
30	0.2	10463500*	PTFE/PP	FLL/ML	White	50
30	0.2	10463503	PTFE/PP	FLL/ML	White	100
30	0.2	10463505	PTFE/PP	FLL/ML	White	500
30	0.45	10463510*	PTFE/PP	FLL/ML	Green	50
30	0.45	10463513	PTFE/PP	FLL/ML	Green	100
30	0.45	10463515	PTFE/PP	FLL/ML	Green	500



ReZist 13 mm PTFE and ReZist 30 mm PTFE

cont.

Diameter (mm)	Pore Size (µm)	Catalog Number	Media/Housing	Connection (In/Out)	Color Code	Quantity/Pack
30	> 1	10463545	GF92/PP	FLL/ML	Natural	50
30	> 1	10463543	GF92/PP	FLL/ML	Natural	100
30	1.0	10463523	PTFE/PP	FLL/ML	Yellow	100
30	1.0	10463525	PTFE/PP	FLL/ML	Yellow	500
30	5.0	10463533	PTFE/PP	FLL/ML	Grey	100
30	5.0	10463535	PTFE/PP	FLL/ML	Grey	500

* Sterile

FLL – Female Luer Lock
GF – Glass Fiber

ML – Male Luer
PP – Polypropylene

PTFE – Polytetrafluoroethylene

Anotop Syringe Filters

Anotop™ syringe filters are a universal solution for numerous filtration applications. Anotop filters can be used with most organic solvents and aqueous materials, and they are suitable for sample volumes up to 100 ml. The distinctive hexagonal housing is manufactured from pigment-free polypropylene to eliminate sample contamination. No wetting agents or adhesives are used in the manufacturing process.

Anotop syringe filters contain the proprietary alumina based Anopore™ membrane and are supplied in three pore sizes. Glass microfiber prefilter versions are available for difficult-to-filter samples.

Anotop 10

Features

- 10 mm diameter syringe filter
- Inorganic membrane
- Capillary pore structure

Benefits

- Low protein binding
- Filters sample volume up to 10 ml
- Low hold-up volume < 20 µl ensures maximum sample recovery
- Sterile formats are available for critical applications

Anotop 10 Plus

The Anotop 10 Plus syringe filter offers the added benefit of an integral glass microfiber prefilter. This unit is designed to enable difficult and hard-to-filter solutions to be filtered without adversely affecting the filtration efficiency of the final membrane. This can eliminate the need for sample clean-up or expensive and time-consuming sequential filtration.

Applications

- Filtration of heavily particulate loaded samples prior to HPLC
- Removal of solids prior to UV/Vis analysis



Anotop 10



Anotop 10 and Anotop 25

Anotop 25

Features

- 25 mm diameter syringe filter
- Filters sample volume up to 100 ml

Applications

- Cold sterilization of growth media
- Phage and virus filtration
- Removal of high molecular weight proteins or polymers
- Liposome extrusion
- Filtration of solvents for spectroanalysis and analytical sample preparation

Anotop 25 Plus

The Anotop 25 Plus syringe filter offers the added benefit of an integral glass microfiber prefilter. This unit is designed to enable difficult and hard-to-filter solutions to be filtered without adversely affecting the filtration efficiency of the final membrane. This can eliminate the need for sample clean-up or expensive and time-consuming sequential filtration.

Applications

- Filtration of tissue culture media
- Clean-up of difficult samples
- Filtration of colloidal material
- Removal of mycoplasma
- HPLC sample preparation
- Biological sample preparation

Anotop IC

Whatman Anotop IC syringe filters are specifically designed for the preparation of samples for subsequent ion chromatography and HPLC analysis. These devices ensure very low levels of anion leaching for ion chromatography testing.

Features

- 10 mm diameter syringe filters
- 25 mm diameter syringe filters
- Each batch certified for IC



Anotop IC

Benefits

- Enhanced consistency of analytical results
- Extended column life
- Certified and guaranteed low levels of anion leaching for improved results

Applications

- Ion chromatography sample preparation
- HPLC sample preparation

Anotop LC

Whatman Anotop LC syringe filters have been specially designed for simple and effective preparation of your samples prior to HPLC. They preserve the life of your column by efficiently removing particulates from your analytical samples. Because the Anotop LC syringe filter is made from pigment free polypropylene and uses the Anopore inorganic membrane, you can be sure that after filtration the level of extractable UV absorbing compounds is minimal.

Features

- Better consistency of analytical results and longer column life
- Extremely low levels of UV absorbing compounds mean better HPLC results
- Easy to use with all sample types

Typical Data – Anotop Syringe Filters

	Anotop 10	Anotop 10 Plus	Anotop 25	Anotop 25 Plus
Housing	Polypropylene	Polypropylene	Polypropylene	Polypropylene
Filtration area	0.78 cm ²	0.78 cm ²	4.78 cm ²	4.78 cm ²
Maximum pressure	100 psi (6.9 bar)	100 psi (6.9 bar)	100 psi (6.9 bar)	100 psi (6.9 bar)
Volume hold-up	< 20 µl	< 30 µl	< 150 µl	< 200 µl
Prefilter type	N/A	Glass microfiber (binderless)	N/A	Glass microfiber (binderless)
Membrane diameter	10 mm	10 mm	25 mm	25 mm
Membrane type	Anopore	Anopore	Anopore	Anopore
Average membrane thickness	60 µm	60 µm	60 µm	60 µm
Device width	15.4 mm	15.4 mm	36.8 mm	36.8 mm
Device length	18.5 mm	18.5 mm	26.3 mm	26.3 mm
Device shape	Hexagonal	Hexagonal	Hexagonal	Hexagonal
Construction process	Thermal weld	Thermal weld	Thermal weld	Thermal weld
Inlet connection	Female luer lock	Female luer lock	Female luer lock	Female luer lock
Outlet connection	Male luer	Male luer	Male luer	Male luer
Protein adsorption	Low	Medium/High	Low	Medium/High
Extractable materials	Low	Low	Low	Low
Cytotoxicity	Non-Cytotoxic	Non-Cytotoxic	Non-Cytotoxic	Non-Cytotoxic

Typical Data – Anotop Syringe Filters

	Anotop 10 IC	Anotop 10 LC	Anotop 25 IC	Anotop 25 LC
Housing	Polypropylene	Polypropylene (pigment free)	Polypropylene	Polypropylene (pigment free)
Filtration area	0.78 cm ²	-	4.78 cm ²	-
Maximum pressure	100 psi (6.9 bar)	-	100 psi (6.9 bar)	-
Volume hold-up with air purge	< 20 µl	< 20 µl	< 150 µl	< 150 µl
Membrane diameter	10 mm	-	25 mm	-
Construction process	Thermal weld	-	Thermal weld	-
Extractable materials	Negligible	-	Negligible	-
Average membrane thickness	60 µm	-	60 µm	-
Device width	15.4 mm	-	36.8 mm	-
Device length	18.5 mm	-	26.3 mm	-
Inlet connection	Female luer lock	-	Female luer lock	-
Outlet connection	Male luer	-	Male luer	-
Membrane type	Anopore	-	Anopore	-

Typical Data – Anotop IC Syringe Filters

Anion	Level (ppb)	Anion	Level (ppb)
Fluoride	< 10	Phosphate	< 75
Chloride	< 15	Nitrite	< 30
Bromide	< 20	Nitrate	< 30
Sulfate	< 30	-	-

Typical average anion leaching levels in 18 MΩ • cm (MegaOhm • cm) water at 20°C

Ordering Information – Anotop Syringe Filters

Pore Size (µm)	Media	Catalog Number	Quantity/Pack
Anotop 10			
0.02	Anopore	6809-1002	50
0.1	Anopore	6809-1012	50
0.2	Anopore	6809-1022	50
0.02	Anopore, sterile	6809-1102	50
0.1	Anopore, sterile	6809-1112	50
0.2	Anopore, sterile	6809-1122	50
Anotop 10 Plus			
0.02	Anopore with prefilter	6809-3002	50
0.1	Anopore with prefilter	6809-3012	50
0.2	Anopore with prefilter	6809-3022	50
0.02	Anopore with prefilter, sterile	6809-3102	50
0.1	Anopore with prefilter, sterile	6809-3112	50
0.2	Anopore with prefilter, sterile	6809-3122	50
Anotop 25			
0.02	Anopore	6809-2002	50
0.1	Anopore	6809-2012	50
0.2	Anopore	6809-2022	50
0.2	Anopore	6809-2024	200
0.02	Anopore, sterile	6809-2102	50
0.1	Anopore, sterile	6809-2112	50
0.2	Anopore, sterile	6809-2122	50
Anotop 25 Plus			
0.02	Anopore with prefilter	6809-4002	50
0.1	Anopore with prefilter	6809-4012	50
0.2	Anopore with prefilter	6809-4022	50
0.02	Anopore with prefilter, sterile	6809-4102	50
0.1	Anopore with prefilter, sterile	6809-4112	50
0.2	Anopore with prefilter, sterile	6809-4122	50
0.2	Anopore with prefilter	6809-4024	200
Anotop 10 IC			
0.2	Anopore	6809-9233	100
0.2	Anopore	6809-9234	200
0.2	Anopore	6809-9244	250
0.2*	Anopore	6839-1212	100
Anotop 10 IC Blister			
0.2	Anopore	6809-9232	50
0.2	Anopore	6809-9235	250
Anotop 10 LC			
0.2	Anopore	2001-0100	100
0.2	Anopore	2001-0200	200
Anotop 25 LC			
0.2	Anopore	2002-5100	100
0.2	Anopore	2002-5200	200

* With tube tip

Roby 25

Roby 25 syringe filters for robotic systems were developed specifically for automated sample filtration systems. Whatman offers Roby syringe filters with various membranes. For difficult-to-filter samples, Roby syringe filters are also available with membranes plus an integral glass fiber prefilter.

The filter housing is made from mechanically stable polypropylene. The external geometry of the filter housing ensures simple and smooth filter transport from the storage turntable to the filtration site and easy filter changing.

Features

- Optimized for Sotax®, Caliper® (Zymark®), and Varian® tablet testers
- Mechanically stable polypropylene

Benefits

- Easy filter changing
- Ensures simple and smooth filter transport

Applications

- Fine filtration of samples in the automatic tablet dissolution test
- Method development with the Roby 25 Filter Validation Kit

Roby 25 Filter Validation Kit

The Roby 25 Filter Validation Kit includes step-by-step instructions for essential selection tests. Instructions include all important properties in an at-a-glance format.

Features

- Six types of filters: six tubes each with 25 filters
- Filter validation protocol with filter selection aid



Roby 25

ZC 13 mm Syringe Filter for Automation

These devices offer an effective alternative to single layer devices and prevent premature membrane clogging.

Features

- 13 mm diameter syringe filters
- For sample volumes up to 10 ml
- High loading capacity for difficult samples
- Choice of membranes and pore sizes available for wide sample compatibility
- Suitable for manual and automated processes

Applications

- Automated sample filtration
- Tablet dissolution tests

Ordering Information – Roby 25 Syringe Filters for Automation

Diameter (mm)	Pore Size (µm)	Description	Catalog Number	Media/Housing	Connection In/Out	Color Code	Quantity/Pack
25	0.45	Roby 25 CA-GF92	10463813	CA-GF/PP	FLL/ML	Green	200*
25	0.45	Roby 25 CA-GF92	10463812	CA-GF/PP	FLL/ML	Green	1000
25	0.45	Roby 25 NL	10463803	NYL/PP	FLL/ML	Translucent yellow	200*
25	0.45	Roby 25 NL-GF92	10463805	NYL-GF/PP	FLL/ML	Yellow	200*
25	0.45	Roby 25 NL-GF92	10463804	NYL-GF/PP	FLL/ML	Yellow	1000
25	0.45	Roby 25 RC	10463807	RC/PP	FLL/ML	Translucent brown	200*
25	0.45	Roby 25 RC-GF92	10463809	RC-GF/PP	FLL/ML	Brown	200*
25	0.7	Roby 25/GF55	10463814	GF/PP	FLL/ML	Natural	200*

cont.

Diameter (mm)	Pore Size (µm)	Description	Catalog Number	Description	Connection In/Out	Color Code	Quantity/Pack
25	0.7	Roby 25/GF55	10463815	GF/PP	FLL/ML	Natural	1000
25	1.0	Roby 25/GF92	10463801	GF/PP	FLL/ML	Natural	200*
25	1.0	Roby 25/GF92	10463800	GF/PP	FLL/ML	Natural	1000
25	-	Filter Validation Kit**	10463898	-	FLL/ML	-	150

* 8 tubes with 25 pieces each

** Filter Validation Kit includes: Roby 25 NL; Roby 25 NL-GF92; Roby 25/RC; Roby 25/RC-GF92; Roby 25/GF55; Roby 25/GF92

FLL - Female Luer Lock
GF - Glass Fiber

ML - Male Luer
NYL - Nylon

PP - Polypropylene
RC - Regenerated Cellulose

Typical Data - ZC 13 mm Syringe Filters

Housing	Polypropylene	Inlet connection	Female slip luer
Dimensions	21.7 × 29.7 mm	Outlet connection	Male luer
Weight	3 g (approx)	Prefiltration media	GMF 150 10 µm: 1 µm and GF/F 0.7 µm
Filtration area	1.3 cm ²	Biosafe	All materials pass USP Class VI
Glass microfiber	100% borosilicate	Maximum pressure	100 psi (6.9 bar)
Hold-up volume full housing with air purge	0.5 ml 50 µl (approx)	Sterilization	Autoclave at 121°C (max 131°C) at 15 psi for 20 min.

Ordering Information - ZC 13 and ZC 25 mm Syringe Filters

Pore Size (µm)	Media	Catalog Number	Protein Binder	Solvent Resistance	Quantity/Pack
ZC 13 mm					
0.2	Nylon with prefilter	6841-1302	High	Good	1000
0.45	Nylon with prefilter	6840-1304	High	Good	200
0.45	PVDF with prefilter	6842-1304	Low	Good	200
0.45	PVDF with prefilter	6843-1304	Low	Good	1000
0.2	PTFE with prefilter	6844-1302	Low	Excellent	200
0.45	PTFE with prefilter	6844-1304	Low	Excellent	200
ZC 25 mm					
0.2	Nylon	6841-2502	-	-	1000
0.45	Nylon	6840-2504	-	-	200
0.45	Nylon	6841-2504	-	-	1000
0.45	PVDF	6842-2504	-	-	200
0.2	PTFE	6844-2502	-	-	200
0.45	PTFE	6844-2504	-	-	200
0.45	PS	6846-2504	-	-	200
0.45	PS	6847-2504	-	-	1000
0.45	PP	6849-2504	-	-	1000
1.6	GF/A	6853-2516	-	-	1000
1.0	GF/B	6855-2510	-	-	200
1.0	GF/B	6854-2510	-	-	1000
1.0	GF/B	6888-2510	-	-	1000
2.7	GF/D	6858-2527	-	-	200
0.7	GF/F	6860-2507	-	-	200
0.45	GMF	6864-2504	-	-	200

PTFE - Polytetrafluoroethylene PVDF - Polyvinylidene Difluoride

Clyde Inline Filter

The most convenient way to filter sterilize and dispense tissue culture media.

- 0.2 µm version typically filter sterilizes 2 liters in one continuous process
- Completely self-contained
- Integral syringe pump provides positive pressure filtration in any location
- Includes flexible tubing and one-way check valve
- Glass microfiber prefilter
- Radiation sterilized and individually packed
- Nonpyrogenic and biosafe

Clyde™ features an asymmetric mixed cellulose ester membrane. Filtration area is 16 cm². Filter housing is acrylic; other materials featured are polypropylene, PVC, and Tygon. Syringe capacity is 20 ml.



Clyde can be used with tissue culture media and aqueous solutions compatible with the cellulose membrane. As Clyde needs no vacuum pump or other power supply, field work applications are also possible.

Ordering Information – Clyde (Sterile)

Pore Size (µm)	Catalog Number	Quantity/Pack
0.2	6740-5002	5
0.45	6740-5004	5

Inline Filters

Whatman inline filters feature a high-purity polypropylene housing to maintain sample purity and are available with a choice of filtration media to suit a range of aqueous and organic samples. They utilize the most advanced construction methods and design features. This level of engineering provides for the finest disposable inline filter devices.

Polydisc Filters

Whatman Polydisc™ 50 mm inline disc filters are designed for larger volume sample filtration in the laboratory, at a pilot plant, or in manufacturing. They are extremely versatile and cost effective. Sample volumes up to 1 liter can be filtered with one device. Polydisc devices can be used in conjunction with a syringe or connected inline via stepped hose barbs.

Polydisc filters feature a high-purity polypropylene housing to maintain sample purity and are available with a choice



of filtration media to suit a range of aqueous and organic samples. The devices are autoclavable and sterile options are available.

Whatman Inline Filter/Degassers (IFD) connect directly into an HPLC line to simultaneously filter and degas the mobile phase as it is being used.

Polydisc AS

The Polydisc AS (Aqueous Solution) family of 50 mm filter devices features a high throughput polyethersulfone membrane, which has low protein binding and no surfactants, developed for use in the pharmaceutical industry. A glass microfiber prefilter extends the life of the membrane and effectively filters heavily contaminated samples. Each Polydisc AS device has a sterility cap on the outlet and is sealed in its own medical-grade clear blister pack, radiation sterilized, and secured in a protective shelf pack.

Features and Benefits

- Radiation sterilized. No EtO residuals
- Barbed hose connections fit multiple tubing sizes
- Integrity-testable (bubble point method)
- Lightweight (11.5 g); avoids the collapsing of tubing, which can be caused by heavy filter devices

Applications

- Tissue culture media
- Reagent preparation
- Particle counting solutions
- Pharmaceutical preparations

Typical Data – Polydisc AS

Pore Size (µm)*	Prefilter/Media	Water Flow Rate ml/min at 0.7 bar (10 psi)
0.2	GMF/PES	150
0.45	GMF/PES	225
1.0	GMF/Nylon	625

* Liquid rating. Retention efficiency in gas streams is significantly higher

GMF – Glass Microfiber
PES – Polyethersulfone
SLPM – Standard Liters Per Minute

Ordering Information – Polydisc AS

Pore Size (µm)	Catalog Number	Prefilter/Media	Quantity/Pack
Sterile			
0.2	6724-5002	GMF/PES	10
0.45	6724-5045	GMF/PES	10
1.0	6724-5010	GMF/Nylon	10
Nonsterile			
0.45	6724-5145	GMF/PES	50

Inline connection – Polydisc, AS, TF, SPF accepts 6-10 mm ID hose

Polydisc TF and ReZist

This device features a PTFE membrane, which is suitable for chemically aggressive solutions, reagents, and organic solvents. This lightweight unit is particularly suitable for protective vents and for inline filtration and isolation applications. The 1 µm device features a polypropylene prefilter for use with heavily contaminated samples.

Features and Benefits

- Solvent-resistant membrane
- Chemical-resistant housing
- Hydrophobic PTFE membrane
- Autoclavable (multiple times)

- Integrity-testable (bubble point or water breakthrough pressure “in situ” methods)
- Biosafe
- Lightweight (11.5 g for Polydisc and 17.9 g for ReZist); avoids the collapsing of tubing, which can be caused by heavy filter devices

Applications

- Pharmaceutical: vents and inline applications
- Biotech: sterile vents and exhausts for growth environments, inline sterilization of gases
- Laboratory: clean or sterile gases, filtration of solvents and reagents, drying gases
- Electronics: photoresists, solvents, gases for research



Polydisc TF



ReZist 50 mm

Typical Data – Polydisc TF

Pore Size (µm)	Integrity Test Data*		Water Breakthrough		Flow Rates*	
	IPA Bubble Point (bar)	(psi)	(bar)	(psi)	Methanol ml/min at 0.7 bar (10 psi)	Air SLPM at 0.2 bar (3 psi)
0.1	1.7	25	3.4	50	200	8
0.2	0.9	13	2.1	38	400	16
0.45	0.5	7	1.1	16	700	24
1.0	0.2	3	0.3	13	900	30

* Typical values

Ordering Information – Polydisc TF and ReZist

Pore Size (µm)	Media	Catalog Number	Sterile	Quantity/Pack
Polydisc TF				
0.05	PTFE	6720-5005	No	10
0.1	PTFE	6720-5001	No	10
0.2	PTFE	6720-5002	No	10
0.45	PTFE	6720-5045	No	10
1.0	PTFE*	6721-5010	No	10
ReZist Filter 50 mm, Sterile				
0.2	PTFE	10463607	Yes	10
0.2	PTFE	10463609	No	50
0.45	PTFE	10463610**	Yes	10
0.45	PTFE	10463611	No	10
0.45	PTFE	10463612	No	50

* With PP prefilter

** Product is only available in the U.S.

Inline connection 6-10 mm ID hose

PTFE – Polytetrafluoroethylene

Polydisc HD

Excellent flow rate characteristics for filtering large volumes to 1 liter of aqueous and solvent samples. Polydisc HD (Heavy Duty) is available in 5 and 10 µm retention ratings.

Features and Benefits

- All polypropylene unit for aqueous and solvent samples
- Broad solvent compatibility

Applications

- Large volume sample preparation

Typical Data – Polydisc HD

Pore Size (µm)*	Air Flow Rate SLPM at 1.0 bar (14.5 psi)	Water Flow Rate ml/min at 1.0 bar (14.5 psi)
5.0	110	1500
10.0	140	2200

* Liquid rating. Retention efficiency in gas streams is significantly higher

Ordering Information – Polydisc HD

Pore Size (µm)	Catalog Number	Media	Quantity/Pack
5.0	6728-5050	Polypropylene	10
10.0	6728-5100	Polypropylene	10
5.0	2227	Polypropylene	50
10.0	2228	Polypropylene	50

Polydisc SPF

Contains a stack of filter media for the prefiltration of serum and other hard-to-filter solutions. The glass microfiber and polyethersulfone membrane filter stack effectively filters the complex particulates found in serum samples.

Applications

- Virology, microbiology, and tissue culture laboratories
- Immunoassay methods and diagnostic standards/controls

Typical Data – Polydisc SPF

Pore Size (µm)*	Air Flow Rate SLPM at 1.0 bar (14.5 psi)	Water Flow Rate ml/min at 1.0 bar (14.5 psi)
1.0	–	500

* Liquid rating. Retention efficiency in gas streams is significantly higher

Ordering Information – Polydisc SPF

Pore Size (µm)	Catalog Number	Prefilter/Media	Quantity/Pack
1.0	6724-5000	GMF/GF/Polysulfone	10

Inline connection – Polydisc SPF accepts 6-10 mm ID hose

Polydisc GW

Polydisc GW (Ground Water) is specifically designed for sample preparation of ground water samples for the analysis of dissolved heavy metals. It is an aqueous filter with low background values for the determination of trace elements (each pack contains a certificate).

It has everything that makes the preparation of aqueous solutions for the analysis of dissolved heavy metals easy: a large filter surface, quartz fiber prefilter, and membrane filter in sandwich arrangement and a high dirt loading capacity. And, of course, it meets all the requirements of regulations such as NEN, EPA.



Typical Data – Polydisc GW

Housing	Polypropylene
Membrane type	0.45 µm polyamide (nylon)
Prefilter	100% quartz fiber
Filtration diameter	52 mm
Filtration area	20.4 cm ²
Dead volume	220 µl
Filling volume	540 µl
Maximum pressure	4.5 bar (65 psi)
Connections	Tubing nozzle 6-14 mm
Max. operating temperature	80°C

Ordering Information – Polydisc GW 50 mm

Pore Size (µm)	Catalog Number	Prefilter/Media	Quantity/Pack
0.45	10463400	Quartz fiber/nylon	20
0.45	10463401	Quartz fiber/nylon	50

Inline connection – Polydisc GW accepts 6-14 mm ID hose

Inline Filter Degasser

Whatman Inline Filter/Degassers (IFD) connect directly into an HPLC line to simultaneously filter and degas the mobile phase as it is being used. The Aqueous IFD provides pure filtration of aqueous based HPLC mobile phases while the Solvent IFD is used with organically based HPLC mobile phases. Specifically, the Aqueous IFD is designed to work with mobile phases containing at least 20% of the aqueous component.

The Aqueous IFD has a 0.2 µm hydrophilic nylon membrane for use with aqueous-based mobile phases. Solvent IFD has a 0.2 µm high-flow polypropylene membrane for mobile phases containing organic solvents. Both devices have a polypropylene housing, the circumference of which is sealed by a security ring, fittings to accommodate 1/16"-1/8" tubing and an air vent on the inlet with luer lock cap to enable priming.

The inline filters work on the principle of “bubble point” – the point of pressure at which gases will pass through a wet membrane. If pressure is maintained below the bubble point, the gas will not pass through the membrane and is trapped by the particular filter device.



Inline Filter Degasser

Features and Benefits

- Faster than traditional methods of mobile phase preparation – saving time in the laboratory
- Enhanced laboratory safety
- No need to purchase expensive degassing equipment
- Rugged, chemically resistant polypropylene construction
- Air vent on inlet with luer lock cap
- Integrity-testable (bubble point method)

Applications

- HPLC analysis
- Pharmaceutical research
- Analytical chemistry

Typical Data – Inline Filters

	Aqueous IFD	Solvent IFD
<i>Bubble point*</i>		
bar	2.9 (a)	0.76 (b)
psi	42 (a)	11.0 (b)
Maximum flow rate**	2.5 ml/min	2.5 ml/min
Filtration area	16 cm ²	16 cm ²

* Typical values determined with (a) water and (b) isopropanol

** For effective gas bubble removal in HPLC

Ordering Information – Aqueous IFD and Solvent IFD

Diameter	Pore Size (µm)	Catalog Number	Description	Media	Quantity/Pack
50	0.2	6726-5002	Aqueous IFD*	Nylon	10
50	0.2	6726-5002A	Aqueous IFD**	Nylon	10
50	0.2	6725-5002	Solvent IFD*	PP	10
50	0.2	6725-5002A	Solvent IFD**	PP	10
-	-	6726-5000	IFD End Fitting Kit (10 rings and 10 caps)	-	10

* Standard catalog numbers include O-rings: 1/32"-5/32"; accepts different diameter tubing 0.8-4 mm

** Catalog numbers with suffix "A" are non-o-ring style and accept 1/8" tubing only

PP – Polypropylene