



# Filtration Technology

## Technical Data Sheet

The following pages provide an overview of our standard products. However, filters can be modified according to specific needs.

The filters are supplied as standard in the transparent version (see pictures below) with the imprint of the membrane type and the pore size.

If you are interested in special colour codes and imprints or other pore sizes, we will be happy to supply you with a customized solution.



15mm USV LLF – LSM



25mm USV LLF – LSM



30mm USV LLF - LSM



15mm USV LLF – Mini Tip



25mm RV LLF – LSM



30mm RV LLF - LSM



25mm sterile version

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## DIAFIL RC Syringe filters

Membrane material: Regenerated cellulose

The membrane of regenerated cellulose is particularly suitable for the filtration of biological solutions due to its low, non-specific absorption characteristics for proteins. A further application area lies in HPLC sample preparation and the degasification of eluents for HPLC (bubble-point on request, depending on the pore size).

The membrane has a high resistance to aqueous and organic HPLC solvents; pH 3-12.

DIAFIL RC is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output	
FRC150020	15	0,2	-	USV	-	LLF / LSM	
FRC140020		0,2	-	USV	-	LLF / Mini-Tip	
FRC150045		0,45	-	USV	-	LLF / LSM	
FRC140045		0,45	-	USV	-	LLF / Mini-Tip	
FRC150020S		0,2	-	USV	yes	LLF / LSM	
FRC150045S		0,45	-	USV	yes	LLF / LSM	
FRC140020S		0,2	-	USV	yes	LLF / Mini	
FRC140045S		0,45	-	USV	yes	LLF / Mini	
FRC250020	25	0,2	-	USV	-	LLF / LSM	
FRC250045		0,45	-	USV	-	LLF / LSM	
FRC250020S		0,2	-	USV	yes	LLF / LSM	
FRC250045S		0,45	-	USV	yes	LLF / LSM	
FRC250020R		0,2	-	RV	-	LLF / LSM	
FRC250045R		0,45	-	RV	-	LLF / LSM	
FRC250020RS		0,2	-	RV	yes	LLF / LSM	
FRC250045RS		0,45	-	RV	yes	LLF / LSM	
FRC250020RV		0,2	Yes	RV	-	LLF / LSM	
FRC250045RV		0,45	Yes	RV	-	LLF / LSM	
FRC250020RVS		0,2	Yes	RV	yes	LLF / LSM	
FRC250045RVS		0,45	Yes	RV	yes	LLF / LSM	
FRC300020		30	0,2	-	USV	-	LLF / LSM
FRC300045			0,45	-	USV	-	LLF / LSM
FRC300020S	0,2		-	USV	yes	LLF / LSM	
FRC300045S	0,45		-	USV	yes	LLF / LSM	
FRC300020R	0,2		-	RV	-	LLF / LSM	
FRC300045R	0,45		-	RV	-	LLF / LSM	
FRC300020RS	0,2		-	RV	yes	LLF / LSM	
FRC300045RS	0,45		-	RV	yes	LLF / LSM	
FRC300020RV	0,2		Yes	RV	-	LLF / LSM	
FRC300045RV	0,45		Yes	RV	-	LLF / LSM	
FRC300020RVS	0,2		Yes	RV	yes	LLF / LSM	
FRC300045RVS	0,45		Yes	RV	yes	LLF / LSM	

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version

## DIAFIL PA Syringe filters

Membrane material: Polyamide

The polyamide (nylon) membrane is used for the filtration of HPLC and GC solvents, and can also be used for example for the clarification and sterilisation of alkaline solutions.

Nylon membranes are both hydrophilic and resistant to many solvents and alkaline solutions. This membrane also stands out for its high mechanical stability.

DIAFIL PA is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output	
FPA150020	15	0,2	-	USV	-	LLF / LSM	
FPA140020		0,2	-	USV	-	LLF / Mini-Tip	
FPA150045		0,45	-	USV	-	LLF / LSM	
FPA140045		0,45	-	USV	-	LLF / Mini-Tip	
FPA150020S		0,2	-	USV	yes	LLF / LSM	
FPA150045S		0,45	-	USV	yes	LLF / LSM	
FPA140020S		0,2	-	USV	yes	LLF / Mini	
FPA140045S		0,45	-	USV	yes	LLF / Mini	
FPA250020	25	0,2	-	USV	-	LLF / LSM	
FPA250045		0,45	-	USV	-	LLF / LSM	
FPA250020S		0,2	-	USV	yes	LLF / LSM	
FPA250045S		0,45	-	USV	yes	LLF / LSM	
FPA250020R		0,2	-	RV	-	LLF / LSM	
FPA250045R		0,45	-	RV	-	LLF / LSM	
FPA250020RS		0,2	-	RV	yes	LLF / LSM	
FPA250045RS		0,45	-	RV	yes	LLF / LSM	
FPA250020RV		0,2	Yes	RV	-	LLF / LSM	
FPA250045RV		0,45	Yes	RV	-	LLF / LSM	
FPA250020RVS		0,2	Yes	RV	yes	LLF / LSM	
FPA250045RVS		0,45	Yes	RV	yes	LLF / LSM	
FPA300020		30	0,2	-	USV	-	LLF / LSM
FPA300045			0,45	-	USV	-	LLF / LSM
FPA300020S	0,2		-	USV	yes	LLF / LSM	
FPA300045S	0,45		-	USV	yes	LLF / LSM	
FPA300020R	0,2		-	RV	-	LLF / LSM	
FPA300045R	0,45		-	RV	-	LLF / LSM	
FPA300020RS	0,2		-	RV	yes	LLF / LSM	
FPA300045RS	0,45		-	RV	yes	LLF / LSM	
FPA300020RV	0,2		Yes	RV	-	LLF / LSM	
FPA300045RV	0,45		Yes	RV	-	LLF / LSM	
FPA300020RVS	0,2		Yes	RV	yes	LLF / LSM	
FPA300045RVS	0,45		Yes	RV	yes	LLF / LSM	

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version

## DIAFIL PTFE Syringe preliminary filters

Membrane material: Polytetrafluorethylene

The membrane of polytetrafluorethylene is used for the filtration of aggressive chemicals, including acids and non-aqueous solvents, as well as for GC and HPLC sample preparation. Since it has low flow resistance to gases, the membrane is also used for air and gas filtration (aeration and ventilation tasks).

PTFE membranes are very inert and hydrophobic (but can also be made hydrophilic by wetting with ethanol).

DIAFIL PTFE is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output
FPT150020	15	0,2	-	USV	-	LLF / LSM
FPT140020		0,2	-	USV	-	LLF / Mini-Tip
FPT150045		0,45	-	USV	-	LLF / LSM
FPT140045		0,45	-	USV	-	LLF / Mini-Tip
FPT150020S		0,2	-	USV	yes	LLF / LSM
FPT150045S		0,45	-	USV	yes	LLF / LSM
FPT140020S		0,2	-	USV	yes	LLF / Mini
FPT140045S		0,45	-	USV	yes	LLF / Mini
FPT250020	25	0,2	-	USV	-	LLF / LSM
FPT250045		0,45	-	USV	-	LLF / LSM
FPT250020S		0,2	-	USV	yes	LLF / LSM
FPT250045S		0,45	-	USV	yes	LLF / LSM
FPT250020R		0,2	-	RV	-	LLF / LSM
FPT250045R		0,45	-	RV	-	LLF / LSM
FPT250020RS		0,2	-	RV	yes	LLF / LSM
FPT250045RS		0,45	-	RV	yes	LLF / LSM
FPT250020RV		0,2	Yes	RV	-	LLF / LSM
FPT250045RV		0,45	Yes	RV	-	LLF / LSM
FPT250020RVS		0,2	Yes	RV	yes	LLF / LSM
FPT250045RVS		0,45	Yes	RV	yes	LLF / LSM
FPT300020	30	0,2	-	USV	-	LLF / LSM
FPT300045		0,45	-	USV	-	LLF / LSM
FPT300020S		0,2	-	USV	yes	LLF / LSM
FPT300045S		0,45	-	USV	yes	LLF / LSM
FPT300020R		0,2	-	RV	-	LLF / LSM
FPT300045R		0,45	-	RV	-	LLF / LSM
FPT300020RS		0,2	-	RV	yes	LLF / LSM
FPT300045RS		0,45	-	RV	yes	LLF / LSM
FPT300020RV		0,2	Yes	RV	-	LLF / LSM
FPT300045RV		0,45	Yes	RV	-	LLF / LSM
FPT300020RVS		0,2	Yes	RV	yes	LLF / LSM
FPT300045RVS		0,45	Yes	RV	yes	LLF / LSM

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version

## DIAFIL PVDF Syringe filters

Membrane material: Polyvinylidenfluoride

The polyvinylidenfluoride is used in many applications for biological samples (low protein adsorption) or for pharmaceutical applications. Due to its hydrophilic properties, it is used for clear filtration and sterilisation of aqueous solutions. Because of its chemical compatibility it is less suitable for the filtration of aggressive media such as strong acids, bases and ketones.

DIAFIL PVDF is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output	
FPV150020	15	0,2	-	USV	-	LLF / LSM	
FPV140020		0,2	-	USV	-	LLF / Mini-Tip	
FPV150045		0,45	-	USV	-	LLF / LSM	
FPV140045		0,45	-	USV	-	LLF / Mini-Tip	
FPV150020S		0,2	-	USV	yes	LLF / LSM	
FPV150045S		0,45	-	USV	yes	LLF / LSM	
FPV140020S		0,2	-	USV	yes	LLF / Mini	
FPV140045S		0,45	-	USV	yes	LLF / Mini	
FPV250020	25	0,2	-	USV	-	LLF / LSM	
FPV250045		0,45	-	USV	-	LLF / LSM	
FPV250020S		0,2	-	USV	yes	LLF / LSM	
FPV250045S		0,45	-	USV	yes	LLF / LSM	
FPV250020R		0,2	-	RV	-	LLF / LSM	
FPV250045R		0,45	-	RV	-	LLF / LSM	
FPV250020RS		0,2	-	RV	yes	LLF / LSM	
FPV250045RS		0,45	-	RV	yes	LLF / LSM	
FPV250020RV		0,2	Yes	RV	-	LLF / LSM	
FPV250045RV		0,45	Yes	RV	-	LLF / LSM	
FPV250020RVS		0,2	Yes	RV	yes	LLF / LSM	
FPV250045RVS		0,45	Yes	RV	yes	LLF / LSM	
FPV300020		30	0,2	-	USV	-	LLF / LSM
FPV300045			0,45	-	USV	-	LLF / LSM
FPV300020S	0,2		-	USV	yes	LLF / LSM	
FPV300045S	0,45		-	USV	yes	LLF / LSM	
FPV300020R	0,2		-	RV	-	LLF / LSM	
FPV300045R	0,45		-	RV	-	LLF / LSM	
FPV300020RS	0,2		-	RV	yes	LLF / LSM	
FPV300045RS	0,45		-	RV	yes	LLF / LSM	
FPV300020RV	0,2		Yes	RV	-	LLF / LSM	
FPV300045RV	0,45		Yes	RV	-	LLF / LSM	
FPV300020RVS	0,2		Yes	RV	yes	LLF / LSM	
FPV300045RVS	0,45		Yes	RV	yes	LLF / LSM	

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version

## DIAFIL PP Syringe filters

Membrane material: Polypropylene

Polypropylene membranes are slightly hydrophobic and versatile in use. Apart from strong oxidising agents, they are attacked by few substances, and are therefore relatively inert. The filters can be used for both aqueous and organic media, and have high long-term stability. The flow rates of aqueous solutions are therefore lower than with comparable hydrophilic membranes. Low protein bonding, containing hardly any soluble materials (IC compatible).

DIAFIL PP is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output
FPP150020	15	0,2	-	USV	-	LLF / LSM
FPP140020		0,2	-	USV	-	LLF / Mini-Tip
FPP150045		0,45	-	USV	-	LLF / LSM
FPP140045		0,45	-	USV	-	LLF / Mini-Tip
FPP150020S		0,2	-	USV	yes	LLF / LSM
FPP150045S		0,45	-	USV	yes	LLF / LSM
FPP140020S		0,2	-	USV	yes	LLF / Mini
FPP140045S		0,45	-	USV	yes	LLF / Mini
FPP250020	25	0,2	-	USV	-	LLF / LSM
FPP250045		0,45	-	USV	-	LLF / LSM
FPP250020S		0,2	-	USV	yes	LLF / LSM
FPP250045S		0,45	-	USV	yes	LLF / LSM
FPP250020R		0,2	-	RV	-	LLF / LSM
FPP250045R		0,45	-	RV	-	LLF / LSM
FPP250020RS		0,2	-	RV	yes	LLF / LSM
FPP250045RS		0,45	-	RV	yes	LLF / LSM
FPP250020RV		0,2	Yes	RV	-	LLF / LSM
FPP250045RV		0,45	Yes	RV	-	LLF / LSM
FPP250020RVS		0,2	Yes	RV	yes	LLF / LSM
FPP250045RVS		0,45	Yes	RV	yes	LLF / LSM
FPP300020	30	0,2	-	USV	-	LLF / LSM
FPP300045		0,45	-	USV	-	LLF / LSM
FPP300020S		0,2	-	USV	yes	LLF / LSM
FPP300045S		0,45	-	USV	yes	LLF / LSM
FPP300020R		0,2	-	RV	-	LLF / LSM
FPP300045R		0,45	-	RV	-	LLF / LSM
FPP300020RS		0,2	-	RV	yes	LLF / LSM
FPP300045RS		0,45	-	RV	yes	LLF / LSM
FPP300020RV		0,2	Yes	RV	-	LLF / LSM
FPP300045RV		0,45	Yes	RV	-	LLF / LSM
FPP300020RVS		0,2	Yes	RV	yes	LLF / LSM
FPP300045RVS		0,45	Yes	RV	yes	LLF / LSM

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version



## DIAFIL PS Syringe filters

Membrane material: Polyether sulphone

The polyether sulphone membrane is hydrophilic and has a very low protein adsorption. It also has high flow rates in comparison to other membranes. This makes these filters popular products for aqueous or partially organic media (pH range approx. 2-12), e.g. in the area of pharmaceutical and biological sample preparation.

DIAFIL PS is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output
FPS150020	15	0,2	-	USV	-	LLF / LSM
FPS140020		0,2	-	USV	-	LLF / Mini-Tip
FPS150045		0,45	-	USV	-	LLF / LSM
FPS140045		0,45	-	USV	-	LLF / Mini-Tip
FPS150020S		0,2	-	USV	yes	LLF / LSM
FPS150045S		0,45	-	USV	yes	LLF / LSM
FPS140020S		0,2	-	USV	yes	LLF / Mini
FPS140045S		0,45	-	USV	yes	LLF / Mini
FPS250020	25	0,2	-	USV	-	LLF / LSM
FPS250045		0,45	-	USV	-	LLF / LSM
FPS250020S		0,2	-	USV	yes	LLF / LSM
FPS250045S		0,45	-	USV	yes	LLF / LSM
FPS250020R		0,2	-	RV	-	LLF / LSM
FPS250045R		0,45	-	RV	-	LLF / LSM
FPS250020RS		0,2	-	RV	yes	LLF / LSM
FPS250045RS		0,45	-	RV	yes	LLF / LSM
FPS250020RV		0,2	Yes	RV	-	LLF / LSM
FPS250045RV		0,45	Yes	RV	-	LLF / LSM
FPS250020RVS		0,2	Yes	RV	yes	LLF / LSM
FPS250045RVS		0,45	Yes	RV	yes	LLF / LSM
FPS300020	30	0,2	-	USV	-	LLF / LSM
FPS300045		0,45	-	USV	-	LLF / LSM
FPS300020S		0,2	-	USV	yes	LLF / LSM
FPS300045S		0,45	-	USV	yes	LLF / LSM
FPS300020R		0,2	-	RV	-	LLF / LSM
FPS300045R		0,45	-	RV	-	LLF / LSM
FPS300020RS		0,2	-	RV	yes	LLF / LSM
FPS300045RS		0,45	-	RV	yes	LLF / LSM
FPS300020RV		0,2	Yes	RV	-	LLF / LSM
FPS300045RV		0,45	Yes	RV	-	LLF / LSM
FPS300020RVS		0,2	Yes	RV	yes	LLF / LSM
FPS300045RVS		0,45	Yes	RV	yes	LLF / LSM

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version

## DIAFIL PE Syringe filters

Membrane material: Polyester

The polyester membrane is a hydrophilic membrane. It can be used for both aqueous and organic solvents (or mixtures of the two). It is therefore much used in HPLC sample preparation. The membrane is not cytotoxic.

DIAFIL PE is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output
FPE150020	15	0,2	-	USV	-	LLF / LSM
FPE140020		0,2	-	USV	-	LLF / Mini-Tip
FPE150045		0,45	-	USV	-	LLF / LSM
FPE140045		0,45	-	USV	-	LLF / Mini-Tip
FPE150020S		0,2	-	USV	yes	LLF / LSM
FPE150045S		0,45	-	USV	yes	LLF / LSM
FPE140020S		0,2	-	USV	yes	LLF / Mini
FPE140045S		0,45	-	USV	yes	LLF / Mini
FPE250020	25	0,2	-	USV	-	LLF / LSM
FPE250045		0,45	-	USV	-	LLF / LSM
FPE250020S		0,2	-	USV	yes	LLF / LSM
FPE250045S		0,45	-	USV	yes	LLF / LSM
FPE250020R		0,2	-	RV	-	LLF / LSM
FPE250045R		0,45	-	RV	-	LLF / LSM
FPE250020RS		0,2	-	RV	yes	LLF / LSM
FPE250045RS		0,45	-	RV	yes	LLF / LSM
FPE250020RV		0,2	Yes	RV	-	LLF / LSM
FPE250045RV		0,45	Yes	RV	-	LLF / LSM
FPE250020RVS		0,2	Yes	RV	yes	LLF / LSM
FPE250045RVS		0,45	Yes	RV	yes	LLF / LSM
FPE300020	30	0,2	-	USV	-	LLF / LSM
FPE300045		0,45	-	USV	-	LLF / LSM
FPE300020S		0,2	-	USV	yes	LLF / LSM
FPE300045S		0,45	-	USV	yes	LLF / LSM
FPE300020R		0,2	-	RV	-	LLF / LSM
FPE300045R		0,45	-	RV	-	LLF / LSM
FPE300020RS		0,2	-	RV	yes	LLF / LSM
FPE300045RS		0,45	-	RV	yes	LLF / LSM
FPE300020RV		0,2	Yes	RV	-	LLF / LSM
FPE300045RV		0,45	Yes	RV	-	LLF / LSM
FPE300020RVS		0,2	Yes	RV	yes	LLF / LSM
FPE300045RVS		0,45	Yes	RV	yes	LLF / LSM

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version

## DIAFIL CM Syringe filters

Membrane material: Mixed cellulose ester

The mixed cellulose ester membrane is a hydrophilic membrane with similar properties to the CA or CN membranes, since it consists of a mixed ester of the two. The properties of one component or the other predominates, depending on the mixing ratio. The filters supplied by us contain a high proportion of cellulose nitrate, and can therefore be used for similar tasks.

DIAFIL CM is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output
FCM150020	15	0,2	-	USV	-	LLF / LSM
FCM140020		0,2	-	USV	-	LLF / Mini-Tip
FCM150045		0,45	-	USV	-	LLF / LSM
FCM140045		0,45	-	USV	-	LLF / Mini-Tip
FCM150020S		0,2	-	USV	yes	LLF / LSM
FCM150045S		0,45	-	USV	yes	LLF / LSM
FCM140020S		0,2	-	USV	yes	LLF / Mini
FCM140045S		0,45	-	USV	yes	LLF / Mini
FCM250020	25	0,2	-	USV	-	LLF / LSM
FCM250045		0,45	-	USV	-	LLF / LSM
FCM250020S		0,2	-	USV	yes	LLF / LSM
FCM250045S		0,45	-	USV	yes	LLF / LSM
FCM250020R		0,2	-	RV	-	LLF / LSM
FCM250045R		0,45	-	RV	-	LLF / LSM
FCM250020RS		0,2	-	RV	yes	LLF / LSM
FCM250045RS		0,45	-	RV	yes	LLF / LSM
FCM250020RV		0,2	Yes	RV	-	LLF / LSM
FCM250045RV		0,45	Yes	RV	-	LLF / LSM
FCM250020RVS		0,2	Yes	RV	yes	LLF / LSM
FCM250045RVS		0,45	Yes	RV	yes	LLF / LSM
FCM300020	30	0,2	-	USV	-	LLF / LSM
FCM300045		0,45	-	USV	-	LLF / LSM
FCM300020S		0,2	-	USV	yes	LLF / LSM
FCM300045S		0,45	-	USV	yes	LLF / LSM
FCM300020R		0,2	-	RV	-	LLF / LSM
FCM300045R		0,45	-	RV	-	LLF / LSM
FCM300020RS		0,2	-	RV	yes	LLF / LSM
FCM300045RS		0,45	-	RV	yes	LLF / LSM
FCM300020RV		0,2	Yes	RV	-	LLF / LSM
FCM300045RV		0,45	Yes	RV	-	LLF / LSM
FCM300020RVS		0,2	Yes	RV	yes	LLF / LSM
FCM300045RVS		0,45	Yes	RV	yes	LLF / LSM

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version

## DIAFIL CN Syringe filters

Membrane material: Cellulose nitrate

The cellulose nitrate membrane is hydrophilic and is therefore much used in microbiological investigations, because it has a high, non-specific adsorption capability for biological components (bacteria, yeasts...). The filters are therefore ideally suitable for separating such compounds out of the solution. The filters can alternatively be used for sample preparation of aqueous media.

DIAFIL CN is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output
FCN250020R	25	0,2	-	RV	-	LLF / LSM
FCN250045R		0,45	-	RV	-	LLF / LSM
FCN250020RS		0,2	-	RV	yes	LLF / LSM
FCN250045RS		0,45	-	RV	yes	LLF / LSM
FCN250020RV		0,2	Yes	RV	-	LLF / LSM
FCN250045RV		0,45	Yes	RV	-	LLF / LSM
FCN250020RVS		0,2	Yes	RV	yes	LLF / LSM
FCN250045RVS		0,45	Yes	RV	yes	LLF / LSM
FCN300020R	30	0,2	-	RV	-	LLF / LSM
FCN300045R		0,45	-	RV	-	LLF / LSM
FCN300020RS		0,2	-	RV	yes	LLF / LSM
FCN300045RS		0,45	-	RV	yes	LLF / LSM
FCN300020RV		0,2	Yes	RV	-	LLF / LSM
FCN300045RV		0,45	Yes	RV	-	LLF / LSM
FCN300020RVS		0,2	Yes	RV	yes	LLF / LSM
FCN300045RVS		0,45	Yes	RV	yes	LLF / LSM

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version

## DIAFIL CA Syringe filters

Membrane material: Cellulose acetate

The cellulose acetate membrane is hydrophilic. Due to its low protein adsorption, filters with this membrane are frequently used for biological samples (e.g. enzyme solutions, biological macro-molecules). Other applications include the clear filtration and sterile filtration of aqueous solutions. The membrane also has high temperature stability.

DIAFIL CA is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output
FCA150020	15	0,2	-	USV	-	LLF / LSM
FCA140020		0,2	-	USV	-	LLF / Mini-Tip
FCA150045		0,45	-	USV	-	LLF / LSM
FCA140045		0,45	-	USV	-	LLF / Mini-Tip
FCA150020S		0,2	-	USV	yes	LLF / LSM
FCA150045S		0,45	-	USV	yes	LLF / LSM
FCA140020S		0,2	-	USV	yes	LLF / Mini
FCA140045S		0,45	-	USV	yes	LLF / Mini
FCA250020	25	0,2	-	USV	-	LLF / LSM
FCA250045		0,45	-	USV	-	LLF / LSM
FCA250020S		0,2	-	USV	yes	LLF / LSM
FCA250045S		0,45	-	USV	yes	LLF / LSM
FCA250020R		0,2	-	RV	-	LLF / LSM
FCA250045R		0,45	-	RV	-	LLF / LSM
FCA250020RS		0,2	-	RV	yes	LLF / LSM
FCA250045RS		0,45	-	RV	yes	LLF / LSM
FCA250020RV		0,2	Yes	RV	-	LLF / LSM
FCA250045RV		0,45	Yes	RV	-	LLF / LSM
FCA250020RVS		0,2	Yes	RV	yes	LLF / LSM
FCA250045RVS		0,45	Yes	RV	yes	LLF / LSM
FCA300020	30	0,2	-	USV	-	LLF / LSM
FCA300045		0,45	-	USV	-	LLF / LSM
FCA300020S		0,2	-	USV	yes	LLF / LSM
FCA300045S		0,45	-	USV	yes	LLF / LSM
FCA300020R		0,2	-	RV	-	LLF / LSM
FCA300045R		0,45	-	RV	-	LLF / LSM
FCA300020RS		0,2	-	RV	yes	LLF / LSM
FCA300045RS		0,45	-	RV	yes	LLF / LSM
FCA300020RV		0,2	Yes	RV	-	LLF / LSM
FCA300045RV		0,45	Yes	RV	-	LLF / LSM
FCA300020RVS		0,2	Yes	RV	yes	LLF / LSM
FCA300045RVS		0,45	Yes	RV	yes	LLF / LSM

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version

## DIAFIL GF Syringe filters

Membrane material: Fibreglass fleece

Fibreglass fleece is used for preliminary filtration or filtration of media difficult to filter. The three-dimensional filter surface provides a much greater intake capacity for contaminating particles than is the case with two-dimensional membranes. The fibreglass is inert to solvents, acids and bases.

DIAFIL GF Vorfilter is available in various filter diameters and pore sizes, with and without preliminary filter and as a sterile version:

Article number	Ø (mm)	Pore size (µm)	Pre-filter	Housing version	Sterile	Connections Input / output
FGF150001	15	0,2	-	USV	-	LLF / LSM
FGF140001		0,2	-	USV	-	LLF / Mini-Tip
FGF150001S		0,2	-	USV	yes	LLF / LSM
FGF140001S		0,2	-	USV	yes	LLF / Mini
FGF250001	25	0,2	-	USV	-	LLF / LSM
FGF250001S		0,2	-	USV	yes	LLF / LSM
FGF250001R		0,2	-	RV	-	LLF / LSM
FGF250001RS		0,2	-	RV	yes	LLF / LSM
FGF300001	30	0,2	-	USV	-	LLF / LSM
FGF300001S		0,2	-	USV	yes	LLF / LSM
FGF300001R		0,2	-	RV	-	LLF / LSM
FGF300001RS		0,2	-	RV	yes	LLF / LSM

LLF: Luer lock Female (input)

LSM: Luer Slip Male (output)

USV: Ultrasonic-welded housing version

RV: Edge-injected housing version

## DIAFIL Inline-Filter 50 mm

The 50 mm inline-filter with ultra-pure polypropylene housing (ultrasonic welded) is designed to contain one or multiple 47 mm membrane cycles. The filter comes with 6-12 mm tube clips (tapered) at the inlet and outlet side.

Depending on the application, the filter can be customized with different membrane types.

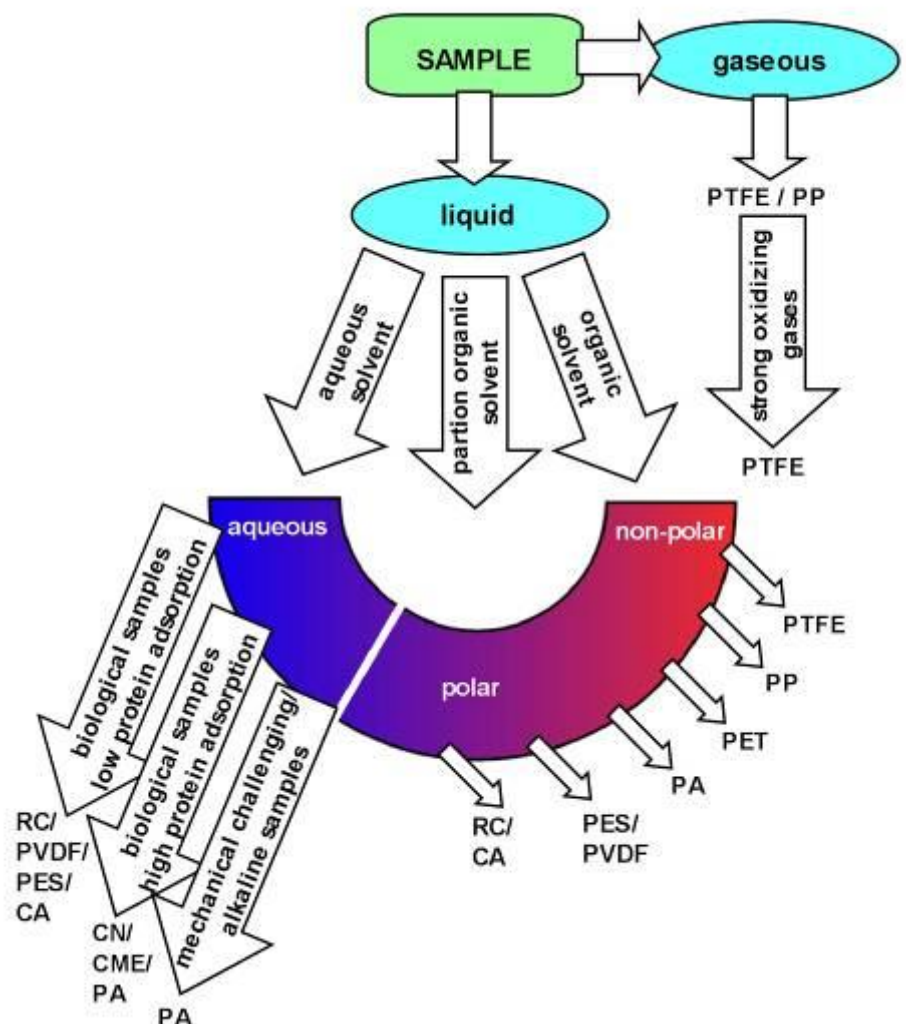
Due to its large filter area of 1735 mm<sup>2</sup>, the filter is suitable for long term gas filtration and venting applications, but also for the filtration of higher volumes of liquid up to approx. 500 ml, depending on the particle load of the filtrated suspension.



## Quick application guide

Not every filter is suitable for all applications. Thanks to the following overview, you can make a preliminary selection of the membrane type.

Filters with different diameters and pore sizes for special uses can be supplied on request.



## Instructions on the handling of syringe filters

The following overview will give you information on special features when using different pore sizes.

### 1. Properties of filters in relation to the pore size:

Cleaning operation	Pore size to be used (µm)
Sterile filtration	0,2
Thorough cleaning	0,45
Clear filtration (freedom from particles)	1-2
Preliminary filtration	5,0

The following table gives you an overview of the approximate volume of liquid that can be made flow through a membrane according to its diameter. Greater deviations from the specified average value may occur depending on the particle charging of the liquid.

### 2. Relationship of filterable sample quantities to the filter diameter:

Filter diameter (mm)	Sample quantity (ml)
4	<1
13	1-10
25	10-100
30	>100 (or fast filtration)

The specified values are approximate values

In the case of solutions that are difficult to filter, high pressure may be necessary to make the liquid flow through the filter. The following table estimates the pressures required and determines the corresponding filters.

### 3. Manually generated maximum pressure in relation to syringe volume

Syringe volume (ml)	Pressure (bar / psi)
1	10 / 150
3	7 / 100
5	5 / 75
10	3,5 / 50
20	2 / 30

The bar/psi conversion has been rounded

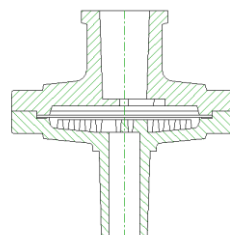


## Technical specifications of syringe filters

Specifications of the syringe preliminary filter with:

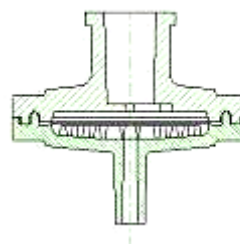
**15 mm diameter (ultrasonic-welded):**

Housing material:	Polypropylene
Total filter volume:	0,335 ml
Dead volume:	< 25 $\mu$ l
Filter area:	177 mm <sup>2</sup>
Max. operating pressure:	9 bar
Inlet:	Luer-Lock (female)
Outlet:	Luer-Slip (male)



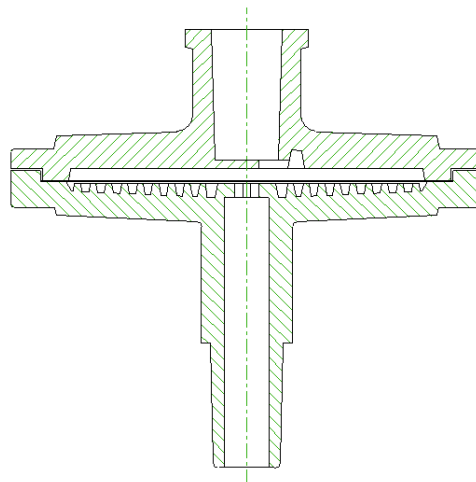
**15 mm diameter Mini-Tip (ultrasonic-welded):**

Housing material:	Polypropylene
Total filter volume:	0,335 ml
Dead volume:	< 25 $\mu$ l
Filter area:	177 mm <sup>2</sup>
Max. operating pressure:	9 bar
Inlet:	Luer-Lock (female)
Outlet:	Mini-Tip



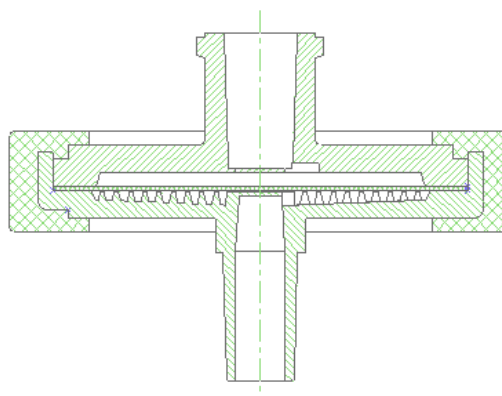
### 25 mm diameter (ultrasonic-welded):

Housing material:	Polypropylene
Total filter volume:	0,6 ml
Dead volume:	< 65 $\mu$ l
Filter area:	490 mm <sup>2</sup>
Max. operating pressure:	6 bar
Inlet:	Luer-Lock (female)
Outlet:	Luer-Slip (male)



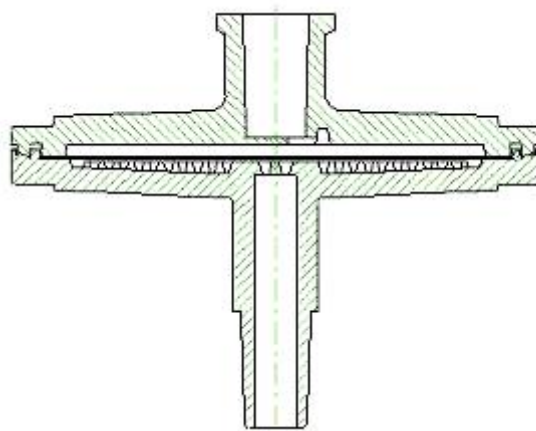
### 25 mm diameter (edge-injected):

Housing material:	Polypropylene
Total filter volume:	0,6 ml
Dead volume:	< 65 $\mu$ l
Filter area:	490 mm <sup>2</sup>
Max. operating pressure:	8 bar
Inlet:	Luer-Lock (female)
Outlet:	Luer-Slip (male)



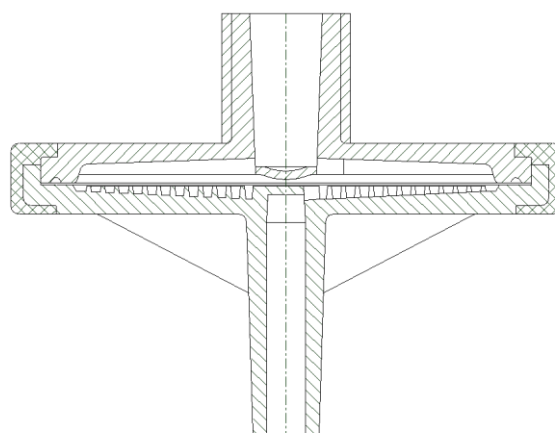
### 30 mm diameter (ultrasonic-welded):

Housing material:	Polypropylene
Total filter volume:	0,864 ml
Dead volume:	< 170 $\mu$ l
Filter area:	707 mm <sup>2</sup>
Max. operating pressure:	6 bar
Inlet:	Luer-Lock (female)
Outlet:	Luer-Slip (male)



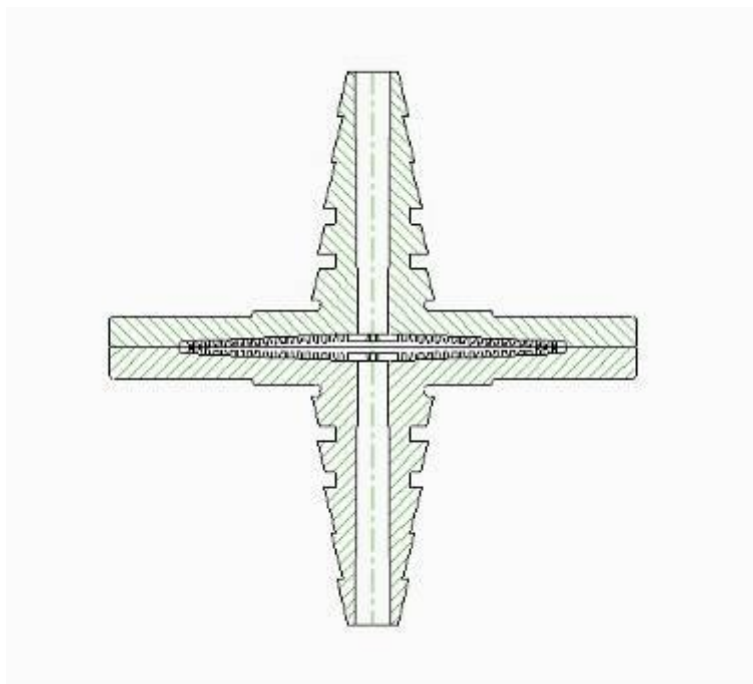
### 30 mm diameter (edge-injected):

Housing material:	Polycarbonate
Total filter volume:	0,864 ml
Dead volume:	< 170 $\mu$ l
Filter area:	707 mm <sup>2</sup>
Max. operating pressure:	8 bar
Inlet:	Luer-Lock (female)
Outlet:	Luer-Slip (male)



## 50 mm Diameter Inline Filter

Housing material:	Polypropylene
Total filter volume:	2,57 ml
Dead volume:	< 920 $\mu$ l
Filter area:	1735 mm <sup>2</sup>
Max. operating pressure:	4 bar
Inlet:	Tube clip 6-12 mm
Outlet:	Tube clip 6-12 mm



## Customized filters

Should you require particular pore sizes (0,1 – 200  $\mu$ m) for your application, we will be happy to help.

Filters can be customized in terms of:

- imprint
- colour coding
- coloured edge
- diameter (approx. size range 4 – 70 mm)
- pore size (0,1 – 200  $\mu$ m)
- membrane material (CA, CN, CME, PES, PET, PP, PC, ACP, PE, stainless steel etc.)
- connection

## Samples

Send us an e-mail with the article number shown in the list of filter types and we will send you some samples (5-15 pcs. as required) for test purposes.

Alternatively, you can request our sample case with a representative selection



