

# Фильтры встраиваемые CARL ROTH Millex-FA, Millex-FG, Millex-FH, Millex-AP 25, Millex-AP 50, Millex-GN, Millex-HN, Millex-HV, Millex-GP, GP 10, GP 20, Steripak, Ultrafree, Steriflip

## Технические характеристики

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# Inline filters



## Inline filter PTFE

ROTH SELECTION.

For gas filtration, ventilation and venting as well as for filtration of large amounts of liquid. Ultrasonically welded housing.

Sterile version (individually packed) available as an option.

### Technical specifications:

Art. No.	HLL7.1	HLL9.1	HLL8.1	HLN0.1
Ø Membrane	47 mm			
Housing material	PP			
Filtration area	17.35 cm <sup>2</sup>			
Inlet connection	stepped tube connection (Ø 6–12 mm)			
Outlet connection	stepped tube connection (Ø 6–12 mm)			

Pore size (µm)	Membrane material	Sterility	Art. No.	Pack Qty.	
0,2	Hydrophobic PTFE	Non-sterile	HLL7.1	50 unit(s)	
0,2	Hydrophobic PTFE	<b>Sterile</b>	HLL9.1	50 unit(s)	
0,45	Hydrophobic PTFE	Non-sterile	HLL8.1	50 unit(s)	
0,45	Hydrophobic PTFE	<b>Sterile</b>	HLN0.1	50 unit(s)	

**A** 121 °C

## Inline filter Millex® PTFE

MERCK MILLIPORE. Autoclavable: Yes.

For the sterile filtration of gases, the sterile aeration of containers and for the sterilisation and clear filtration of organic solutions. Also suitable for preventing the ingress of liquids in downstream pumps and other devices.

### Technical specifications:

Art. No.	CY08.1	CY06.1	CY07.1
Ø Membrane	50 mm		
Housing material	PP		
Filtration area	19.6 cm <sup>2</sup>		
Max. operating pressure	4 bar		
Max. application temperature	121 °C		
Inlet connection	stepped tube connection (Ø 6–13 mm) with internal Luer Cone		
Outlet connection	stepped tube connection (Ø 6–13 mm) with internal Luer Cone		

Type	Pore size (µm)	Membrane material	Art. No.	Pack Qty.	
Millex®-FA	1,0	Hydrophobic PTFE	CY08.1	10 unit(s)	
Millex®-FG	0,22	Hydrophobic PTFE	CY06.1	10 unit(s)	
Millex®-FH	0,45	Hydrophobic PTFE	CY07.1	10 unit(s)	

# Filter units



## Filter units Millex® glass fibre

MERCK MILLIPORE.

For pre-filtration of solutions and liquids with a high particle load that are difficult to filter. Protects downstream membranes against blocking quickly. Retention range approx. 2.0 µm.

### Technical specifications:

Art. No.	CY09.1	CY10.1
Ø Membrane	25 mm	50 mm
Housing material	PVC	
Sample volume	100 ml	4000 ml
Dead volume	<100 µl	<1000 µl
Filtration area	3.9 cm <sup>2</sup>	19.6 cm <sup>2</sup>
Max. operating pressure	5 bar	4.1 bar
Max. application temperature	45 °C	
Inlet connection	female Luer Lock, internal	stepped tube connection (Ø 6–13 mm) with internal Luer Cone
Outlet connection	male Luer Cone, external	stepped tube connection (Ø 6–13 mm) with internal Luer Cone

Type	Pore size (µm)	Membrane material	Art. No.	Pack Qty.
Millex®-AP 25	-2	Glass fibre	CY09.1	50 unit(s)
Millex®-AP 50	-2	Glass fibre	CY10.1	10 unit(s)



## Syringe filters Millex® HPF

MERCK MILLIPORE. Non-sterile.

**For clear filtration of solutions with a high particle load prior to instrument based assay.**

With graduated glass fibre prefilter (10.0 to 0.7 µm), enabling two to four times higher throughput than syringe filters without prefilter. Housing made of HDPE with low extractable substances content.

### Technical specifications:

Art. No.	XE30.1	XE33.1	XE31.1	XE34.1	XE32.1
Ø Membrane	25 mm				
Housing material	HDPE				
Sample volume	~100 ml				
Dead volume	<250 µl				
Filtration area	3.9 cm <sup>2</sup>				
Max. application temperature	45 °C				
Max. operating pressure	7 bar				
Inlet connection	Luer lock connector				
Outlet connection	Luer connector				

Not a medical device / Not an IVD product

## Nylon

Hydrophilic membrane with glass fibre prefilter for clear filtration of aqueous and slightly organic solutions with a high particle load.

Type	Pore size (µm)	Sterility	Ø Membrane (mm)	Art. No.	Pack Qty.
Millex®-GN	0,2	Non-sterile	25	XE30.1	50 unit(s)
Millex®-HN	0,45	Non-sterile	25	XE31.1	50 unit(s)

## Hydrophilic polytetrafluoroethylene (PTFE)

Hydrophilic membrane with glass fibre prefilter for clear filtration of aqueous and organic solutions with a high particle load. Low protein binding.

Type	Pore size (µm)	Sterility	Ø Membrane (mm)	Art. No.	Pack Qty.
Millex®-LLG	0,2	Non-sterile	25	XE33.1	50 unit(s)
Millex®-LCR	0,45	Non-sterile	25	XE34.1	50 unit(s)

## Polyvinylidene fluoride (PVDF)

Hydrophilic Durapore® membrane with glass fibre prefilter. Very low protein binding, for clear filtration of protein solutions with a high particle load.

Type	Pore size (µm)	Sterility	Ø Membrane (mm)	Art. No.	Pack Qty.
Millex®-HV	0,45	Non-sterile	25	XE32.1	50 unit(s)



# Filter units



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## Filter units Millex® PES

MERCK MILLIPORE. **Sterile.**

Express® PES membrane with low protein binding and high flow speed. For sterile filtration of cell culture media and other aqueous solutions. With optional filling bell for reducing the risk of contamination.

The dead volume given refers to the volume left in the filter after purging the filter with air.

### Technical specifications:

Art. No.	CY11.1	CY12.1
Ø Membrane	50 mm	
Housing material	MBS	
Sample volume	~4000 ml	
Dead volume	<1000 µl	
Filtration area	19.6 cm <sup>2</sup>	
Max. operating pressure	3.4 bar	
Max. application temperature	45 °C	
Inlet connection	stepped tube connection (Ø 6–13 mm) with internal Luer Cone	
Outlet connection	stepped tube connection (Ø 6–13 mm) with internal Luer Cone	

Type	Pore size (µm)	Membrane material	Sterility	Art. No.	Pack Qty.
Millex®-GP	0,22	PES	<b>Sterile</b>	<b>CY11.1</b>	10 unit(s)
Millex®-GP with filling cone	0,22	PES	<b>Sterile</b>	<b>CY12.1</b>	10 unit(s)



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## Filter units Sterivex™

MERCK MILLIPORE. **Sterile.**

For the sterile filtration of aqueous liquids. Filter units can be operated with syringe pumps or hose pumps. With optional filling bell for reducing the risk of contamination.

The dead volume given refers to the volume left in the filter after purging the filter with air.

### Technical specifications:

Art. No.	CT79.1	CT80.1	CT81.1	CT82.1	CT83.1	CT84.1
Housing material	Eastar®					
Sample volume	1000 ml				2000 ml	
Dead volume	<200 µl					
Filtration area	10 cm <sup>2</sup>					
Max. operating pressure	3 bar					
Max. application temperature	45 °C					
Inlet connection	female Luer Lock					
Outlet connection	male Luer Lock					

## Durapore® (PVDF) membrane

With extremely low protein binding. Filtration volume approx. 1 litre.

Type	Pore size (µm)	Membrane material	Sterility	Art. No.	Pack Qty.
With filling bell	0,22	PVDF	<b>Sterile</b>	<b>CT79.1</b>	10 unit(s)
Without filling bell	0,22	PVDF	<b>Sterile</b>	<b>CT80.1</b>	15 unit(s)
With filling bell	0,45	PVDF	<b>Sterile</b>	<b>CT81.1</b>	10 unit(s)
Without filling bell	0,45	PVDF	<b>Sterile</b>	<b>CT82.1</b>	15 unit(s)

## Millipore Express® (PES) membrane

With low protein binding and high flow speed. Filtration volume approx. 2 litres.

Type	Pore size (µm)	Membrane material	Sterility	Art. No.	Pack Qty.
With filling bell	0,22	PES	<b>Sterile</b>	<b>CT83.1</b>	10 unit(s)
Without filling bell	0,22	PES	<b>Sterile</b>	<b>CT84.1</b>	15 unit(s)

# Filter units



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## Filter units Steripak™

MERCK MILLIPORE. **Sterile.**

### Disposable filter units for sterile filtration of large volumes up to 20 l.

With Millipore Express® (PES) membranes with high flow rate and low protein binding. Packaged ready to use, for operation with hose pumps or pressurised containers.

- Filling bell on the outlet side of the unit increases the safety of the sterilisation process
- Manual ventilation opening prevents air blocking the membrane
- For sterile filtration of tissue culture media, buffers and other aqueous solutions

The dead volume given refers to the volume left in the filter after purging the filter with air.

#### Technical specifications:

Art. No.	CT85.1	CT86.1
Ø ext.	76 mm	
Housing material	SAN	
Sample volume	10000 ml	20000 ml
Dead volume	<2700 µl	
Filtration area	100 cm <sup>2</sup>	200 cm <sup>2</sup>
Max. operating pressure	5.2 bar	
Max. application temperature	45 °C	
Inlet connection	stepped tube connection (Ø 6–8 mm)	
Outlet connection	stepped tube connection and filling bell	

Type	Pore size (µm)	Membrane material	Sterility	Art. No.	Pack Qty.
GP 10	0,22	PES	<b>Sterile</b>	<b>CT85.1</b>	3 unit(s)
GP 20	0,22	PES	<b>Sterile</b>	<b>CT86.1</b>	3 unit(s)



## Centrifuge filter unit Ultrafree

MERCK MILLIPORE.

Centrifuge filter units for sample volumes of no more than 0.5 or 2.0 ml. For use in fixed-angle rotors for 1.5 or 15 ml sample tubes. Filter unit and collector tube are made of PP.

- **Hydrophilic Durapore® PVDF-membrane:** Extremely low protein binding. Suitable for removal of particulate matter and precipitate from aqueous samples, and for protein and nucleic acid applications
- **Hydrophilic PTFE membrane:** for removal of precipitate from solvent-based samples

#### Procedure:

- Open the attached lid of the filter unit
- Fill the insert with the volume of sample
- Close the filtration unit and insert it in the centrifuge
- On completion of centrifuging, remove the filtration unit, open the lid and remove the insert
- The insert contains the residue and the sealable housing contains the filtrate

#### Ultrafree-MC: PVDF membrane, sample volume up to 0.5 ml

Filter insert volume max. 0.5 ml, collector tube volume 1.5 ml.

#### Technical specifications:

Art. No.	T341.1	T342.1	XH78.1	T343.1	XH80.1	T344.1	XH79.1
Version	Ultrafree-MC						
Sample volume	≤ 0,5 ml						
Centrifugability in g (max.)	12,000						
Filtration area	0,2 cm <sup>2</sup>						
Dead volume	5 µl						
Ø ext.	10,6 mm						
Height	45 mm						

Membrane material	Pore size (µm)	Sterility	Colour coding	Art. No.	Pack Qty.
PVDF	0,10	Non-sterile	orange	<b>T341.1</b>	25 unit(s)
PVDF	0,22	Non-sterile	yellow	<b>T342.1</b>	25 unit(s)
PVDF	0,22	<b>Sterile</b>	yellow	<b>XH78.1</b>	50 unit(s)
PVDF	0,45	Non-sterile	red	<b>T343.1</b>	25 unit(s)
PVDF	5,0	Non-sterile	dark green	<b>XH80.1</b>	100 unit(s)
PVDF	0,65	Non-sterile	purple	<b>T344.1</b>	25 unit(s)
PVDF	0,65	<b>Sterile</b>	purple	<b>XH79.1</b>	50 unit(s)



# Centrifuge filter units

## Ultrafree-MC: Hydrophilic PTFE membrane, sample volume up to 0.5 ml

Filter insert volume max. 0.5 ml, collector tube volume 1.5 ml.

### Technical specifications:

Art. No.	XH81.1	XH82.1
Version	Ultrafree-MC	
Sample volume	≤ 0.5 ml	
Centrifugability in g (max.)	12,000	
Filtration area	0.2 cm <sup>2</sup>	
Dead volume	5 µl	
Ø ext.	10.6 mm	
Height	45 mm	

Membrane material	Pore size (µm)	Sterility	Colour coding	Art. No.	Pack Qty.
Hydrophilic PTFE	0,20	Non-sterile	yellow	XH81.1	25 unit(s)
Hydrophilic PTFE	0,45	Non-sterile	red	XH82.1	25 unit(s)

## Ultrafree-CL: PVDF membrane, sample volume up to 2.0 ml

Filter insert volume max. 2 ml, collector tube volume 5 ml.

### Technical specifications:

Art. No.	T345.1	T346.1	XH83.1	T347.1	XH85.1	XH84.1
Version	Ultrafree-CL					
Sample volume	≤ 2 ml					
Centrifugability in g (max.)	5,000					
Filtration area	0.8 cm <sup>2</sup>					
Dead volume	10 µl					
Ø ext.	16.3 mm					
Height	77 mm					

Membrane material	Pore size (µm)	Sterility	Colour coding	Art. No.	Pack Qty.
PVDF	0,10	Non-sterile	orange	T345.1	25 unit(s)
PVDF	0,22	Non-sterile	yellow	T346.1	25 unit(s)
PVDF	0,22	Sterile	yellow	XH83.1	50 unit(s)
PVDF	0,45	Non-sterile	red	T347.1	25 unit(s)
PVDF	5,0	Non-sterile	dark green	XH85.1	25 unit(s)
PVDF	0,65	Non-sterile	purple	XH84.1	25 unit(s)

## Ultrafree-CL: Hydrophilic PTFE membrane, sample volume up to 2.0 ml

Filter insert volume max. 2 ml, collector tube volume 5 ml.

### Technical specifications:

Art. No.	XH86.1	XH87.1
Version	Ultrafree-CL	
Sample volume	≤ 2 ml	
Centrifugability in g (max.)	5,000	
Filtration area	0.8 cm <sup>2</sup>	
Dead volume	10 µl	
Ø ext.	16.3 mm	
Height	77 mm	

Membrane material	Pore size (µm)	Sterility	Colour coding	Art. No.	Pack Qty.
Hydrophilic PTFE	0,22	Non-sterile	yellow	XH86.1	25 unit(s)
Hydrophilic PTFE	0,45	Non-sterile	red	XH87.1	25 unit(s)



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## Vacuum filter unit Steriflip®

MERCK MILLIPORE. Material: PP, modified acrylic (MBS). **Sterile.**

**For filtration of sample volumes up to 50 ml.**

- **Millipore Express® PES membrane** with high flow rate and low protein binding: For routine sterile filtration of tissue culture media, sera, buffers and other aqueous solutions
- **Durapore® PVDF membrane** with very low protein binding: For sterile and clear filtration of aqueous solutions
- **Hydrophilic nylon mesh filter:** For removing coarse particulate matter, e.g. for applications with stem, heart muscle and nerve cells, or skeletal tissue

### Procedure:

Connect the filter unit to the centrifuge tube containing the sample. Rotate the filter unit through 180° and apply vacuum.

Optional: Screw the funnel attachment onto the sterile filter unit, fill with the sample and apply vacuum, Steriflip® filter unit filters directly into a sterile 50 ml centrifuge tube.

### Technical specifications:

Art. No.	XH01.1	X348.1	XE99.1	XH02.1	XH00.1	XH03.1	XH04.1
Sample volume	50 ml						
Filtration area	7 cm <sup>2</sup>						
Dead volume	600 µl						
Max. application temperature	45 °C						

**Delivery incl.** fitted 50 ml centrifuge tube and lid (each packaged separately) and a single tube holder (blue).

**Delivery without** funnel attachment or second 50 ml centrifuge tube (e.g. Art. No. N462.1), please order separately.

Membrane material	Pore size (µm)	Sterility	Art. No.	Pack Qty.
Nylon	20	Sterile	XH01.1	25 unit(s)
PES	0,22	Sterile	X348.1	25 unit(s)
PVDF	0,22	Sterile	XE99.1	25 unit(s)
Nylon	40	Sterile	XH02.1	25 unit(s)
PVDF	0,45	Sterile	XH00.1	25 unit(s)
Nylon	60	Sterile	XH03.1	25 unit(s)
Nylon	100	Sterile	XH04.1	25 unit(s)

## Accessories Funnel attachment for Steriflip® vacuum filter unit

MERCK MILLIPORE.

Type	Art. No.	Pack Qty.
Funnel attachment, 50 ml, PP, non-sterile	XH05.1	25 unit(s)

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