

Vacuum filtration is used primarily in micro-biological and analytical procedures that involve collecting a particulate (bacteria, precipitate etc.) from a liquid suspension.

Liquid poured into a funnel passes through a filter, which retains the particulate, and filtrate can be collected into a filter flask,

directly or via a vacuum manifold. Applying vacuum reduces process time compared to gravity flow. Advantec supplies a wide range of vacuum filter holders and accessories.

Select from glass, polysulfone and stainless steel assemblies with funnels holding from 22 ml to 1,100 ml.



KG-25



KGS-25



KG-47



KGS-47



KGS-47-TF



KG-90



KGS-90

Glass Microfiltration: Support Systems

▶ Sintered Glass Support (Glass Frit)

- Glass frit (nominal retention 30-50 μm)
- Recommended when filtering highly acidic (low pH) solutions or when slower flow rates are preferred to maximize contact with the filter or reagent
- Ground glass seal



Sintered base

▶ Stainless Steel Support

- Stainless steel screen (Type 316, 100 mesh)
- PTFE gasket
- Maximize flow rate with proteinaceous or viscous solutions
- Will not shed particles into the filtrate
- Ground glass seal



SS support base

Filter Specifications

Model	KG-25 KGS-25	KG-47 KGS-47 KGS-47-TF	KG-90 KGS-90
Filter dia. [mm]	25	47	90
Effective filtration area [cm ²]	2.1	9.6	43.0

Vacuum Filter Holders

25 mm Glass Microanalysis Holders

- **Use for filtering small volumes** for biological or particulate contamination
- Available with either sintered glass base or with stainless steel screen support
- **Use stainless steel screen** when producing ultraclean filtrate or when filtering proteinaceous solutions



KG-25

KGS-25

Specifications

	KG-25	KGS-25
Funnel capacity:	Maximum volume 22 ml, graduated to 15 ml	
Materials:		
Support	Sintered glass	Stainless steel screen
Funnel and base	Borosilicate glass	Borosilicate glass
Stopper	Silicone rubber	Silicone rubber
Clamp	Anodized aluminium	Anodized aluminium
Connection:		
Included	No. 4 stopper adapts to standard 125 ml vacuum filter flask	
Membrane Filter Compatibility:		
Filter size	25 mm	25 mm
Prefilter size	16 mm	16 mm
Filtration area	2.1 cm ²	2.1 cm ²

Ordering Information

Model	KG-25	KGS-25
Cat. No.	17311200	17311300

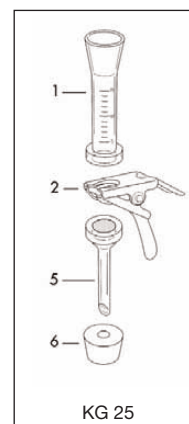


19311208

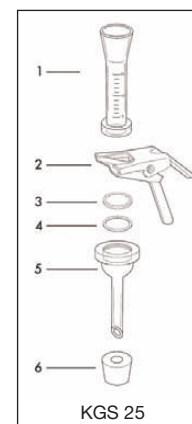
19311209

Replacement parts and optional funnels

		KG-25	KGS-25
1	Funnel, 15 ml (22 ml)	19311201	19311201
1	Funnel, 150 ml (160 ml)	19311208	19311208
1	Funnel, 300 ml (320 ml)	19311209	19311209
2	Clamp	19311003	19311003
3	Screen (stainless steel)	-	19311304
4	Gasket (PTFE)	-	19311305
5	Base	19311202	19311302
6	Stopper No. 4	19311004	19311004



KG 25



KGS 25

47 mm Glass Microanalysis Holders

- **Standard size** for microbiology and particulate analysis
- **Filter up to 500 ml**
- **Available with sintered glass support and stainless steel support.** Last-mentioned also with PTFE flange to prevent membrane sticking to glass when autoclaving with filter in place



KG-47

KGS-47

KGS-47-TF

Specifications

	KG-47	KGS-47	KGS-47-TF
Funnel capacity:	Maximum volume 320 mm (graduated to 300 ml)		
Materials:			
Support	Sintered glass	Stainless steel screen	Stainless steel and PTFE
Funnel and base	Borosilicate glass	Borosilicate glass	Borosilicate glass
Stopper	Silicone rubber	Silicone rubber	Silicone rubber
Clamp	Anodized aluminium	Anodized aluminium	Anodized aluminium
Connection:			
Included	No. 8A stopper adapts to standard 1 L vacuum filter flask or vacuum manifold		
Membrane Filter Compatibility:			
Filter size	47 mm	47 mm	47 mm
Prefilter size	35 mm	35 mm	35 mm
Filtration area	9.6 cm ²	9.6 cm ²	9.6 cm ²

Ordering Information

Model	KG-47	KGS-47	KGS-47-TF
Cat. No.	17311400	17311500	17311600

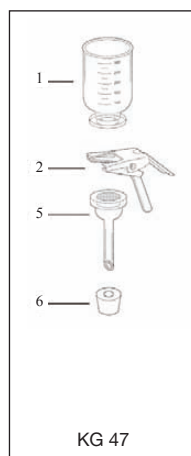


19311408

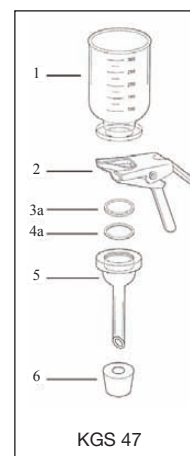
19311409

Replacement parts and optional funnels

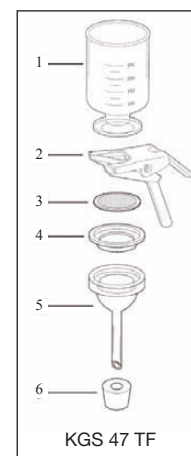
	KG-47	KGS-47	KGS-47-TF
1 Funnel, 100 ml	19311408	19311408	19311408
1 Funnel, 300 ml	19311401	19311401	19311401
1 Funnel, 500 ml	19311409	19311409	19311409
2 Clamp	19311403	19311403	19311403
3a/3 Screen (stainless steel)	-	19311504	19311504
4a Gasket (PTFE)	-	19311505	-
4 Flange (PTFE)	-	-	19311605
5 Base	19311402	19311502	19311602
6 Stopper No. 8A	19311404	19311404	19311404



KG 47



KGS 47



KGS 47 TF

Vacuum Filter Holders

90 mm Glass Microanalysis Holders

- **Larger filtration** area for filtering larger volumes (>500 ml)
- **Use for viscous samples** or those with a heavy particle or bioburden that would clog a 47 mm filter
- Available with sintered glass or stainless steel support



KG-90

KGS-90

Specifications

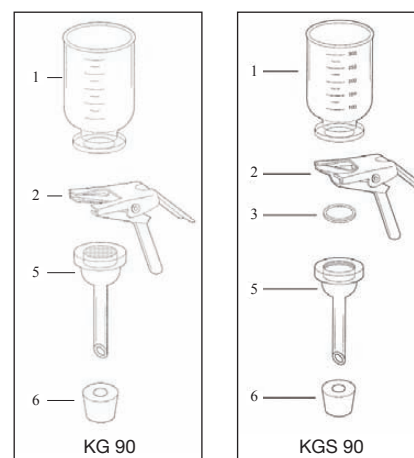
	KG-90	KGS-90
Funnel capacity:	Maximum volume 1100 ml, graduated to 1000 ml	
Materials:		
Support	Sintered glass	Stainless steel screen
Funnel and base	Borosilicate glass	Borosilicate glass
Stopper	Silicone rubber	Silicone rubber
Clamp	Anodized aluminium	Anodized aluminium
Connection:		
Included	No. 8A stopper adapts to standard 1 L vacuum filter flask or vacuum manifold	
Membrane Filter Compatibility:		
Filter size	90 mm	90 mm
Prefilter size	70 mm	70 mm
Filtration area	43 cm ²	43 cm ²

Ordering Information

Model	KG-90	KGS-90
Cat. No.	17312100	17312200

Replacement parts

		KG-90	KGS-90
1	Funnel, 1000 ml (1100 ml)	19312101	19312101
2	Clamp	19312102	19312102
3	Screen (stainless steel)	-	19312204
5	Base	19312103	19312203
6	Stopper No. 8A	19311404	19311404



Polysulfone Filter Holders

- **Can be used aseptically**
- **Recessed filter support** provides sufficient clearance so that the membrane will not twist or tear when the funnel is secured
- **Graduated funnel** in 300 ml (standard) or 500 ml (wide mouth) capacities
- **Receiver flask** (KP-47S) is interchangeable with all other models
- **Funnel cover** can be vented aseptically using disposable syringe filter (13JP050AN, see page 20)
- **Autoclavable** at 120°C for 20 min.



KP-47H



KP-47U



KP-47W



KP-47S

Specifications

	KP-47H	KP-47U	KP-47W	KP-47S
Materials:				
Support	Polypropylene	Polypropylene	Polypropylene	Polypropylene
Funnel and base	Polysulfone	Polysulfone	Polysulfone	Polysulfone
Receiver flask	-	-	-	Polysulfone
Stopper, O-rings	Silicone Rubber	Silicone Rubber	Silicone Rubber	Silicone Rubber
Caps	-	Silicone Rubber	-	Silicone Rubber
Vacuum adapter	-	-	-	Polypropylene
Connection:				
Outlet	No. 8B stopper adapts to standard 1 L vacuum filter flask, vacuum manifold. KP-47S screws onto receiver flask.			
Receiving flask port	-	-	-	Luer slip
Funnel cover port	-	Luer slip	-	Luer slip
Capacity:				
Funnel	300 ml	300 ml	500 ml	300 ml
Receiver	-	-	-	300 ml
Pressure: Vacuum (25 in Hg maximum)				
Membrane Filter Compatibility:				
Filter size	47 mm	47 mm	47 mm	47 mm
Prefilter size	41 mm	41 mm	41 mm	41 mm
Filtration area	13.5 cm ²	13.5 cm ²	13.5 cm ²	13.5 cm ²

Ordering Information

Model	Description	Main Components	Cat. No.
KP-47H	Polysulfone Filter Holder	Funnel, base	43301030
KP-47U	Polysulfone Aseptic Filter Unit	Funnel, base, cover	43301020
KP-47W	Wide Mouth Polysulfone Filter Holder	Funnel, base	43301050
KP-47S	Polysulfone Aseptic Filter System	Funnel, base cover, receiver	43301010

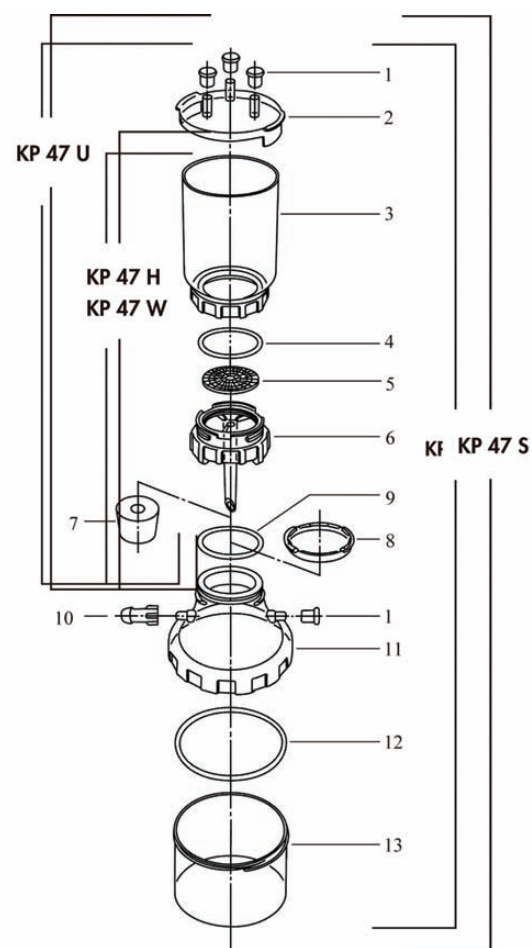
Replacement parts

Replacement Parts – Funnel assembly

	Model	KP-47H	KP-47U	KP-47W	KP-47S
	Cat. No.	43301030	43301020	43301050	43301010
1	Gum rubber cap	-	44501010	-	44501010
2	Funnel cover	-	44501001	-	44501001
3	Funnel	44501002	44501002	44501102	44501002
4	Funnel O-ring	44501008	44501008	44501008	44501008
5	Filter support	44501004	44501004	44501004	44501004
6	Base	44501003	44501003	44501003	44501003
7	Stopper No. 8B	19311008	19311008	19311008	19311008

Replacement Parts – Receiver flask

	Model	KP-47S
8	Receiver cover	44501005
9	Receiver adapter O-ring	44501009
10	Vacuum adapter	44501013
11	Receiver adapter	44501007
12	Receiver O-ring	44501015
13	Receiver flask	44501006



Stainless Steel Filter Holders – KSF-47

- **Nonbreakable stainless steel unit** may be flame sterilized to sanitize the holder between samples
- **Set pins and a locking nut** on the funnel to help prevent twisting and tearing of the membrane
- **Autoclavable** with membrane in place



Specifications

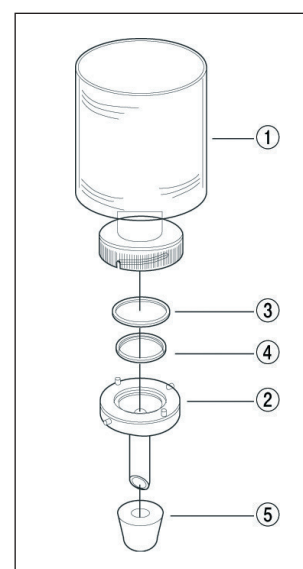
KSF-47	
Materials:	
Support	Type 316 stainless steel
Funnel, base	Type 304 stainless steel
Stopper	Silicone rubber
Gasket	PTFE
Connection:	
Included	No. 8A stopper adapts to standard 1 L vacuum filter flask or vacuum manifold
Capacity:	
Funnel	500 ml
Pressure:	
	Vacuum (21 in Hg recommended)
Membrane Filter Compatibility:	
Filter size	47 mm
Prefilter size	35 mm
Filtration area	9.3 cm ²

Ordering Information

Model	KSF-47
Cat. No.	17312600

Replacement parts

KSF-47		
1	Funnel	-
2	Base	-
3	SS support screen	19311504
4	PTFE gasket	19311505
5	Stopper No. 8A	19311404



Vacuum Filtration

▶ Disposable Vacuum Filtration Unit

- **Disposable;** no cleaning saves labor time
- **Hydrophilic PTFE membrane,** suitable for filtration of both aqueous liquids and solvents
- **Fits receiver flasks** with neck diameter from 24 mm to 50 mm and minimum height of 30 mm
- **Two pore sizes available,** 0.2 µm and 0.5 µm

Applications

Ideal for filtering and degassing HPLC mobile phases.



▶ Specifications

Model	VH020P	VH050P
Materials:	Hydrophilic PTFE membrane filter in polyethylene housing	
Pore size, µm	0.20	0.50
Effective Filtration area [cm ²]	22.1	22.1
Funnel capacity, ml	350	350

▶ Ordering Information

Model	VH020P	VH050P
Cat. No.	8100020	8100050