new

SpeedFlow

Modular Filtration Manifolds and Related Assembly Components

CE

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CERTIQUALITY

SISTEMA DI GESTIONE QUALITÀ CERTIFICATO

CRAMI Group Srl

Specialized Manifold Producer

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CRAMI Group Srl

CE

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CRAMI Group S.r.l.

Via Newton n.9 — 20016 — MI

Pero — Italia

DICHIARA CHE LA MACCHINA

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Modular Manifolds and Related Assembly Components

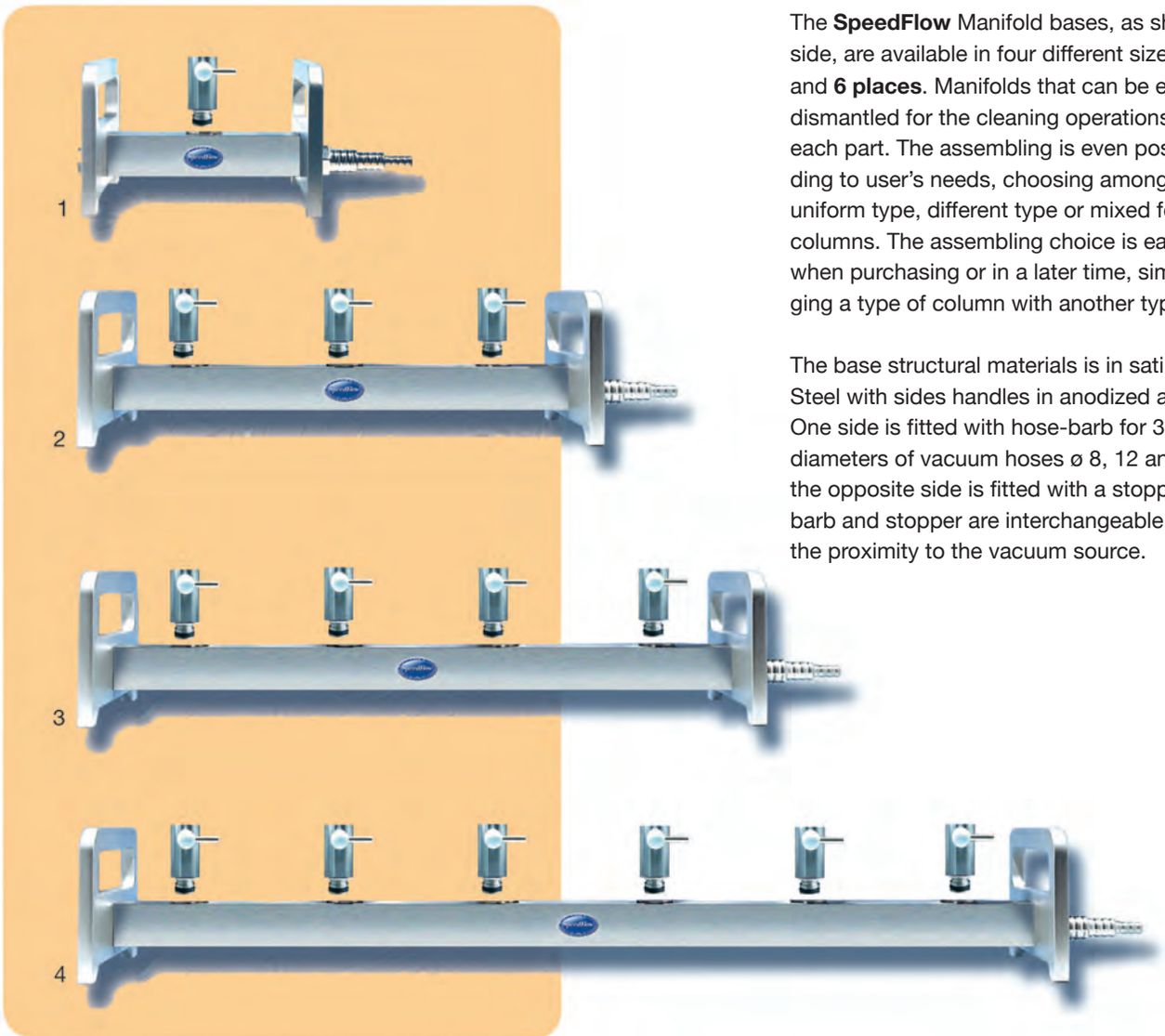
Our Company is on microfiltration market since 1961
Through over 60 years of daily contacts with the users we have acquired an outstanding expertise with the application needs and inconveniences, especially when it is necessary to cary out a number of multiple and separated analysis in a shorter time.

Our long established know-how and experience have led us in 2014 to redesign this filtration system, making it more flexible and suitable to all applications using microfiltration membranes for analytic purposes.

The result of the updating is the implementation of ***SpeedFlow*** modular Manifolds as described in this catalogue with an increased number of auxiliary and additional components available for a proper, simple and handy use.

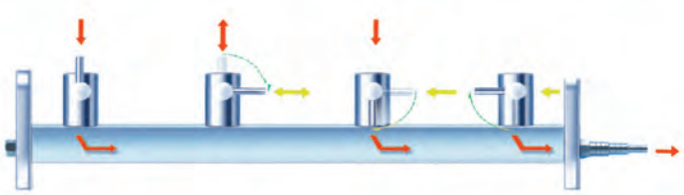
SpeedFlow Manifolds Quality Warranty is CE certification, as machine or quasi machine.

Manifold basis in different sizes



The **SpeedFlow** Manifold bases, as shown on left side, are available in four different sizes: **1**, **3**, **4** and **6 places**. Manifolds that can be easily dismantled for the cleaning operations or to check each part. The assembling is even possible according to user's needs, choosing among various uniform type, different type or mixed form type columns. The assembling choice is easily done when purchasing or in a later time, simply changing a type of column with another type of column.

The base structural materials is in satin Stainless Steel with sides handles in anodized aluminium. One side is fitted with hose-barb for 3 different diameters of vacuum hoses ø 8, 12 and 16 mm, the opposite side is fitted with a stopper. Hose-barb and stopper are interchangeable to facilitate the proximity to the vacuum source.



Different tap positions with flux directions indication

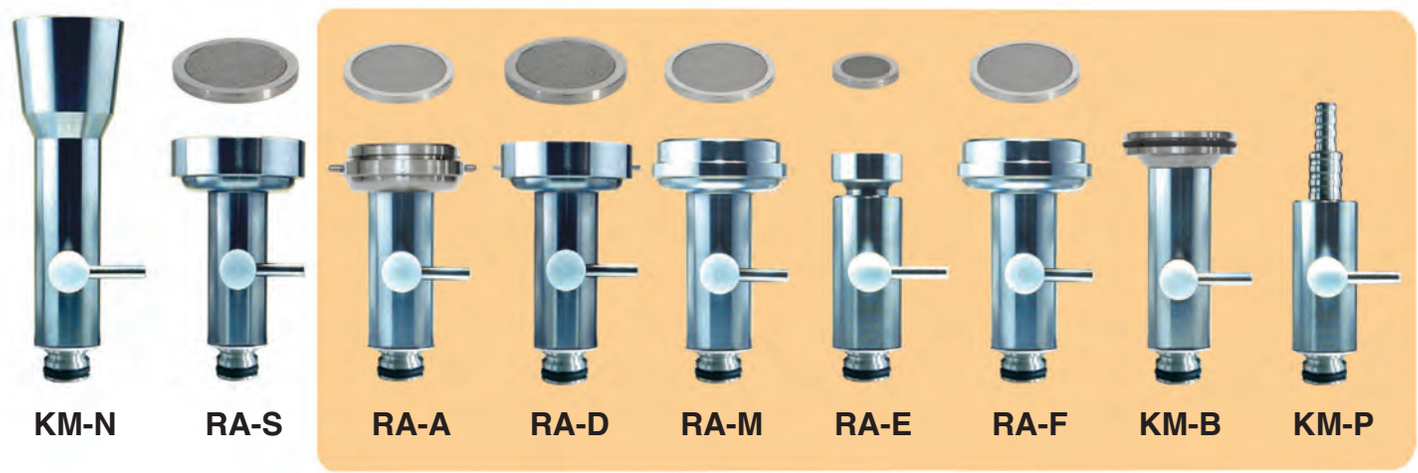
Purchase codes

Select the suitable manifold **width** then make your columns choice among the ones shown in the following pages.

1 - **247310** – **1** place manifold base (width mm 240)
2 - **247330** – **3** places manifold base (width mm 420)
3 - **247340** – **4** places manifold base (width mm 560)
4 - **247360** – **6** places manifold base (width mm 780)

5 – Side detail with hose-barb (width mm 160 x H mm 100)
6 – Side detail with stopper
7 – Columns joint detail seen back-side, with stop hexagon socket screw and its allen screw on manifold base

Different columns for the assembling on manifold base



Different columns type in polished Stainless Steel are available (see illustration). Each column is supplied with a tap to close the vacuum or for the changing of the flux direction (see page 4). The tap is made in PTFE with a SS lever.

Column selection for the assembly on Manifolds bases on page 4

249306 - Column **KM-N**
see page 6
Universal – Conical shaped for stopper #8 (with higher measure of Ø 41 mm) on which insert a filtration device.

249305 - Column **RA-S**
see page 7
Universal - Mushroom shaped with SS sintered disc Ø 50 mm and PTFE gasket. Funnels are directly mounted on it.

249312 - Column **RA-A**
see page 8
Special - Mushroom shaped with a disc in SS net Ø 41 mm. For funnels with separated membrane by **Crami** and **Sartorius** companies.

249308 - Column **KM-A**
Special - As the previous one RA-A but without SS disc. For filtering funnels with incorporated membrane by **Crami**, **Pall** and **Sartorius** companies.

249303 - Column **RA-D**
see page 9
Special - Mushroom shaped with sintered SS disc and Ø 50 mm and PTFE gasket. Funnels by **Sartorius** are directly mounted on it.

249307 - Column **RA-M**
see page 9
Special - Mushroom shaped with SS net disc Ø 41 mm.
Plastic funnel by **Millipore** are directly mounted on it.

249304 - Column **RA-E**
see page 10
codice *249304*
Special - Mushroom shaped with SS net disc Ø 19 mm. It accepts funnels for membrane **Ø 25** mm.

249313 - Column **RA-F**
see page 10
Special - Mushroom shaped with SS net disc Ø 41 mm. Plastic funnels by Sentino® Filter 4870 and 4871 Pall Company are directly mounted on it.

249309 - Column **KM-B**
see page 11
Special - Mushroom shaped with polished plain and central suction hole. Graduated Monitor (with internal diameter 46 mm) are mounted, produced by **Crami**, **Sartorius, Bio-Set** or other brands.

249310 - Column **KM-P**
see page 11
Special - Hose barb shaped for vacuum hose with internal Ø 8 or 12 mm, to connect filtration instruments or separated and indipendent devices.

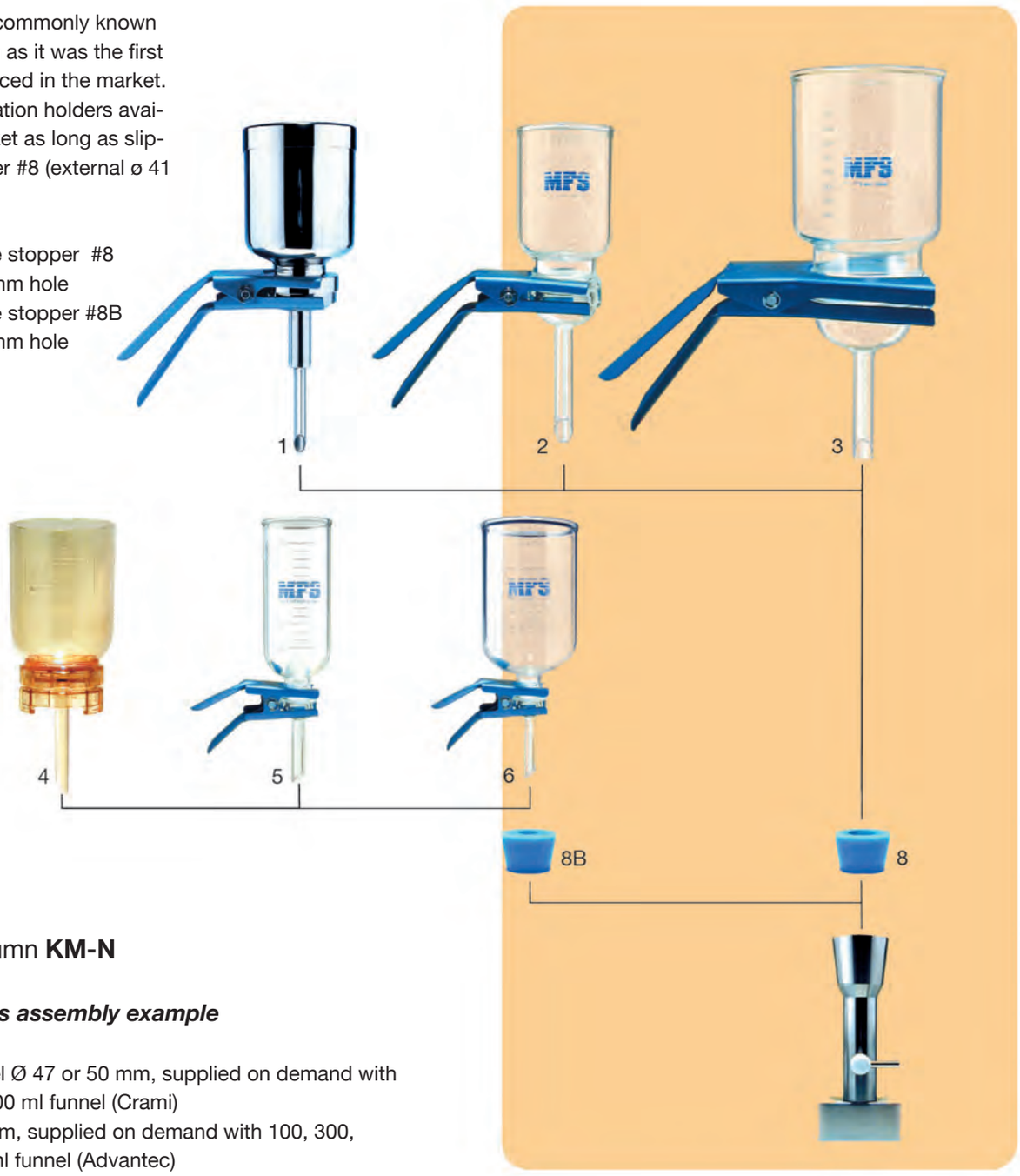
Columns common spare parts

249221 - PTFE tap with SS lever, complete with washers and O-ring
249221.1 -PTFE tap complete with washers and O-ring, whitout lever
249304.1 - O-ring on column joint (pack of 6 pcs)
249304.2 - PTFE gasket Ø 27 mm on column base (pack of 6 pcs)

KM-N • universal column for assembled filter holders

This is the most commonly known and used column as it was the first one to be introduced in the market. It accepts all filtration holders available on the market as long as slipped into a stopper #8 (external ø 41 mm)

249200 - Silicone stopper #8 with 15 mm hole
249201 - Silicone stopper #8B with 10 mm hole



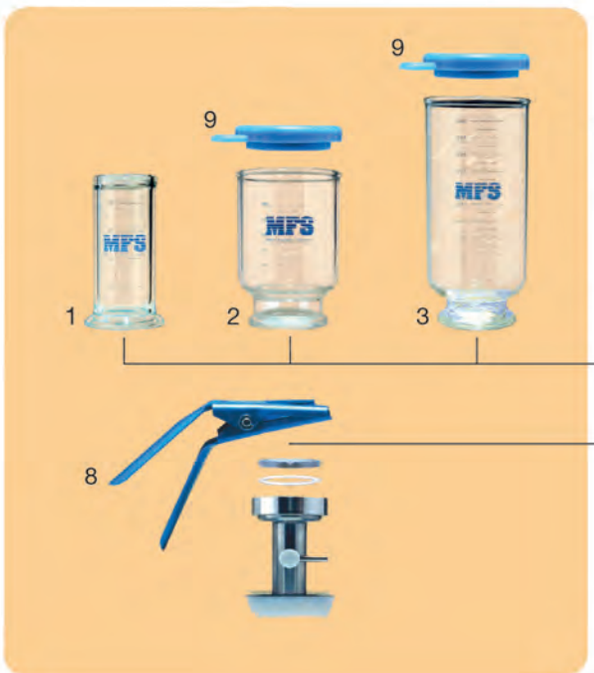
249306 - Column **KM-N**

Various holders assembly example

1 - Stainless steel Ø 47 or 50 mm, supplied on demand with 100, 250 or 500 ml funnel (Crami)
2 - Glass Ø 47 mm, supplied on demand with 100, 300, 500 or 1000 ml funnel (Advantec)
3 - Glass Ø 90 mm, with 1000 ml funnel (Advantec)
4 - Polysulfone Ø 47 mm, supplied on demand with 300 or 500 ml funnel (Advantec)
5 - Glass Ø 13 mm, with funnel 100, 500 or 1000 ml (Advantec)
6 - Glass Ø 25 mm, with funnel 15, 150 or 300 ml (Advantec)

Note: all these holders are supplied with stopper #8 or #8B.

RA-S • universal column for ø 47 or 50 mm membrane



This mushroom shaped column with polished inner part is supplied with a PTFE gasket and a membrane support disc in sintered SS Ø 50 mm.

249305 - Column **RA-S**

On this column it's possible to mount funnels with different form, held by a clamp (unless different descriptions), as in the following list:

1 - **249070** (Advantec) - Glass **100** ml, graduated
2 - **249120** (Advantec) - Glass **300** ml, graduated
3 - **249080** (Advantec) - Glass **500** ml, graduated
4 - **249085** (Advantec) - Glass **1000** ml, graduated
5 - **249180** (Crami) - Stainless Steel **500** ml, (optional lid), graduated 250 e 500 ml
6 - **249185** (Crami) - Stainless Steel **250** ml, clamp not required, graduated each 50 ml
7 - **249190** (Crami) - Stainless Steel **100** ml, clamp not required
8 - **249170** (Advantec) - Blue alluminium clamp
9 - **249090** (Advantec) - Silicone lid (optional) for 249120, 249080 and 249185
10 - **249186** (Crami) - Stainless Steel lid (optional) for 249180

Spare parts

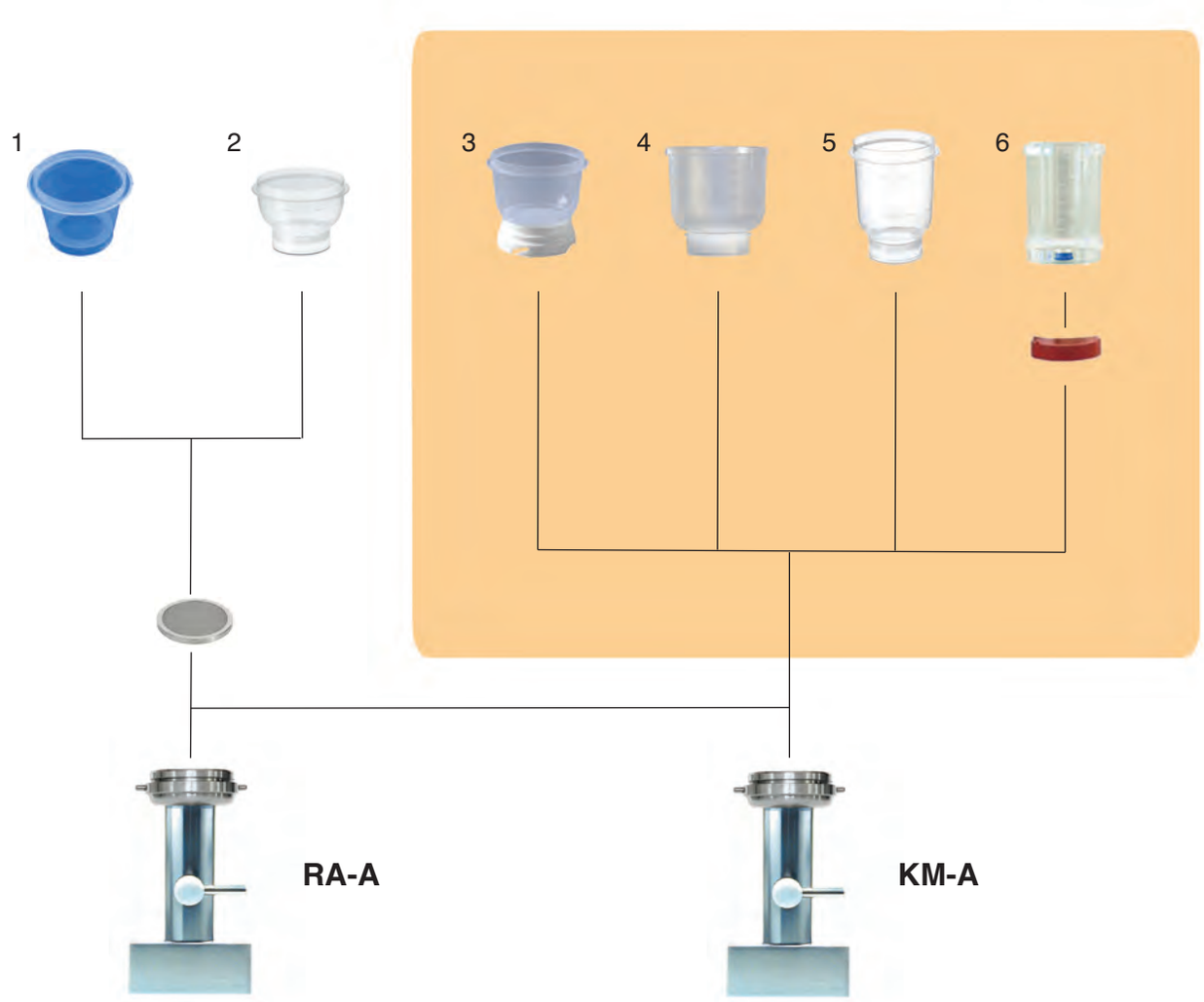
249110 – Sintered SS disc Ø 50 mm
249100 – PTFE gasket Ø 50 mm, settled under the disc (pack of 6 pcs)

Prefilter devices, SS PR-50 and glass PR-47

This accessory provides a physical separation on two filters which have been set up in series, to clarify first then to refine. They accepts membranes Ø 47 or 50 mm and are fitted with a standard clamp.

1 - **PR-50** – code **245331** – SS prefilter device, including SS net disc, (code 249140) and clamp (code 249170).
2 - **PR-47** – code **245318** – Glass prefilter device, including SS net disc (code 249140) and clamp (code 249170).

• *RA-A and KM-A columns*



This mushroom shaped column with polished inner part is supplied **with** a disc support in SS net membrane Ø 41 mm.

249312 - Column **RA-A**

On this column it's possible to mount a range of funnels as follow:

1 - **Ascle®U** 100 o 250 (Crami), see page 13
2 - **Microsart®** Funnel 100 or 250 (Sartorius Company), code 16A07

This identical to the previous one column is supplied **without** a membrane disc support.

249308 - Column **KM-A**

It accepts devices equipped with filtering membrane as follow :

3 - **Ascle®V** 100 or 250 (Crami), see page 13
4 - **MicroFunnel®** 100 or 300 Pall Life Science Company, fixed on its adapter 4890
5 - **Microsart®Filter** 100 or 250 Sartorius Company
6 - **Biosart®** 100 Monitors, supplied with its adapter, code 16424 Sartorius Company

RA-D • column for BioSart® 250 funnels and stainless steel funnels

This mushroom shaped column with conical polished inner part is supplied with PTFE gasket and a disc in sintered SS Ø 50 mm as support of membrane.

249303 - Column **RA-D**

Similar to **Sartorius** column 16840 type, accepts funnel as follow
- **BioSart® 250** Funnel, 16407
- **BioSart® 100 Monitors**, through its adapter 16424
- In **stainless steel** 40, 100 and 500 ml capacity.

Fixed with a light finger pressure and bayonet fitting, or with a proper spring lever.

RA-M • column for Microfil® 100 e 250 funnels

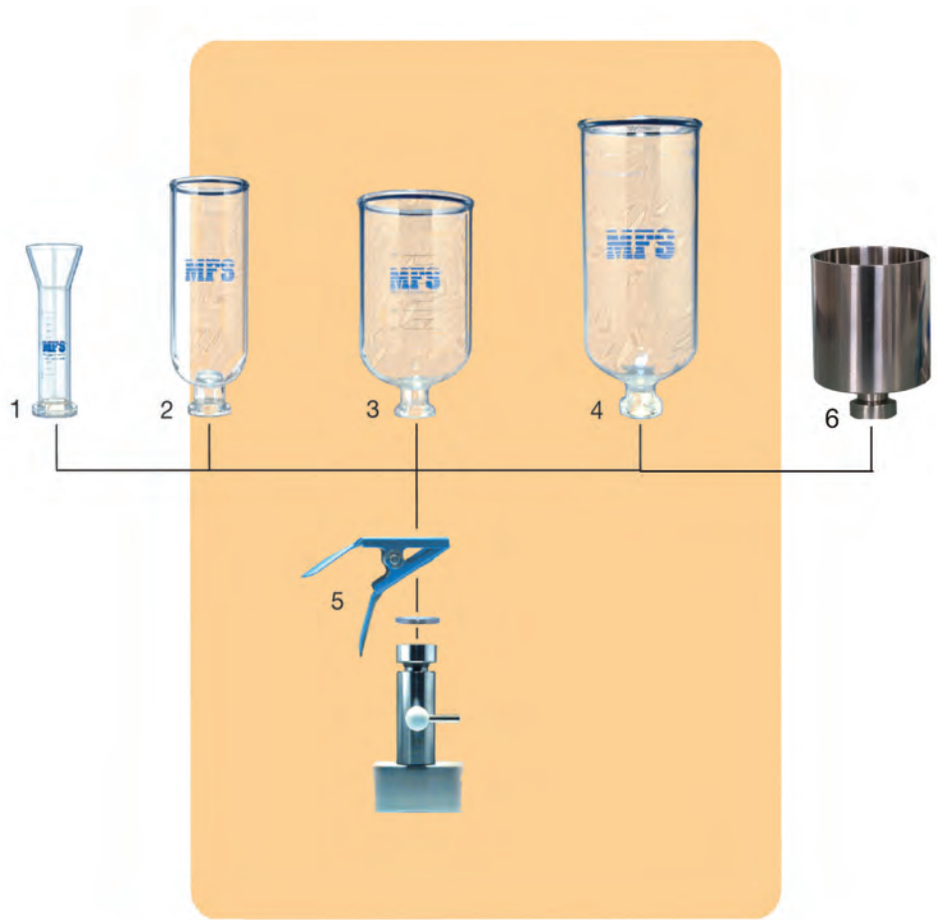
This mushroom shaped column with conical polished inner part is supplied with a disc holder of SS net membrane Ø 41 mm as support of membrane.

249307 - Column **RA-M**

This column accepts **Microfil®** (Millipore Company), funnels **100** or **250** ml capacity, fixed with a light fingers pressure.

RA-E • universal column for ø 25 mm membrane

This mushroom shaped column with conical polished inner part is supplied with a disc in SS net Ø 25 mm as support of membrane.



249304 - Column **RA-E**

This column accepts different type of funnels, held by a clamp, as listed below:

1 - **245111** (Advantec)
Glass **15** ml, graduated
2 - **245115** (Advantec)
Glass **150** ml, graduated
3 - **245114** (Advantec)
Glass **300** ml, graduated
4 - **245022** (Advantec)
Glass **500** ml, graduated
5 - **245113** (Advantec)
Blue alluminium clamp
6 - **245051R** Stainless Steel, 250 ml graduated

RA-F • Column for Sentino® Filter 100 e 250 funnels

This mushroom shaped column with conical polished inner part is supplied with a disc in SS net Ø 41 mm as support of membrane.

249313 - Column **RA-F**

This column accepts filtration funnels Sentino® Filter by Pall, 100 e 250 ml, fixed with a light finger pressure. It's similar to adapter Pall type 4891

KM-B • column for Monitors BioBatt 100 and BioSart® 100

249309 - Column **KM-B**

In this mushroom shaped column are mounted graduated filtration devices BioBatt 100 (Crami, see page 13), Bio-Set, BioSart®100 (Sartorius), Whatman or equivalent, simply by a light finger pressure.

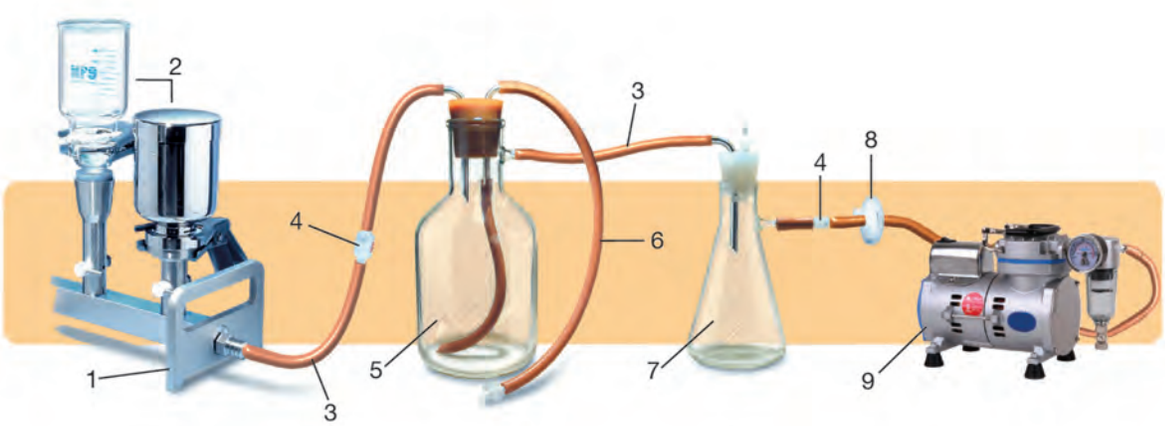
KM-P • coumn for distant devices connection

249310 - Column **KM-P**

This column is Ø 8 or 12 mm hose barb shaped. This allows an indipendent connection with different separated devices that need vacuum for his performance.

The scheme is showing a standard recommended Manifold assembly

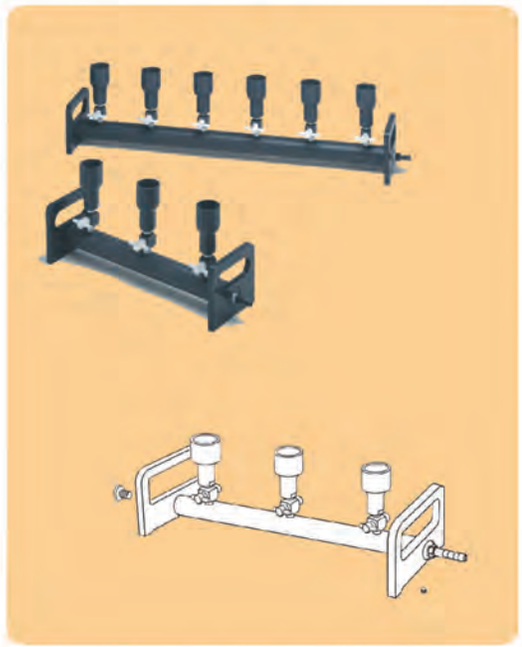
1- Manifold 2- Different filter holders 3- Vacuum hose 4- Non return valve 5- Glass waste filtrate vessel
6- Hose with tap used to empty the flask (flasks with 5 or 10 lt capacity) 7-Water-trap to protect the electric pump
8- Hydrophobic filter for extra pump protection (optional) 9- Vacuum pump



KMPC manifold in PVC for special applications (Advantec®)

This universal type manifold made of PVC allows the mounting of filter holders trough a stopper size #8 and it's suggested when agressive agents products are used. It's commonly used with glass or plastic devices and an equally resistant vacuum pump.

code **246110** – Manifold **KMPC3** in PVC **3** places
code **246120** – Manifold **KMPC6** in PVC **6** places



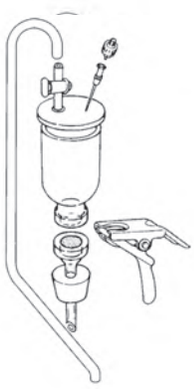
Vacuum pump resistant to chemical agressive components, dry portable type, electric (220 V), noise 50 dB, equipped with temperature sensor.

code **22530T** – CMK300, flow rate 18 lt/min
(suggested for 3 places manifolds)
code **22540T** – CMK400, flow rate 34 lt/min
(suggested for 6 places manifolds)

KMVS manifold in SS for sterility test

This universal type manifold made of SS AISI 304 allows the mounting of filter holders by the stopper size #8, and it's equipped with a second manifold for the fluxing of filter holders STU (special on sterility applications)
code **246010** – Manifold **KMVS3** in SS 3 places
code **246020** – Manifold **KMVS6** in SS 6 places

STU – Sterility test device



Filter holder entirely assembled to perform sterility test with antibiotics or pharmaceutical products.
code **245700** - Complete unit ready to use

Ascle® U - Disposable funnel with separated membrane

Fast and secure filtering system for bacteriological filtration pourpose

TECHNICAL DATA

- Funnel 100 or 250 ml, sterile
- Packages of 100 pcs divided in 10 sterile boxes
- Supplied with 100 separated gridded and sterile membranes, in individual pack
- Single-use type, easy to manage
- In use on **RA-A** column see page 8

Purchase codes

100 ml funnels and membranes

Code	µ	ø mm	Colour
A47U100+A020H		47	white
A47U100+A045H		47	white
A47U100+A080H		47	white
A47U100+A045R		47	black
A47U100+A080R		47	black

250 ml funnels and membranes

Code	µ	ø mm	Colour
A47U250+A020H		47	white
A47U250+A045H		47	white
A47U250+A080H		47	white
A47U250+A045R		47	black
A47U250+A080R		47	black

For furthers details contact us

Ascle® V - Disposable funnel equipped with membrane

Fast and secure filtering system for bacteriological filtration pourpose

TECHNICAL DATA

- Funnel 100 or 250 ml, sterile
- Packages of 75 and 50 pcs divided in single sterile boxes unit
- Square membranes are incorporated and pre-mounted
- Single-use type, easy to manage
- In use on **KM-A** column see page 8 (code 249308) or on **RA-A** column removing the supporting holder

Purchase codes

100 ml funnels and membranes

Code	µ	ø mm	Colour
A47V100GM22	0,22	47	white
A47V100GM45	0,45	47	white
A47V100LG22	0,22	47	black
A47V100LG45	0,45	47	black

250 ml funnels and membranes

Code	µ	ø mm	Colour
A47V250GM22	0,22	47	white
A47V250GM45	0,45	47	white
A47V250LG22	0,22	47	black
A47V250LG45	0,45	47	black

For furthers details contact us

Bio-Bact 100 - Monitors equipped with membrane for bacteriological analysis

Fast and secure filtering system for filtration and transformation on Petri dish, ready for incubation

TECHNICAL DATA

- Funnels 100 ml, composed of a base with membrane, graduated cylinder and lid (all in a sterile bag)
- Packages of 50 pcs divided in single sterile boxes unit
- Membranes in ø 47 mm are gridded, incorporated and ready for use
- Disposable type, easy to manage
- In use on **KM-B column** see page 11 (code 249309)

Purchase codes

Bio-Bact 100 funnels

Code	µ	ø mm	Colour
BB-47MCE022SW	0,22	47	white
BB-47MCE045SW	0,45	47	white
BB-47MCE080SW	0,8	47	white
BB-47MCE045SB	0,45	47	black
BB-47MCE080SB	0,8	47	black
BB-47PES010SW	0,1	47	white
BB-47PES022SW	0,22	47	white
BB-47PES045SW	0,45	47	white
BB-47PVL022SW	0,22	47	white
BB-47PVL045SW	0,45	47	white

For furthers details contact us

Manifold's accessories and auxiliaries

Waste bottle accessories

1) Waste vacuum glass flasks
code **06004** – capacity 5 liters
code **06005** – capacity 10 liters

2) Flask type 1- mounted with a stopper type (3) as shown below

3) Rubber stopper to empty vacuum flasks, equipped with 2 SS connections for vacuum hose Ø 8 mm, vent tap and a series of vacuum hoses
code **04016** – size #16

4) Waste in PP (polypropylene) vessel capacity 4000 ml - autoclavable, hose connection Ø 8 mm, overflow valve and draining on its base
code **22548R** – capacity 4000 ml

5) Waste vessel with hose connections Ø 8 mm and overflow valve
code **22512R** – PES, capacity 1200 ml
code **22520R** – PC, capacity 2000 ml
code **22530R** – PC, capacity 3000 ml

Flask traps

6) Glass flasks Wolf system, equipped with silicone stopper, SS connection for the vacuum hose, vent tap and non-return valve
code **06011** – glass, capacity 1 liter
code **06012** – glass, capacity 2 liter

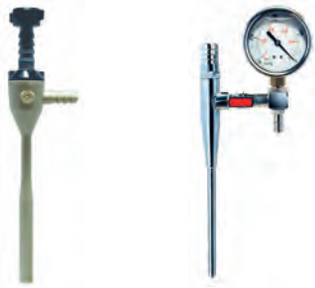
7) PC (polycarbonate) vessels with hose Ø 8 mm connection, overflow valve
code **22510R** – in PC, capacity 1 liter
code **22520R** – in PC, capacity 2 liters

Vacuum pumps

8) Dry portable pump type, electric (220 V), noise 50 dB, equipped with trap and temperature sensor
code **225300** – RCK300, flow rate 18lt/min (suggested for 1 or 3 places manifold)
code **225400** – RCK400, flow rate 34 lt/min (suggested for 4 or 6 places manifold)

9) Dry portable pump, electric (220 V), for agressive products, noise 50 db, with temperature sensor
code **22530T** – CMK300, flow rate 18lt/min (suggested for 1 or 3 places manifold)
code **22540T** – CMK400, flow rate 34 lt/min (suggested for 4 or 6 places manifold)

10) Oil portable pump type, electric (220 V), noise 52 dB, with temperature sensor
code **225130** – TNK 130, rate flow 70 lt/min (suggested for 3, 4 or 6 places manifold)
code **225150** – TNK 150, rate flow 127 lt/min (suggested for 6 places manifold)



11) Water tap flow pump type
code **22781** – in plastic, connections 1/2" or 3/4" (suggested for 1 or 3 places manifold)
code **22783** – in chrome plated metal, with hose connector and vacuum gauge (suggested for 1 or 3 places manifold)

12) Hand lever pump type
code **22791** – in plastic, with vacuum gauge (suggested for 1 place manifold)

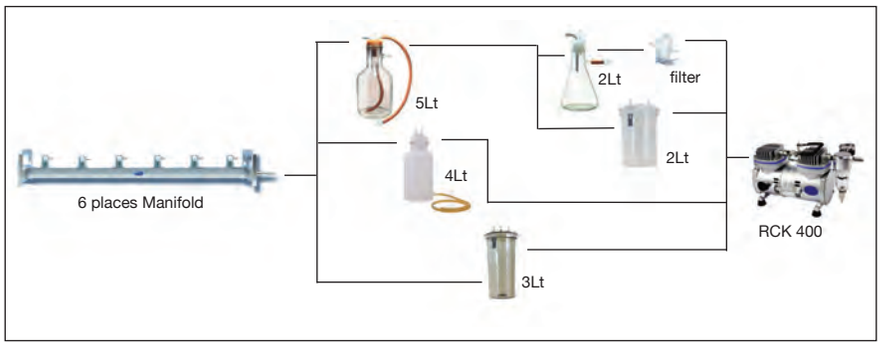
Accessories

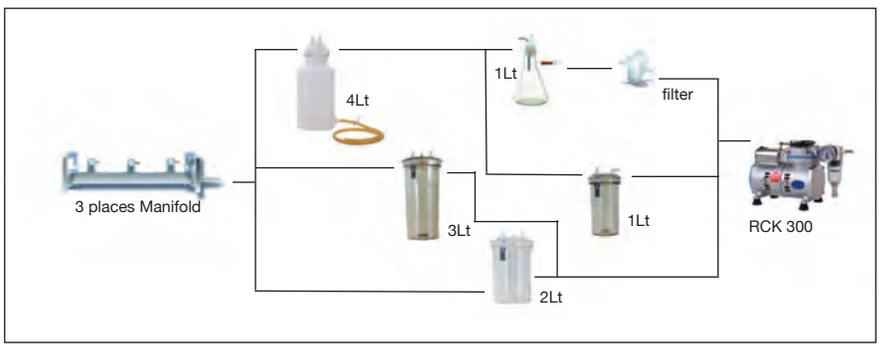
13) Non-returne valve to stop the inverse air flow (reflux)
code **22795** – In plastic with hosebarb in 3 diameter sizes

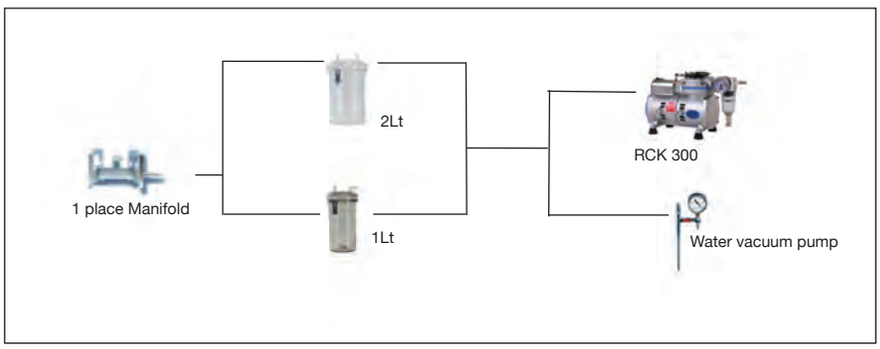
14) Hydrophobic PTFE filter Ø 50 mm, to protect the electric pump from water flow
code **MD-50JP050AN** – 0,5 µ in PTFE (pack of 10 pcs)

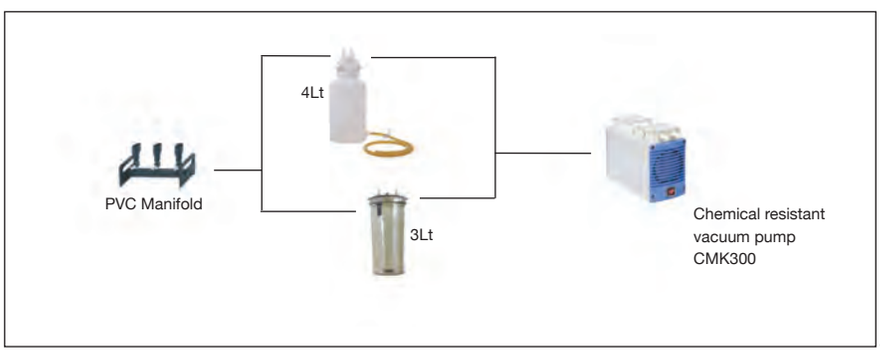
15) Rubber vacuum hose
code **07201** – internal ø 8 mm

Various examples









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CE

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