



Safety Solutions

for Laboratory and Production 2014 · 15



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EXTRACTION SYSTEMS



COLLECTION SYSTEMS



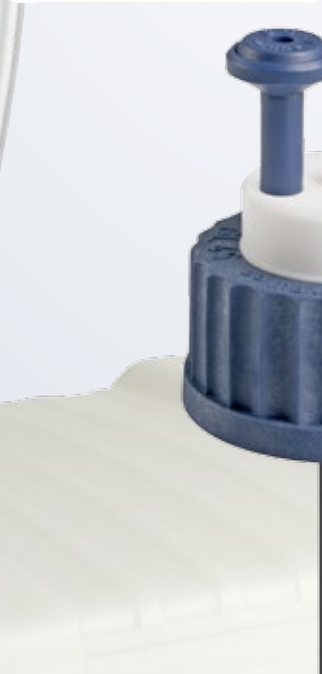
WASTE-MANAGEMENT



LEVEL CONTROL



Over 600 products of our own development



WE BRING YOU SAFETY AND COMFORT

Work in the laboratory requires a high level of concentration and is often subject to high performance pressure. Therefore it is important for colleagues to work with the best possible devices and resources.

» **The most essential value is the health of humans in the laboratory and maintaining health is a significant part of our strategy and work.**

Perfect materials and simple, but absolutely safe, handling are the preconditions for safety. This is what products from S.C.A.T. provide with a guarantee you can count on. All S.C.A.T. products are developed in close collaboration with major German chemical and pharmaceutical firms. Here, chemists, engineers and technicians have deliberated, developed and manufactured for colleagues. Our company was founded to implement maximum safety standards and to guarantee them over the long term. S.C.A.T. Europe stands for Safety-Center-Analyses-Technology. We follow this idea with pleasure and success. Of course we would be happy to serve you and your colleagues as customers.

Johann Rittgasser

Owner and president of S.C.A.T. Europe GmbH

» Strictly orientated to the principles of
DIN EN ISO 9001



S.C.A.T. Europe - A SUCCESS STORY

S.C.A.T. Europe stands for Safety-Center-Analyses-Technology. The company was founded in order to protect technicians in analytical laboratories from harmful materials used in the working environment.

The impetus was a concrete requirement of a large German Chemical company. Contaminant concentrations in a laboratory where organic solvents were utilized required necessary structural alteration measures resulting in a large investment; laboratory work had to come to a halt as well.

S.C.A.T. Europe developed a safety concept which rendered these measures superfluous. With S.C.A.T. SafetyCaps, emissions were drastically reduced and structural alterations were no longer necessary. During the entire time, the laboratory continued to operate with almost no interruption. The company was able to save an amount in the upper six figures.

For us, this success was the starting shot. Since then, we have helped numerous companies throughout Europe to save costs and before all else, to protect their employees from impairment to health.

We continually develop new products in order to offer the optimal solution to each – often very specialized – requirement.

Over 600 products, developed in-house for safe handling of harmful fluids, substantiate our performance capabilities and expertise.

The current catalog offers an overview of our standard products – in addition to these, customized solutions are also realized.

We have over 20 years experience in instrumental chemical analysis and can give you professional advice for anything having to do with hazardous material safety.



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of S.C.A.T. Europe GmbH,
Mörfelden/Frankfurt am Main.

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Safety Solutions

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SAFETY every day in the laboratory



0.855 g/cm³ of the solvent mixture rose to a density of 0.858 g/cm³ (Fig.1). An increase in density indicates that there has been a greater loss of methanol than of water from the mixture. This loss did not occur in the same mixture ratio.

Therefore a change in the composition of the methanol/water mixture can be assumed, which then could result in errors in measured values under laboratory conditions. In contrast to this, in the solvent bottle with the S.C.A.T. SafetyCap, no change in the mixture ratio was found so that errors in measured values due to a change in the solvent mixture can be excluded.

Characterization of the change in volume in methanol and acetonitrile

The first step in this test was to determine change in volume by

A comparison of the measured results shows that in a bottle fitted with the S.C.A.T. SafetyCap no change in density occurs, the initial density of 0.855 g/cm³ stayed constant throughout the entire 8 days of the test.

In contrast to this, the solvent bottle without a S.C.A.T. SafetyCap displayed a demonstrable change in density so that the initial value of

Determining the changes in density and volume

SGS Institut Fresenius GmbH was commissioned by S.C.A.T. Europe GmbH to evaluate the effectiveness of their S.C.A.T. SafetyCaps in comparison to a solvent bottle without S.C.A.T. SafetyCaps. Changes in density of a methanol/water mixture were examined to determine if use of the S.C.A.T. SafetyCap could prevent a change in the mixture over an longer time of 8 days.

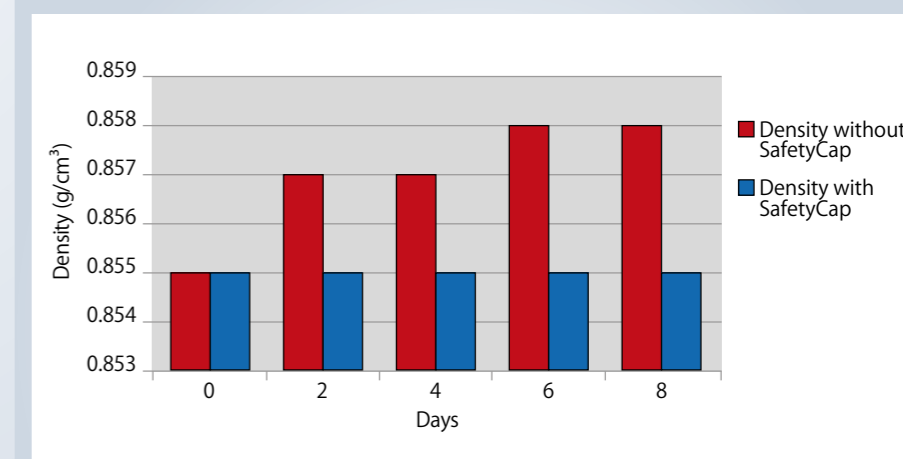


Fig. 1 Changes in the density of a methanol/water mixture

SGS Institut Fresenius was commissioned by S.C.A.T. Europe GmbH to investigate reduction of emissions achieved by use of S.C.A.T. SafetyCaps In this respect, 1000 ml solvent bottles with and without SafetyCaps were used and the emissions over a period of 28 days compared.

Then test chamber tests were conducted over a period of 7 days, during which the level of emissions in atmosphere were regularly monitored. The solvent components tested as examples were the tested compounds methanol/water (ratio: 80/20), acetonitrile and methanol.

means of differential weighing over the 28 day pilot study in which both acetonitrile and methanol were specified as solvents. These two solvents were used to generate the best possible comparison with real on-site conditions in a HPLC laboratory. [Based on the measurement results it is evident that in both series of trials with the S.C.A.T. SafetyCap, scarcely any change in volume over the period of 28 days was observed. In comparison to this, without the S.C.A.T. SafetyCap, a significant reduction in the given volume of 1 liter was found within the period of the trial \(Fig. 2\).](#)

In the acetonitrile bottle without a SafetyCap, a reduction in volume of almost 10% occurred so that after 28 days, only 90% of the initial volume remained in the solvent bottle. Consequently, after 4 weeks, almost 10% of the solvent quantity was lost, having escaped unfiltered into the atmosphere.

During differential weighting to determine the change in volume of methanol, it was evident that an even more significant reduction had occurred in the solvent bottle not fitted with a S.C.A.T. SafetyCap: After 28 days, only 87.8% of the initial volume remained in the open solvent bottle, compared with 100% of the initial volume remaining in the solvent bottle equipped with the S.C.A.T. SafetyCap. [It is obvious that almost 13% of the solvent quantity used are lost, having escaped into the atmosphere](#)

[from the solvent bottle not fitted with a S.C.A.T. SafetyCap.](#)

Characterization of the atmospheric concentration by test chamber investigations

In order to investigate the atmospheric emissions caused by open solvent bottles in comparison to a solvent bottle with S.C.A.T. SafetyCap, one of each solvent bottles were placed in a test chamber and their respective methanol or acetonitrile emissions were tested after 1, 3 and 7 days (fig. 3).

[It was evident that within the test chamber, despite continuous air exchange a methanol concentration of 630–660 mg/m³ could be determined for the solvent bottle without SafetyCap, whereas a concentration of 1–2 mg/m³ was analyzed for a solvent bottle with S.C.A.T. SafetyCap.](#)

This clearly documents that with the S.C.A.T. SafetyCap an evident reduction in the methanol concentration in the test chamber to nearly 0 was achieved, so the workplace limit value of 270 mg/m³ specified by TRGS 900 was fallen well below.

In contrast to this, without SafetyCap the concentration of 630–660 mg/m³ clearly exceeds the workplace limit value to constitute a background exposure which can lead to impairment of employees' health in the laboratory.

A similar picture also results from the test chamber investigation with acetonitrile, in which a concentration of 1–5 mg/m³ was determined safety cap, as opposed to an atmospheric concentration of 730–800 mg/m³ without the S.C.A.T. safety cap, despite continuous air exchange (Fig. 3).

Comparison of the detected test chamber emissions with the acetonitrile limit values of 34 mg/m³ specified by TRGS 900 showed that without the S.C.A.T. SafetyCap, the workplace limit value was evidently exceeded. In contrast to this, with the S.C.A.T. on the bottle a distinct minimization of the acetonitrile concentration was determined, which was well below the workplace limit value of 34 mg/m³ specified by TRGS 900 (fig. 4).

Conclusion

In conclusion, it is evident that solvent emissions could be significantly reduced by the S.C.A.T. SafetyCaps. In this respect, the use of S.C.A.T. SafetyCaps can be expected to lead to a clear reduction of the exposure to solvents in the air in a laboratory.

In this connection the reduction in the solvent concentration in the air can be assumed to be of a similar proportion as was described previously, leading to significantly lower health risk for the employees concerned.

Furthermore, S.C.A.T. technology significantly minimizes the risk of contamination of solvent-free blank samples in laboratories, so the use of S.C.A.T. SafetyCaps can also be considered a measure of quality assurance.

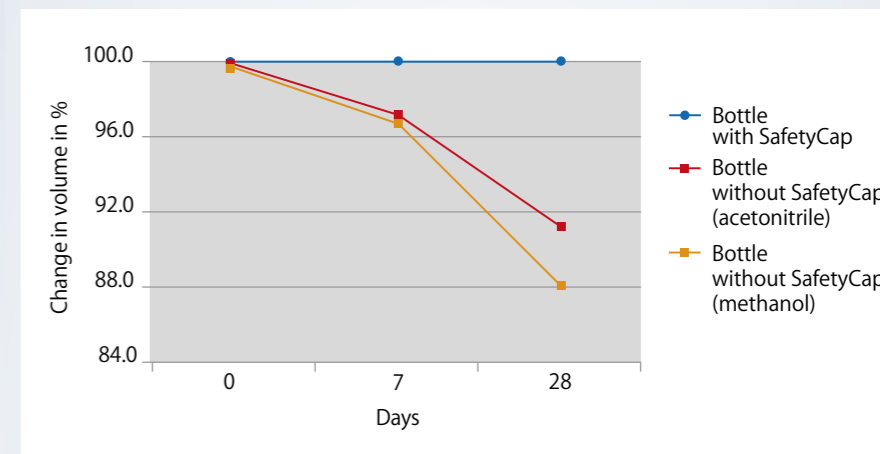


Fig. 2 Changes in volume of methanol and acetonitrile.

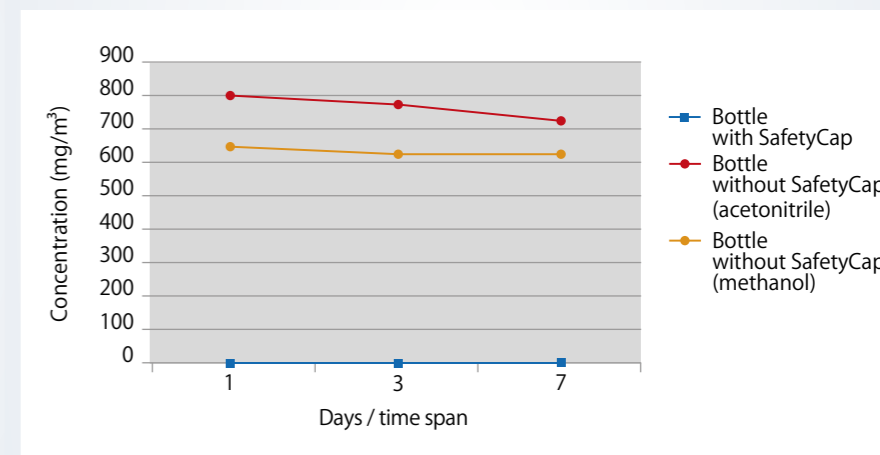


Fig. 3 Methanol emissions and acetonitrile emissions in the test chamber.

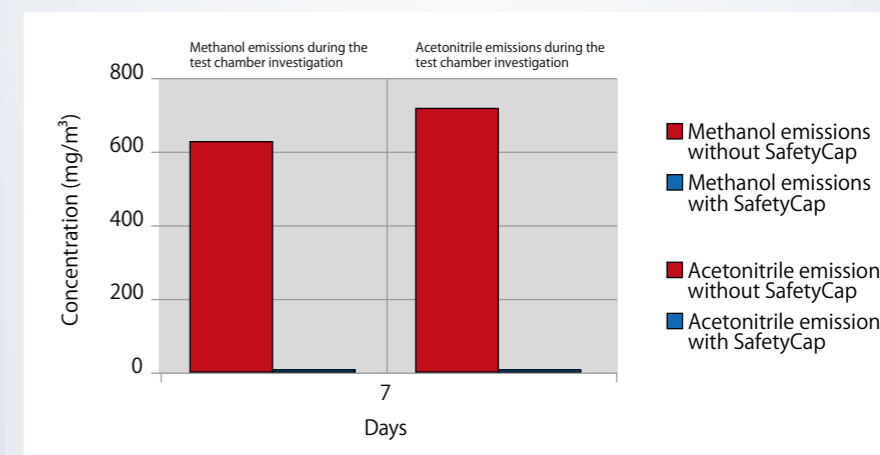


Fig. 4 Methanol emissions & acetonitrile emissions in the test chamber.

SAFETY - an absolute must for all users in the laboratory



The first and foremost concern is chromatography and secondly, safe handling of solvents is taken into consideration. It is remarkable how little attention is given to one's own health protection. Normally, everybody starts to move when MWC tolerances are exceeded in the laboratory.

When new HPLC equipment is installed, the solvent bottles for the mobile phase must be provided and at the same time, a suitable form of disposal for eluents has to be considered. Equipment suppliers leave it up to the user to supply this. Only closure caps for GL45 threaded glass bottles having open holes for tubes with 3.2 mm (OD) and a 3.2 mm hole so that underpressure does not occur are delivered. The safe disposal of used eluents is not resolved by equipment manufacturers either.

What are the implications of inadequate screw caps?

First, tubes can slide out of the solvent bottle because they are not screwed on tightly. This can cause air to be sucked in and HPLC equipment down times are thus "permanently calculated." In addition, the mobile phase gets contaminated by dust particles in the air. Similarly, evaporation loss of light volatile solvents can occur and change the mixing ratio of solvent compounds. This plays a particular role with u-HPLC. Solvent filtration and precisely prepared mobile solvents are a must with ultra-HPLC! In addition, solvent exchange with common screw caps is difficult to handle. Often, the well-known "tangled tubes" occur, when supply bottles have to be exchanged.

The SafetyCaps made of pure PTFE and many more high grade plastics from S.C.A.T. Europe



provide a remedy. Solvent containers are tightly sealed, so that safe removal of solvents is possible with tightly screwed tubes and connectors. The integrated air valve provides pressurization during removal. Thus, harmful vapors do not end up in the laboratory air.

What does disposal of used mobile solvents look like?

Even laboratories often have archaic conditions for this. In some rare cases, catch canister, funnel and solvent tray are positioned under the exhaust – and this is the tragic reality. However, there is a suitable safety cap system for all current disposal containers consisting of SafetyCap, exhaust filter (with special granulates based on active charcoal) and if desired, a safety funnel, so that it is easy to implement retrofitting without sacrificing flexibility. The solution is SafetyWasteCaps.

Conclusion

Those who want to get their waste disposal under control and to create ideal solvent conditions for their HPLC will need a coherent concept. And S.C.A.T. Europe can provide this. More protection for people and the environment and reduction of solvent loss – SafetyCaps are a one-time investment for many years of health and safety.

Dr. Andrea Junker-Buchheit
Chromatography consultant

Sophisticated CLOSURE DEVICES



The high health hazard of solvents is well known by anyone who works in a laboratory, because solvent vapors leads not only endanger health, but also increase the risk for laboratories and buildings in addition to causing air contamination. This is why the safety measures have been and are checked again and again and adapted to the conditions. Safety officials monitor the measures and intervene rigorously when safety standards are not properly observed.

Contamination and evaporation

Despite all of these safety measures, there always seem to be new sources of permanent air burden by solvent vapors in HPLC laboratories, in most cases caused by faulty sealing of the supply and waste containers. The results are not only a permanent risk, but also of a very practical nature: Contamination of the eluent and changes in the mixing ratio caused by leaks in the system as a result of different vapor pressures in components. This necessarily leads to separation results that can hardly be reproduced and/or to incorrect analytical data.

Remedy: SafetyCaps

The S.C.A.T. SafetyCaps with integrated air valve remedy this situation by ensuring safe withdrawal of solvents. The sophisticated system, which in addition to the screw caps also integrates standard bottles with NS29/32 ground necks, has freely rotatable closure caps so even when several connectors are used, containers can be quickly changed without twisting the tubes. The PTFE air filter with 1.0 μm pore size integrated into the air valve ensures that the solvent remains uncontaminated. SafetyCaps made from PTFE and many more high grade plastics are resistant against aggressive solvents and the sealing system reliably closes the receptacle.



SafetyCaps with shut-off have been proven to be very practical; they prevent air pockets in the tube, make changing supply containers easier and are ideal for repairs or maintenance work on the HPLC system.

SafetyWasteCaps

Naturally waste solvents also evaporate and therefore, suitable SafetyCaps have been developed. The required fittings for the tubes are provided, as well as an exhaust filter with special granulates of active charcoal in various sizes. The lifetimes (3-9 months) for the filter are standard values and refer to the application of a HPLC system. Their actual wear is dependent on the load created by solvent vapor adsorption.

Often, waste has to be disposed of or test tubes have to be emptied. The S.C.A.T. safety funnels are only opened the moment filling starts, otherwise the container remains closed.

Dr. Gerhard Schilling
Science editor for the magazines
Magazine labor&more, lab&more
and chemie&more

PROTECT YOUR HEALTH

Harmful vapors are created during work with solvents and other dangerous fluids. People are exposed to health risks due to faulty sealing of supply or waste containers. Meanwhile, legislation has established many regulations.

» Your health should be foremost.

The Hazardous Substance Ordinance is now based on both the Chemical Act and the Occupational Safety Act. The employer is responsible for protecting all employees from health hazards through inhalation, skin contact and chemical and/or physical effects of hazardous substances. S.C.A.T. Europe supports companies through consultation and can offer standard as well as custom solutions for all areas.



At January 20, 2009 the regulation (EC) No. 1272/2008 – CLP-regulation – became effective.

It regulates the classification, labeling and packaging of substances and mixtures (Regulation on classification, labeling and packaging of substances and mixtures, short CLP) and replace the European regulation 67/548/EEC and the Dangerous Preparations Directive 1999/45/EC from 2015 completely.

The CLP Regulation is based on the recommendation of the UN, which dates back to the 1992 Sustainability Conference in Rio de Janeiro, to establish a global corporate system for classification and labeling of chemicals (Global Harmonized System, UN GHS). This represents a compromise by established systems primarily in North America, the EU and the regulation for dangerous goods.

More informations at www.unece.org



Important regulations & legislation

TRGS 526 "Laboratories" =
Technical regulations for hazardous substances

Section 2 TRGS 526: General information

Laboratories must be (...) designed and operated according to state of the art technology.

Section 3.1 TRGS 526: Risk assessment

- Measures for protection against hazardous materials are to be construed so that (...) the employees are not exposed to any risks or burdens.
- If this is not possible, the overall risk must be minimized (...) after investigation of (...) alternative measures.

Section 3.3.1 TRGS 526: Assessment of exposure

Employers can assume there is no impermissibly high exposure to hazardous materials when (...) the applicable requirements are adhered to and state of the art technology is in place.

Section 3.7 TRGS 526: Occupational restrictions

Here too, the occupational restrictions for women of childbearing age and for pregnant and nursing mothers are referred to. (Maternity Protection Act (MuSchG))

Section 4.3.1 TRGS 526: Prevention of hazards

The employer is responsible for designing the work in such a way that hazards are avoided or reduced to a minimum. Duration and extent of exposure to hazardous materials are to be restricted, (...).

Section 4.11.1 TRGS 526: Release of gases and vapors

Outside of exceptions, occupations for which gases and vapors may occur in hazardous concentrations or amounts may only be carried out when suitable measures are (...) employed to ensure that a hazard (...) is excluded.

Section 4.16.1 TRGS 526: Handling of wastes

When collection containers (of wastes) are kept and filled, it must be ensured that no hazardous gases or vapors (...) can make their way into the air of the laboratory.

Section 5.2.23 TRGS 526: Chromatography (HPLC)

Unless the system can be operated under an exception, any released solvent vapors must safely be drawn off.

Section 6.1 TRGS 526:

Technical protective measures

Hazards in laboratories are most significantly reduced by appropriate design and equipage of the workplace. This includes (...) the properties of devices, apparatuses and (...).

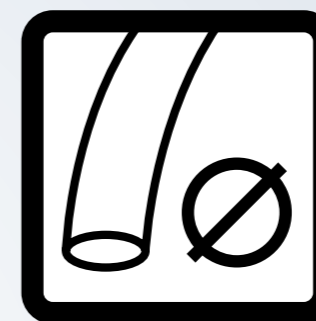


S.C.A.T. Europe Icons

We have developed these icons to make it even easier for you to navigate through this catalog. This way, you can quickly and easily compare products and their features. S.C.A.T. is the solid brand and your companion for safety in the laboratory.



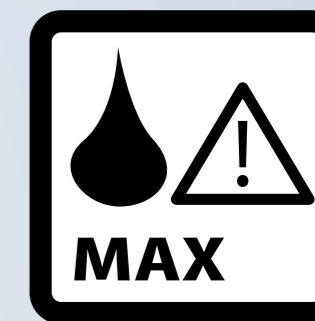
Connection options for HPLC capillaries



Connection options for tubing



Connection options for S.C.A.T. Exhaust air filters



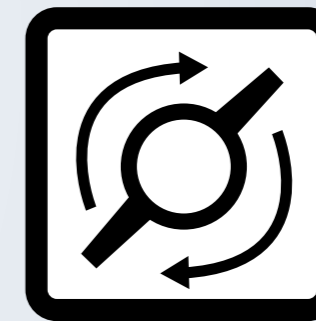
Integrated float for level warning



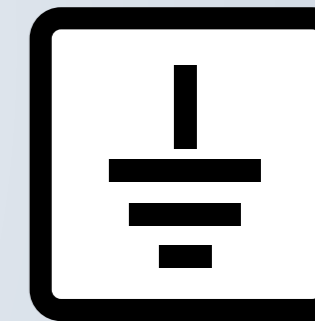
Connection options for electronic level control



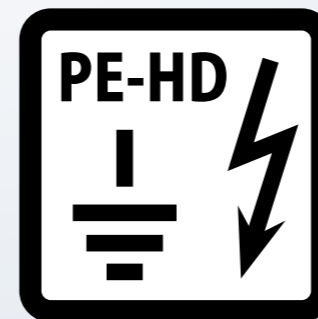
Integrated safety funnels with automatic closure



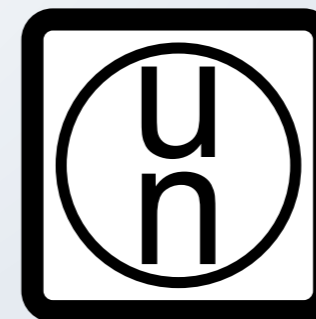
Integrated safety funnels with shut-off



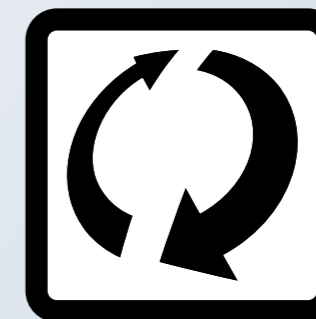
Connection options for ground cables



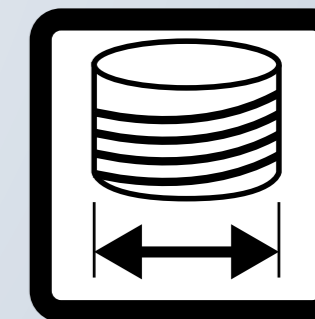
Electrically conductive PE-HD to prevent sparking risks



UN approval for the transport of hazardous goods on roads and plant premises



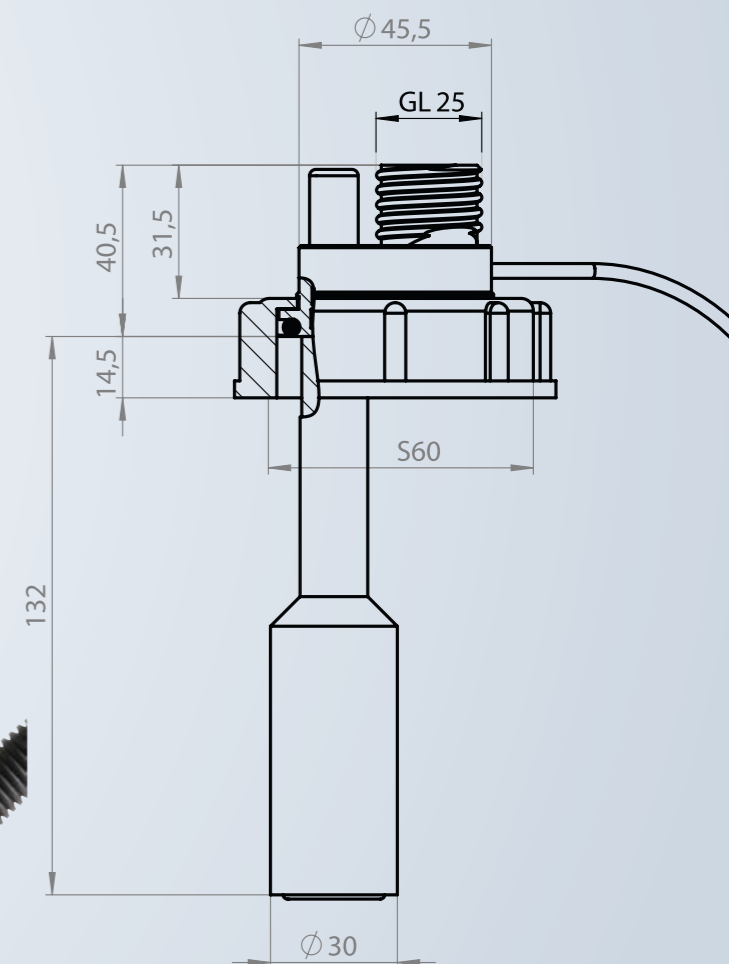
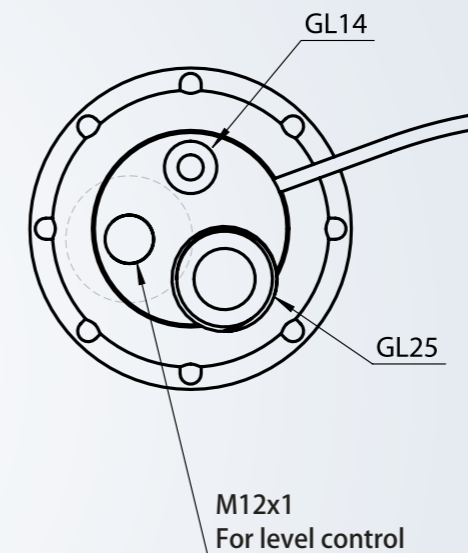
Service life / lifespan for consumables



Thread size

S.C.A.T. Europe Customized production

Many of our products arise from solutions for individual problems of our customers. Most of our standard products presented in this catalog were developed in this way. Furthermore, naturally we find the right answer to your special problem in the laboratory or in production, wherever the safe handling of fluid chemicals is a priority.



From idea through construction to the completed product – with S.C.A.T. Europe, you receive customized and sustainable solutions for your technical problem.



**S.C.A.T.
POWER**



S.C.A.T. Europe

Customized production

Some examples which we have successfully developed for our customer and brought to market maturity.



SafetyWasteCap with level control for Baker® aluminum canister.



Disposal systems for laboratory installation with additional capillaries, exhaust filters and electronic level control.



Electronic empty state warning for pressure vessels.

SafetyWasteCap with grounding connection and different connections for UV-resistant containers.



Disposal solution with safety funnel and exhaust filter for steel cans.



PTFE core with tube fitting made of PTFE for extremely high resistance to chemicals.



Electrically conductive container closure cap with drain tap.



Tabletop distribution base with capillary and tube connectors.



SafetyCap with air valve for a TOC system.

How do you extract your solvents?

DANGEROUS



Solvent extraction with S.C.A.T.

SAFE



**SAFETY PAYS
FOR ITSELF**

QUESTIONS?

S.C.A.T. Europe GmbH
Opelstraße 3
D-64546 Mörfelden



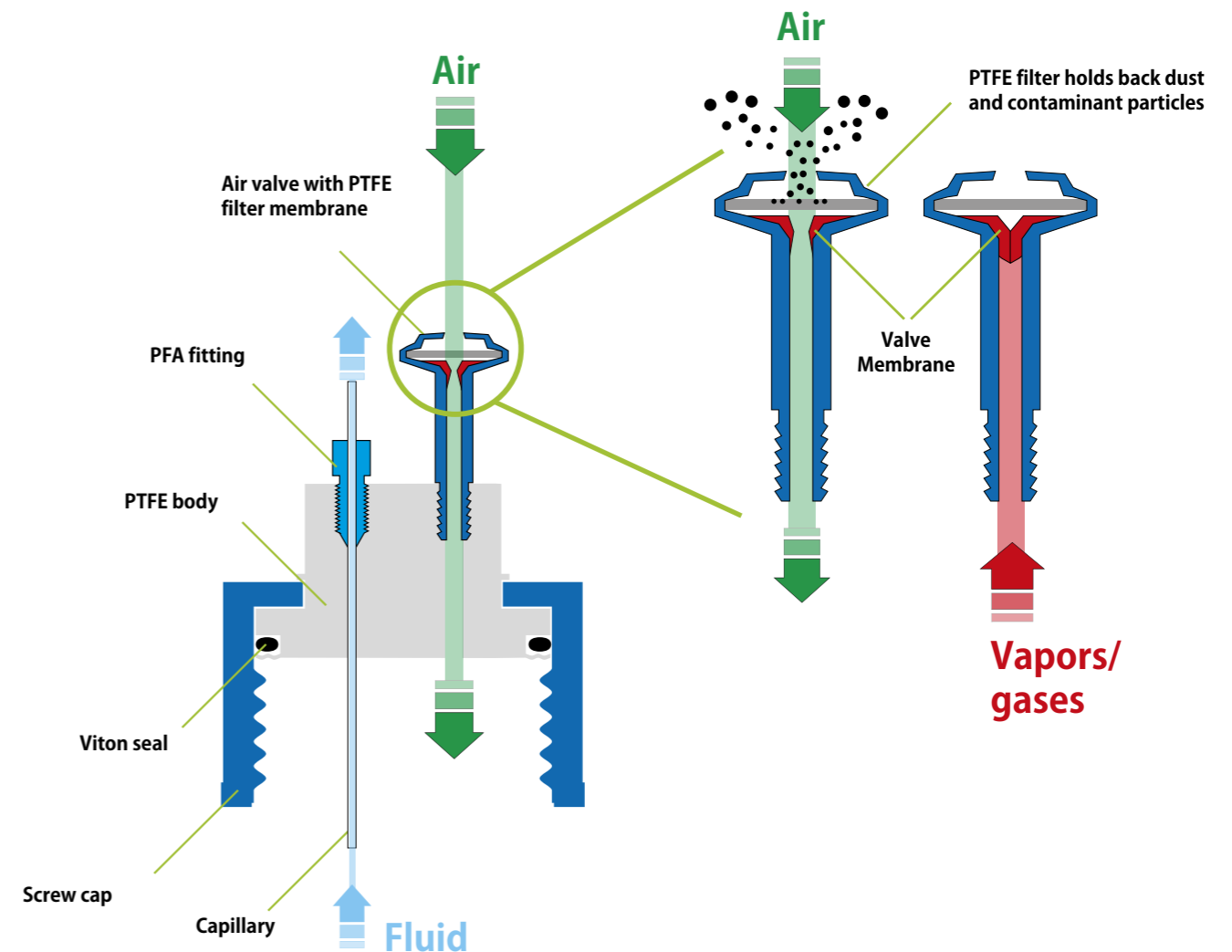
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EXTRACTION SYSTEMS

SafetyCaps – The technology



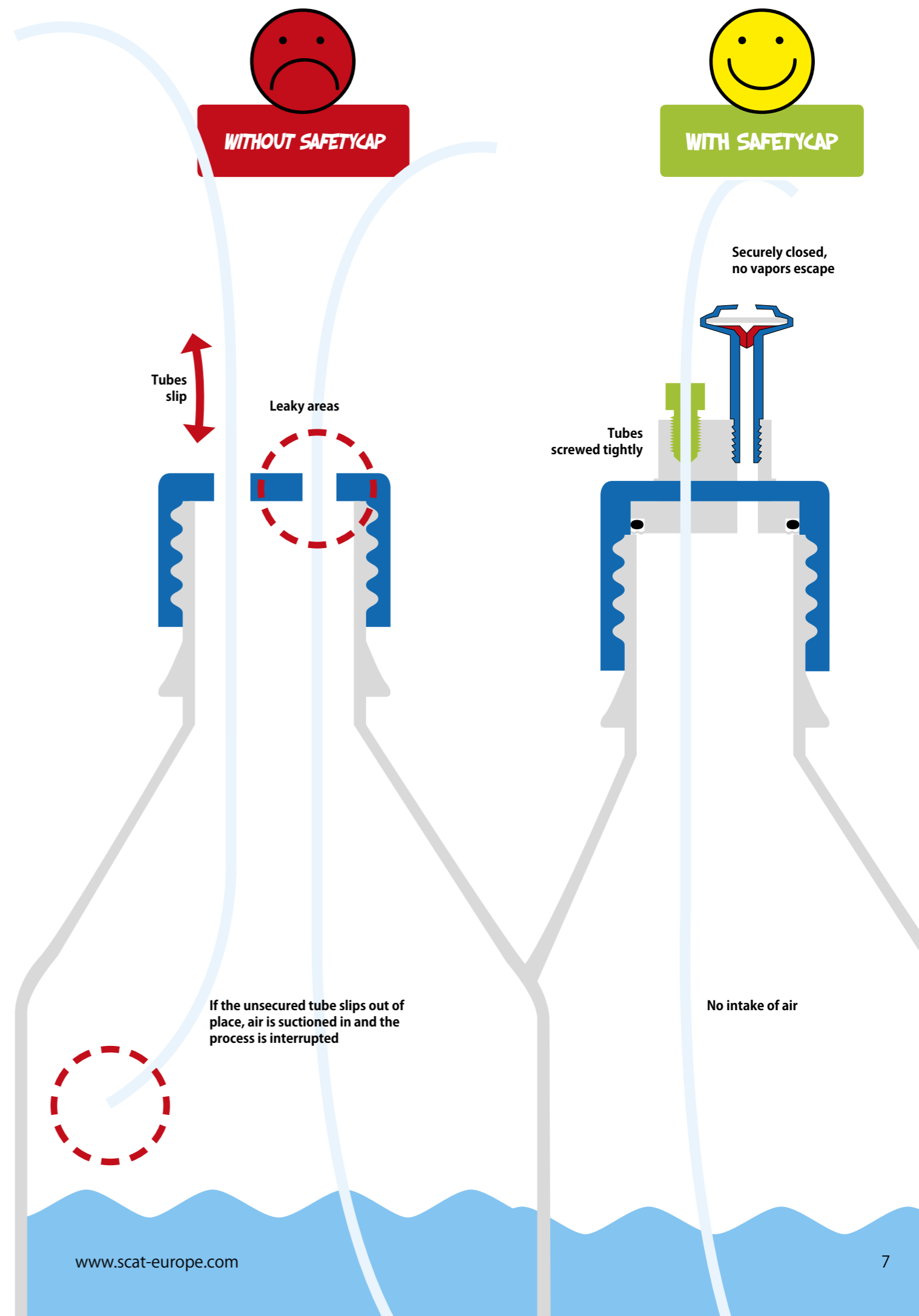
The new, improved air valve combines valve and filter functions. As usual, ventilation occurs during removal; harmful solvent vapors are blocked. At the same time, the valve membrane absorbs dust and contaminant particles from the incoming air. The valve also fits your existing S.C.A.T SafetyCaps without any technical modification. **Since the filter membrane absorbs contaminants from the surrounding air, it is recommended that the valve be replaced every 6 months in order to ensure flawless operation.**





**360°
FREE ROTATION**

- » **No more harmful vapors**
thanks to the integrated air valve.
- » **No eluent contamination**
Receptacles remain securely closed so the results of your analyses stay correct.
- » **No tube slippage**
... so no accidental intake of air into the HPLC system. No interruption of analytical and work processes due to air pockets in the tube.
- » **Easy container changes**
thanks to a freely-rotatable cap, even with tubes installed. Without twisting or "tangled tubes".
- » **Confidence during audits**
With S.C.A.T. systems, you pass quality and safety inspections with confidence.






» Many of our customers also readily use our 3-way and 4-way adapter (Page 132) on GL 45 bottles.

SafetyCaps Thread GL 45



Blind plug for closing unused connectors

F G
Safety caps with empty state display inform you at the right time, when your solvent supply is running low!

 You will find signal boxes for the electronic empty state display on Page 100.



Up to 150 ml per minute

Air valve service life: 6 months 



SCOPE OF DELIVERY

Air valve and fittings are included in the scope of delivery.

Fig.	Part No.	Description	Thread size	Connector Ø3.2 mm OD	Empty state warning (mechanical)	Empty state warning (electronic)
A	107 019	SafetyCap I	GL 45	1x	-	-
B	107 909	SafetyCap II	GL 45	2x	-	-
C	107 910	SafetyCap III	GL 45	3x	-	-
D	107 410	SafetyCap IV	GL 45	4x	-	-
E	107 520	SafetyCap VI	GL 45	6x	-	-
F	117 991	SafetyCap II with mechanical empty state display	GL 45	2x	•	-
G	117 992	SafetyCap II with electronic empty state display	GL 45	2x	-	•
H	160 501	Blind plug (10 pc./unit)	UNF 1/4" 28G	-	-	-
I	117 010	Air valve for SafetyCaps	UNF 1/4" 28G	-	-	-
-	197010	Air valve for SafetyCaps (10 pc./unit)	UNF 1/4" 28G	-	-	-

SafetyCaps Thread GL 45 for the preparative HPLC



NO HALFWAY MEASURES

The red air valve is specially designed for preparative HPLC operation and easily delivers supply amount of up to 400ml/min (Blue air valve up to 150ml/min). The connectors have a correspondingly larger diameter for typical tube sizes in the preparative HPLC. For special applications, individual connectors can be closed with blind plugs (Page 161). We would also be happy to produce individual solutions for you.

Fig.	Part No.	Description	Thread size	Connector Ø 3.2 mm OD (1/8 Zoll)	Connector Ø 4,76 mm OD (3/16")	Connector Ø 6,35 mm OD (1/4")
A	107 007	SafetyCap I (1/4")	GL 45	-	-	1x
B	107 008	SafetyCap II (1/4")	GL 45	-	-	2x
C	107 009	SafetyCap II (1/8" + 1/4")	GL 45	1x	-	1x
D	108 032	SafetyCap I (3/16")	GL 45	-	1x	-
E	109 032	SafetyCap II (3/16")	GL 45	-	2x	-
F	110 032	SafetyCap III (3/16")	GL 45	-	3x	-
G	117 011	Air valve (preparative) up to 400 ml/min.	UNF 1/4" 28G	-	-	-
-	107 064	PFA fitting 3,2mm Ø (1/8")	UNF 1/4" 28G	-	-	-
-	107 045	PTFE fitting 4,76mm Ø (3/16")	UNF 5/16" -24	-	-	-
-	107 044	PTFE fitting 6,35mm Ø (1/4")	M 10x1	-	-	-

» **Valve power**
Red air valve for higher supply volumes up to 400 ml/min.

» **No halfway measures**
Connectors for larger extraction tubes with up to Ø 6.35 mm outer diameter.



SCOPE OF DELIVERY
Air valve and fittings are included in the scope of delivery.

SafetyCaps Thread GL 45 with shut-off

» No air entrapment in tube

After the supply container is changed, the current analysis can be continued without interruption.

» Ready for use again - quickly

During repairs on HPLC pumps, the shut-off on the SafetyCaps can be closed so the capillaries and solvent filter remain in the solvent. Thus the pump can be quickly and easily flushed when returning to operation after repairs.

» With shut-off

QUESTIONS?

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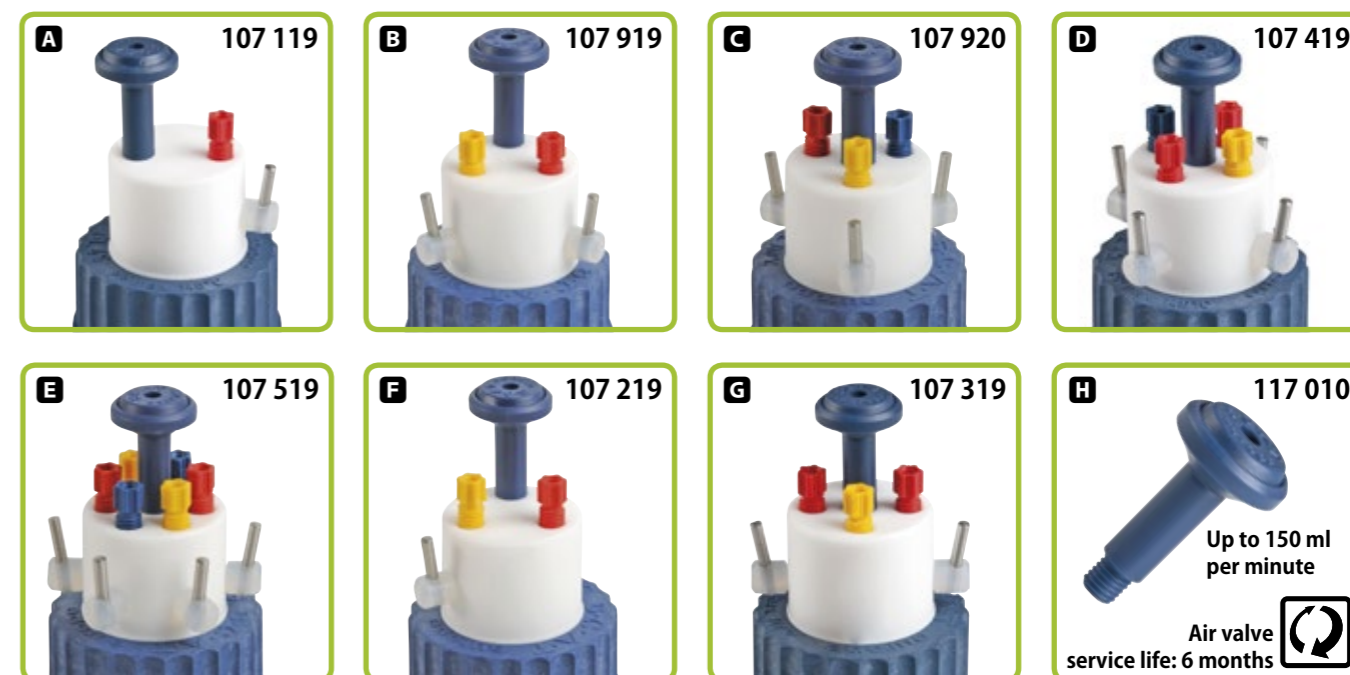


Fig.	Part No.	Description	Thread size	Connector Ø 3.2 mm OD	of which with shut-off
A	107 119	SafetyCap I with shut-off	GL 45	1x	1x
B	107 919	SafetyCap II with shut-off	GL 45	2x	2x
C	107 920	SafetyCap III with shut-off	GL 45	3x	3x
D	107 419	SafetyCap IV with shut-off	GL 45	4x	4x
E	107 519	SafetyCap VI with shut-off	GL 45	6x	6x
F	107 219	SafetyCap II with shut-off (combined)	GL 45	2x	1x
G	107 319	SafetyCap III with shut-off (combined)	GL 45	3x	2x
H	117 010	Air valve for SafetyCaps	UNF 1/4" 28G	-	-
-	197010	Air valve for SafetyCaps (10 pc./unit)	UNF 1/4" 28G	-	-

SafetyCaps Thread GL 45 Angled SafetyCaps



Fig.	Part No.	Description	Thread size	Connector \varnothing 3,2 mm OD
A	199 019	SafetyCap I (angled)	GL 45	1x
B	199 909	SafetyCap II (angled)	GL 45	2x
C	160 501	Blind plug (10 pc./unit)	UNF 1/4" 28G	-
D	117 010	Air valve for SafetyCaps	UNF 1/4" 28G	-



» Saves space!

Especially where laboratory space is limited, you gain a major advantage with our angled safety caps. Even when extraction bottles are stored above the HPLC system, you can easily reach all the connectors because they are attached on the side.

**THE ANGLE
MAKES IT!**

» Saves space!



SafetyCaps Special sizes

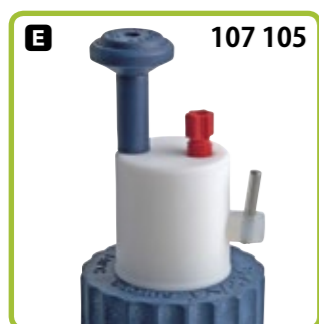


Fig.	Part No.	Description	Thread size	Connector Ø3.2mm OD	of which with shut-off
A	107 005	SafetyCap I (GL 28)	GL 28	1x	-
B	107 006	SafetyCap II (GL 28)	GL 28	2x	-
-	107 512 NEW	SafetyCap III (GL 38)	GL 38	3x	-
C	107 100	SafetyCap I (S 40)	S 40 / GL 40	1x	-
D	107 101	SafetyCap II (S 40)	S 40 / GL 40	2x	-
-	107 742 NEW	SafetyCap III (S 40)	S 40 / GL 40	3x	-
E	107 105	SafetyCap I (S 40) with shut-off	S 40 / GL 40	1x	1x
F	107 030	SafetyCap I (GLS 80)	GLS 80	1x	-
G	107 031	SafetyCap II (GLS 80)	GLS 80	2x	-
H	107 032	SafetyCap III (GLS 80)	GLS 80	3x	-
I	107 035	SafetyCap IV (B 83)	B 83	4x	-



» C D E Thread S 40

Now you can use our proven safety system without an adapter, directly on supply bottles with thread sizes S 40 and GL 40. Many solvents are already delivered in such containers. With the new sealing system, you can connect the containers directly to the HPLC system, without decanting or thread adapters.



» F G H
For GL 80 wide neck bottles

QUESTIONS?

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I 107 035





» For bottles with 29/32 mm standard ground neck

» Simple loosening & opening with the locknut

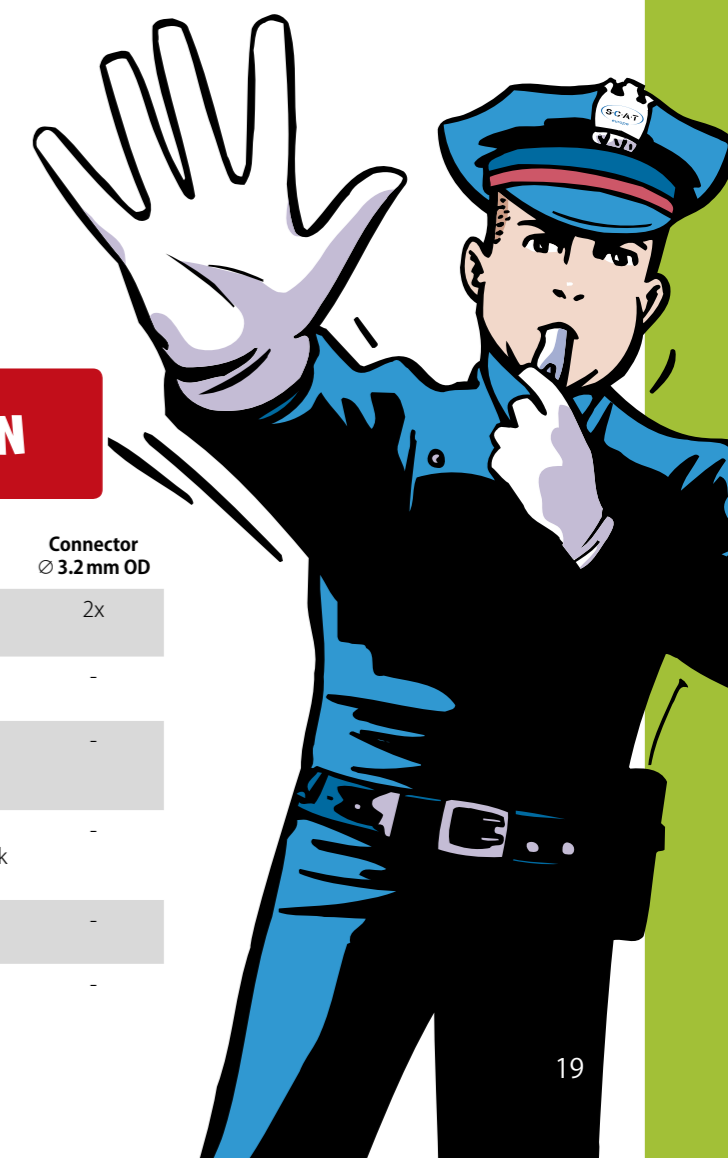
Everybody is familiar with stuck ground neck stoppers: Dried fluids and sticky substances build up on the ground glass; the stopper will not budge. S.C.A.T. closures with locknut allow the stopper to be easily loosened and removed, even after long usage.

SafetyCaps for ground neck bottles



NO STICKING, NO ACCUMULATION

Fig.	Part No.	Description	Thread size	Connector Ø 3.2 mm OD
A	107 607	SafetyCap II for ground neck bottles (with locknut)	Ground neck 29/32 mm	2x
B	107 507	Blind plug for ground neck bottles (with locknut)	Ground neck 29/32 mm	-
C	107 508	Ground neck adapter for GL 45 threaded bottles	Top: Ground neck 29/32 mm (f) Bottom: GL 45 (f)	-
D	107 509	GL 45 adapter for ground neck bottles	Top: GL 45 (m) Bottom: Ground neck 29/32 mm (m)	-
E	107 506	Replacement locknuts for SafetyCaps	Ground neck 29/32 mm	-
F	117 010	Air valve for SafetyCaps	UNF 1/4" 28G	-





107 300



107 303



107 304

**SCOPE OF DELIVERY**

Delivery scope includes PTFE suction filter and 1.5 m capillary for each connector.

SafetyCaps HPLC sets with bottle

- » The extraction system in a complete set, ready to connect.
- » Only one article number for the comprehensive safety system.
- » No time-consuming compilation of a configuration.
- » The delivery is made complete and can be used immediately.



**STRONG TEAMS -
GOOD DEALS**



107 301



107 305



107 306



107 312



107 313



107 314

Fig.	Part No.	Description	Connections incl. 1.5 m capillary ∅ 3.2 mm OD	Suction filter PTFE	Bottle	Form	Volume
A	107 300	SafetySet HPLC	1x	1x	DURAN® clear glass	Round	1 liter
B	107 303	SafetySet HPLC	2x	2x	DURAN® clear glass	Round	1 liter
C	107 304	SafetySet HPLC	3x	3x	DURAN® clear glass	Round	1 liter
D	107 301	SafetySet HPLC	1x	1x	DURAN® clear glass	Square	1 liter
E	107 305	SafetySet HPLC	2x	2x	DURAN® clear glass	Square	1 liter
F	107 306	SafetySet HPLC	3x	3x	DURAN® clear glass	Square	1 liter
G	107 312	SafetySet HPLC	1x	1x	DURAN® brown glass	Round	1 liter
H	107 313	SafetySet HPLC	2x	2x	DURAN® brown glass	Round	1 liter
I	107 314	SafetySet HPLC	3x	3x	DURAN® brown glass	Round	1 liter



SafetyCaps Thread GL 45 HPLC starter kits

- » Extraction initial equipment for a HPLC system.
- » Price advantage compared to ordering piece by piece.
- » Suitable for all current HPLC systems.
- » Unused connectors can be closed by the blind screws delivered with the set. This makes the system universally applicable, even when less connectors are needed for a time.

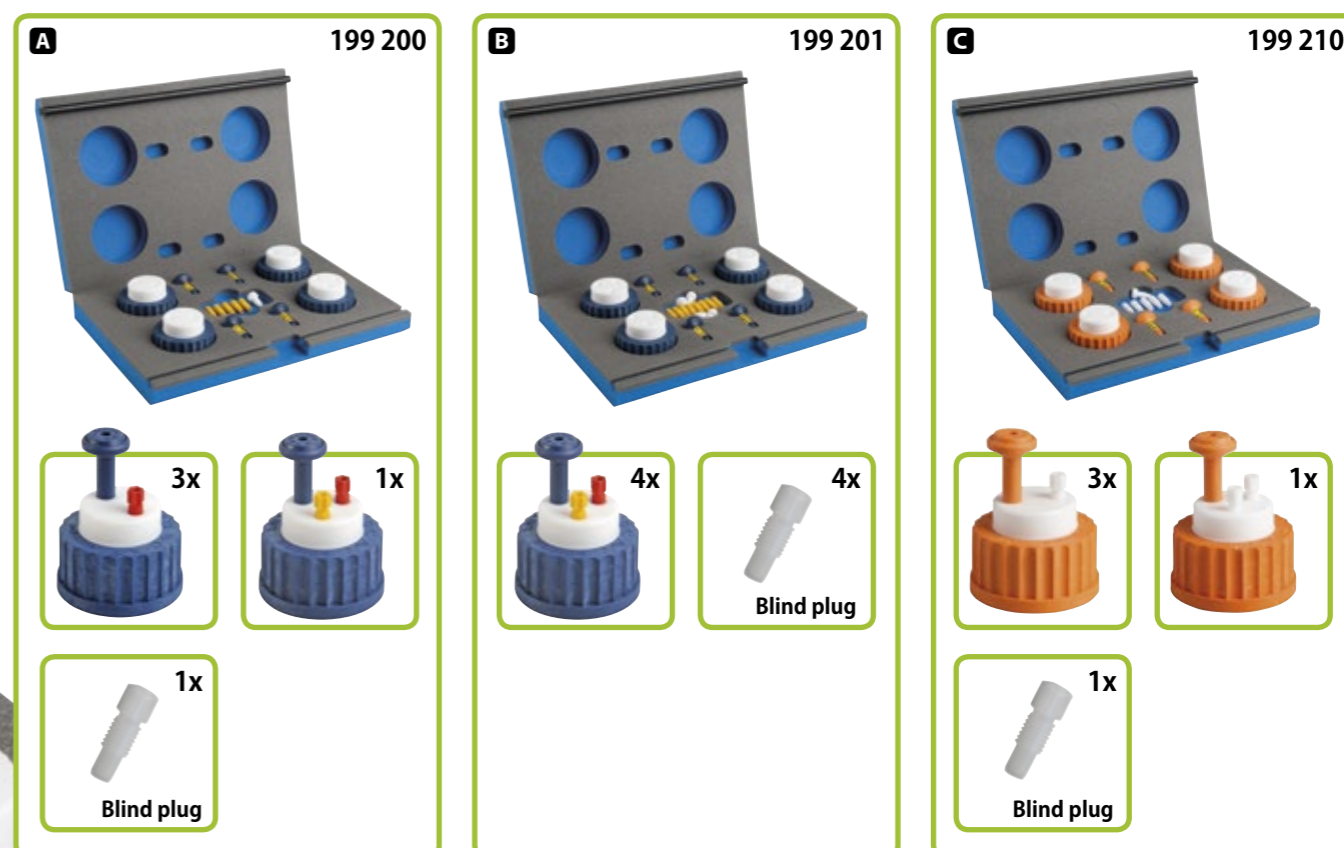
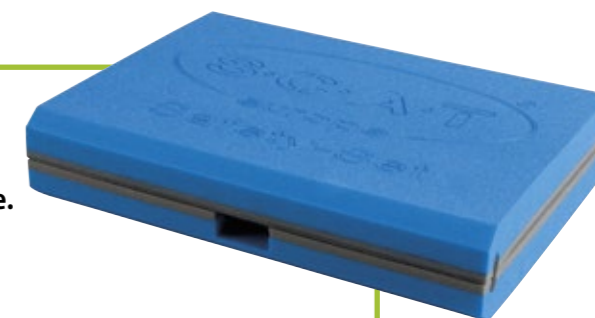
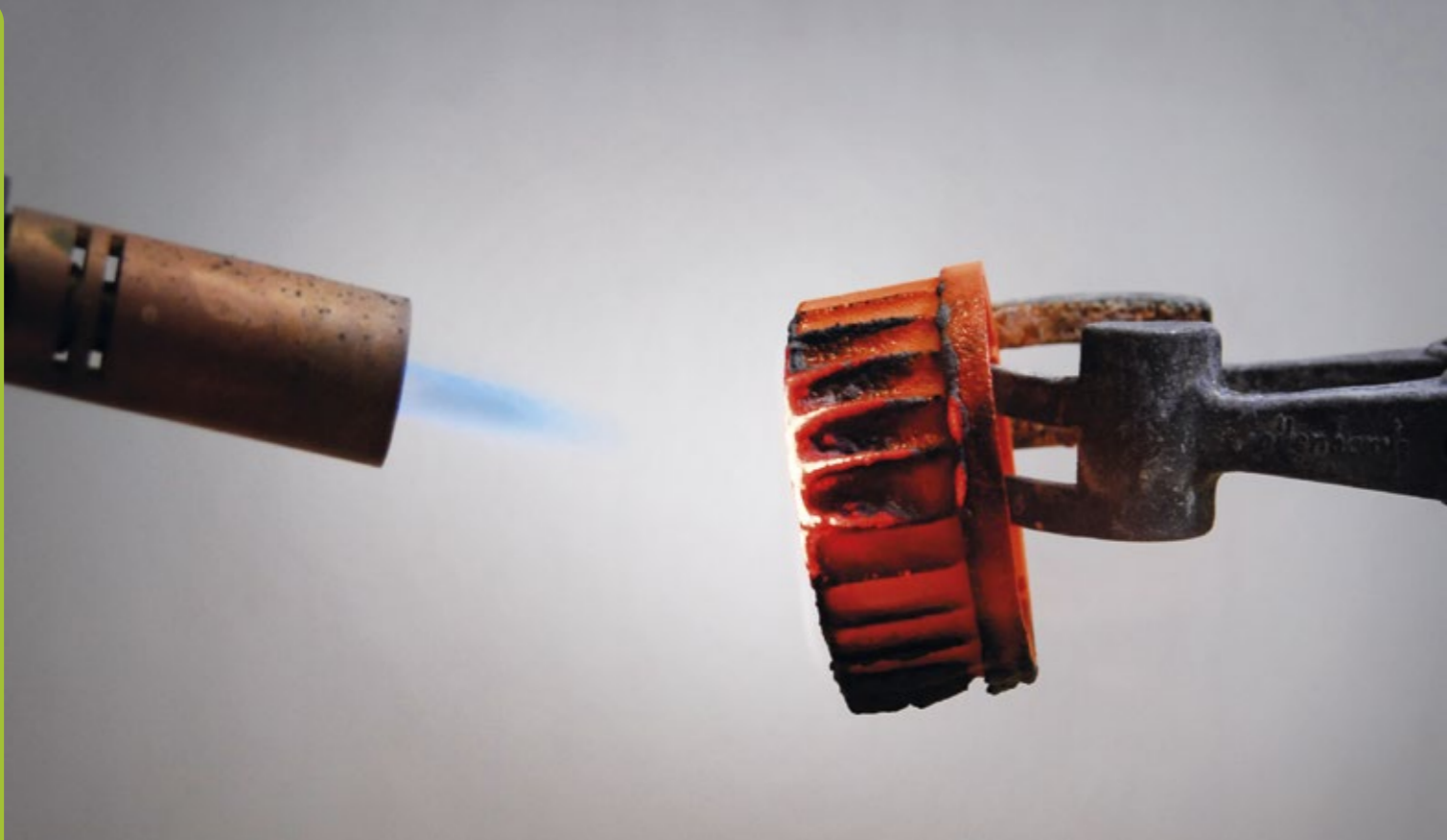


Fig.	Part No.	Description	Inhalt
A	199 200	HPLC SafetySet 1	3x SafetyCap I (107 019) 1x SafetyCap II (107 909) 1x blind plug (160 501)
B	199 201	HPLC SafetySet 2	4x SafetyCap II (107 909) 4x blind plug (160 501)
C	199 210	HPLC SafetySet 3 (fire resistant)	3x SafetyCap I fire resistant (112 019) 1x SafetyCap II fire resistant (112 909) 1x blind plug (160 501)

SafetyCaps made from fire-resistant material



In order to assess burning characteristics, Underwriters Laboratories Inc. (USA), the most significant and internationally recognized test organization in the USA, has developed the UL-94 test as standard.

The flammability of polymer materials was subject to UL-94 and other tests. Here, V0 is the highest and best ranked fire class.

Fire resistant S.C.A.T. Products were exposed to flame under standardized test conditions while easily combustible material (e.g. cotton batting) was placed beneath the test sample. Whether or not the cotton was ignited by drips of burning material was observed.

The test series was conducted with both the closure caps and the filter housings of the SafetyWasteCaps.

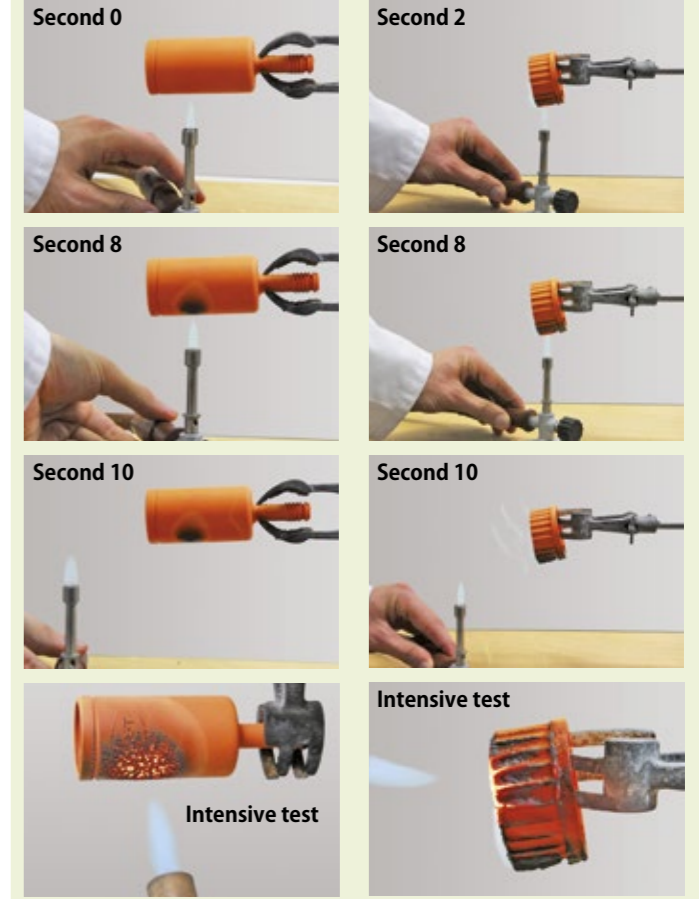
The decisive criteria was flame persistence time between removal of the burner and extinguishing of the sample. To attain the ranking V0, the cotton must not be ignited and the flame persistence duration for each exposure to flame must be less than 10 seconds.

On all samples, the flame persistence times of 2 or 3 seconds were very low and well below the limit values. No drips fell from the sample in any of the tests and the cotton batting was never ignited.

Under extreme load, the samples of the covers exhibited only a slight glow and a good surface intumescence. Even at higher energies, none of the flames had an affect on the test sample.

In addition, none of the samples sustained interior damage at the places the flame was applied to.

- » **Self-extinguishing**
In case of fire, the worldwide unique flame protection material is an insulating layer acting to brake heat. The foaming mass prevents oxygen supply and therefore the spread of flames.
- » **Optimal protection**
Naturally the closures offer all the proven S.C.A.T. quality features to protect the user and the environment. The air valve blocks combustible vapors and cleans dust and contaminant particles from the incoming air.
- » **All limit values were fallen well below**
During tests in the firing chamber, SafetyCaps attained the highest fire class V0 and were significantly below all UL-94 test criteria.



Test results

UL 94 test criteria	Nominal V0	Actual V0 caps	Actual V0 filter housing
Flame persistence time of the test sample after first exposure to flame	10	0	0
Flame persistence time of the test sample after second exposure to flame	30	1	1
Sum of all flame persistence times	50	2	3
Combustion of the cotton batting	No	No	No



SafetyCaps made from fire-resistant material

SafetyCaps made from fire-resistant material with shut-off

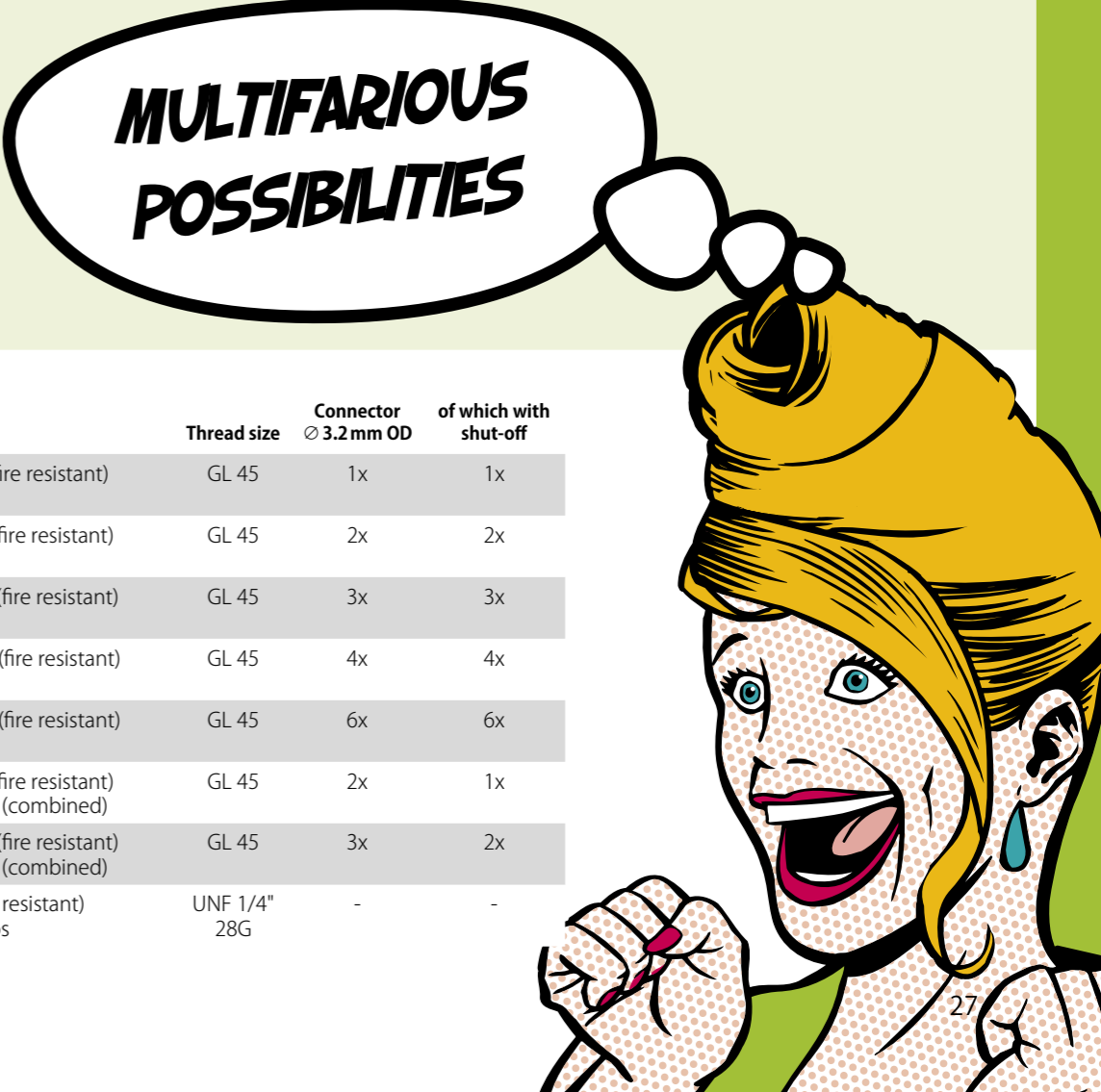
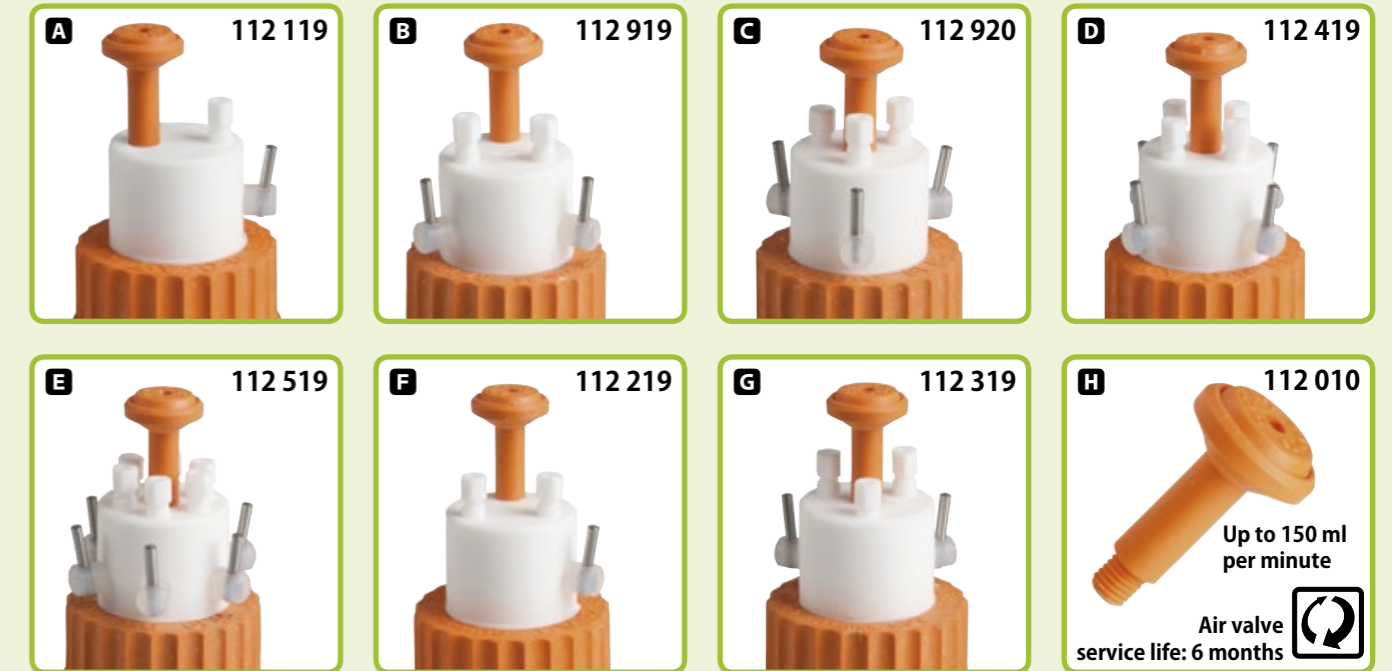
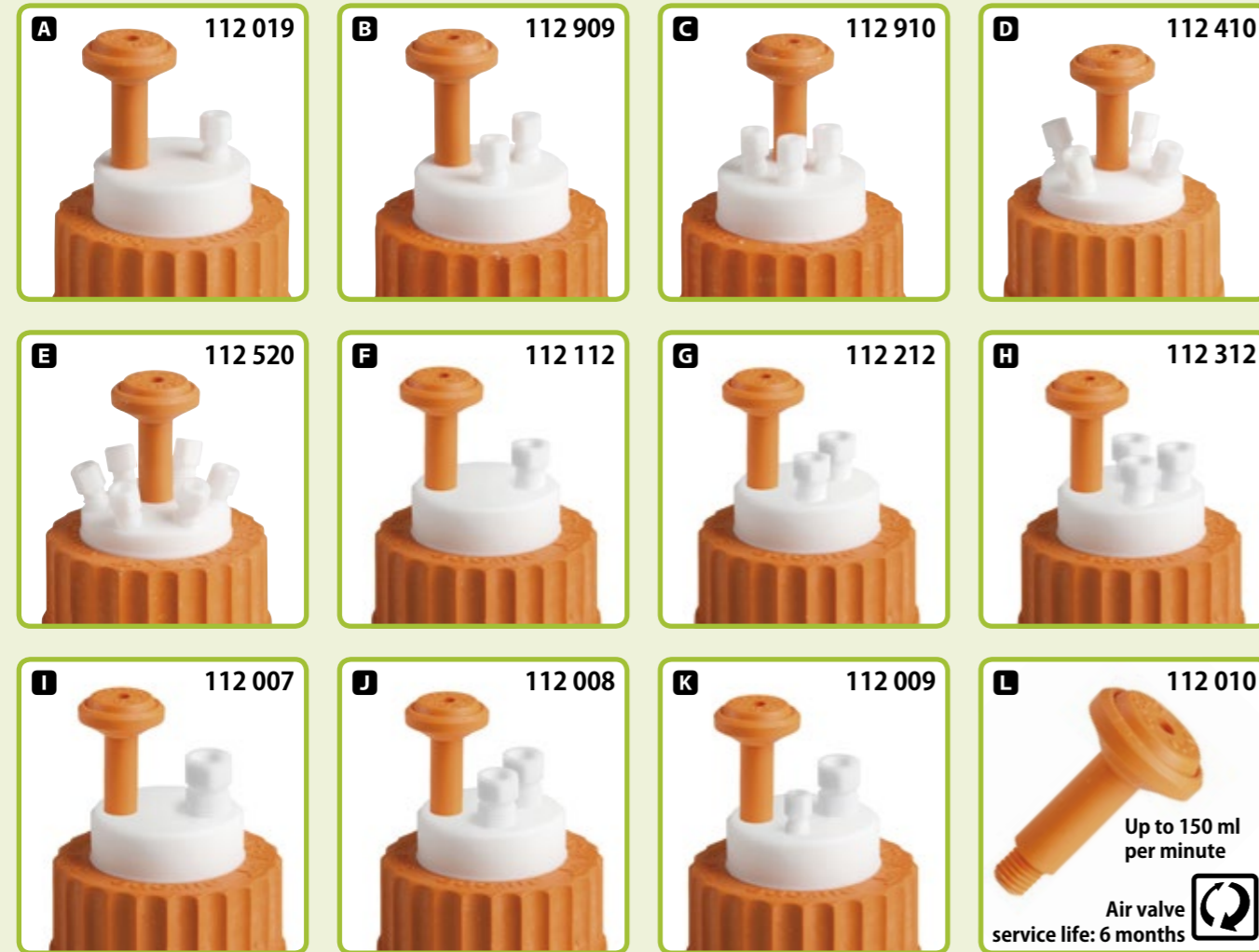


Fig.	Part No.	Description	Thread size	Connectors ∅ 3.2 mm OD (1/8")	Connectors ∅ 4.76 mm OD (3/16")	Connectors ∅ 6.35 mm OD (1/4")
A	112 019	SafetyCap I (fire resistant)	GL 45	1x	-	-
B	112 909	SafetyCap II (fire resistant)	GL 45	2x	-	-
C	112 910	SafetyCap III (fire resistant)	GL 45	3x	-	-
D	112 410	SafetyCap IV (fire resistant)	GL 45	4x	-	-
E	112 520	SafetyCap VI (fire resistant)	GL 45	6x	-	-
F	112 112	SafetyCap I (fire resistant) 3/16"	GL 45	-	1x	-
G	112 212	SafetyCap II (fire resistant) 3/16"	GL 45	-	2x	-
H	112 312	SafetyCap III (fire resistant) 3/16"	GL 45	-	3x	-
I	112 007	SafetyCap I (fire resistant) 1/4"	GL 45	-	-	1x
J	112 008	SafetyCap II (fire resistant) 1/4"	GL 45	-	-	2x
K	112 009	SafetyCap II (fire resistant) 1/4" + 1/8"	GL 45	1x	-	1x
L	112 010	Air valve (fire resistant) for SafetyCaps	UNF 1/4" 28G	-	-	-

Fig.	Part No.	Description	Thread size	Connector ∅ 3.2 mm OD	of which with shut-off
A	112 119	SafetyCap I (fire resistant) with shut-off	GL 45	1x	1x
B	112 919	SafetyCap II (fire resistant) with shut-off	GL 45	2x	2x
C	112 920	SafetyCap III (fire resistant) with shut-off	GL 45	3x	3x
D	112 419	SafetyCap IV (fire resistant) with shut-off	GL 45	4x	4x
E	112 519	SafetyCap VI (fire resistant) with shut-off	GL 45	6x	6x
F	112 219	SafetyCap II (fire resistant) with shut-off (combined)	GL 45	2x	1x
G	112 319	SafetyCap III (fire resistant) with shut-off (combined)	GL 45	3x	2x
H	112 010	Air valve (fire resistant) for SafetyCaps	UNF 1/4" 28G	-	-

How do you dispose of your waste?

DANGEROUS



Dispose with S.C.A.T. systems

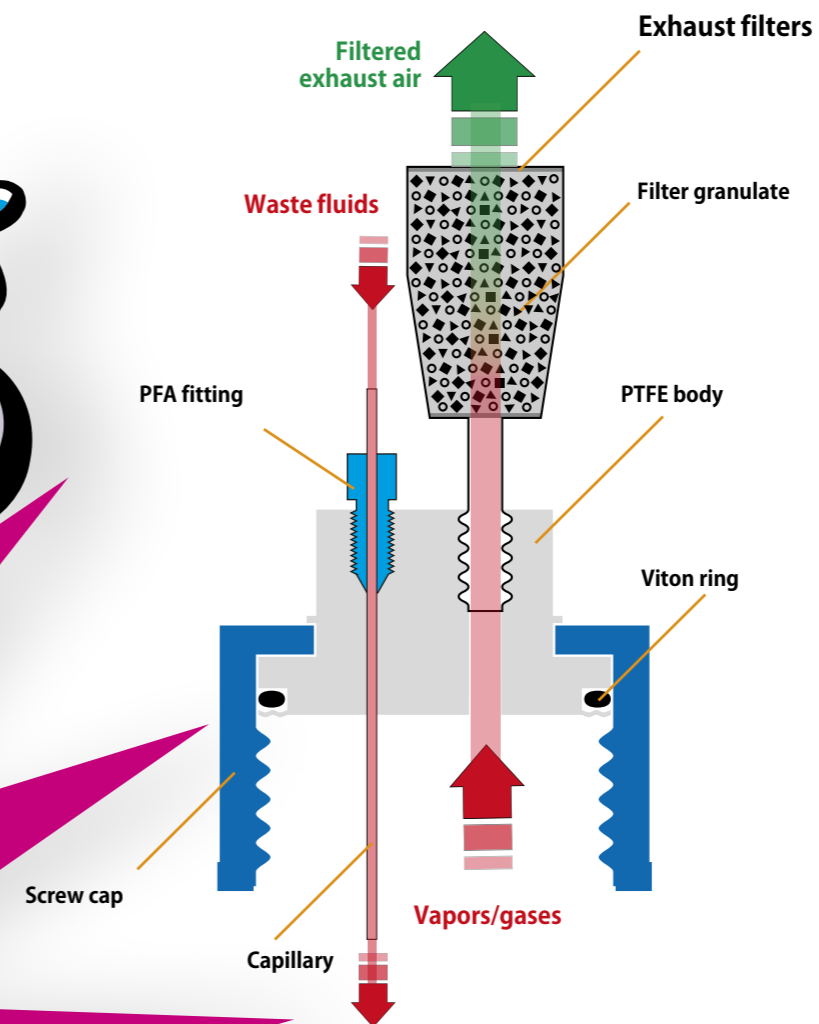
SAFE



WASTE SYSTEMS

SafetyWasteCaps – The concept

The fluids in the waste containers in the laboratory are overwhelmingly poisonous – the user often does not know which mixture can emerge in the canisters. Closed safety systems from S.C.A.T. Europe offer reassuring protection and also guarantee efficient work in the laboratory.



» Filter systems against harmful vapors

You will find exhaust filters in different sizes starting from Page 74.

» Different thread sizes

Use SafetyWasteCaps on your available containers, or order the appropriate canisters at the same time! Starting from Page 144.

» Resistant against aggressive media

Because they are made of pure PTFE and PE-HD, SafetyWasteCaps are resistant against organic solvents, acids and lyes.

SafetyWasteCaps Equipment features The exhaust filter



Exhaust filters keep your workspace safe clean. The exhaust filter is an essential component of the S.C.A.T. safety system. It cleans solvent vapors from the exhaust air and is available in different sizes.

With a specific surface of 1,200m²/g, our multi-component granulate is the optimum filter media for nearly all solvent vapors. It is based on active charcoal and contains additional components which prevent sticking or clump formation and so prevents restriction of the filter performance. 99% of the volatile substances are captured here.



- » Up to 120,000m² filter surface
- » Multi-component granulate prevents clumping
- » You will find filters in different sizes starting from Page 74



Exhaust filter with change indicator

Exhaust filters are permanently exposed to vapours, dust particles and pollutants. Exchange saturated filters within their service life to maintain your workspace safety. With the useful **change indicator** the inspection is easier than ever before.

Install the exhaust filter as usual on your solvent reservoir. The filters fit to all S.C.A.T. waste systems. By pushing the button the activation is done. The change indicator shows the elapsed service life clearly and is easy to observe.

- » Safety at the push of a button!



NEW



Size S
Part No. 610 534
Service life
3 months



Size M
Part No. 610 535
Service life
6 months



- » Easy to activate and to change at the right time



SafetyWasteCaps Equipment features The capillary connector



Direct connection of your HPLC with the disposal system. The SafetyWasteCaps are delivered ready for connection and fit capillaries with an outer diameter of 2.3 and 3.2 mm. For larger tubes, there are variants with tube connection (see Page 36).

Our caps are suitable with any HPLC system. If you like to connect capillaries even less than provided on your SafetyWasteCap you can block remaining connections with blind plugs. These and many more accessories for the capillary connector you will find on page 160.

» You will find extraction systems starting from page 5

» Several systems can be connected to one waste container

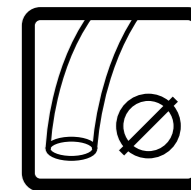


DIRECT CONNECTION TO YOUR HPLC!



VARIABLE!

SafetyWasteCaps Equipment features The tube connector



Larger drainage tubes fit the tube connector. The standard connector design is for flexible tubes with 6.4–9.0mm inner diameter. Those drainage tubes are prevalent at e.g. Agilent or VWR systems.

We also have suitable connections for other tube diameters! On Page 162 you will find all of our tube fittings which you can screw in and on Page 166 all tube connectors. The images are shown in the scale of 1:1 so you can determine your desired size easily.



» The most special feature of the tube connector is its flexibility

The standard connector included in the scope of delivery can be exchanged with numerous adapters. This way, you can increase the number of connections or connect tubes with different diameters. You will find an overview of the possibilities on Page 162.



- » For variable tube sizes
- » Extensive range of accessories starting from Page 156



Exhaust filters: Page 74

» 280 ml charge*



» Automatic closure

» Capillary connection

* Maximum charge (if button of automatic closure is not pressed): 280 ml. Filling the funnel without pressing the button of the automatic closure may cause shifting of weight at the waste system. The waste container should not be complete empty, we recommend that there should be a prior content. The waste system has to be installed stable.

SafetyWasteCaps Equipment features Safety funnels with automatic closure



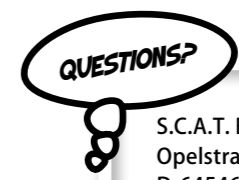
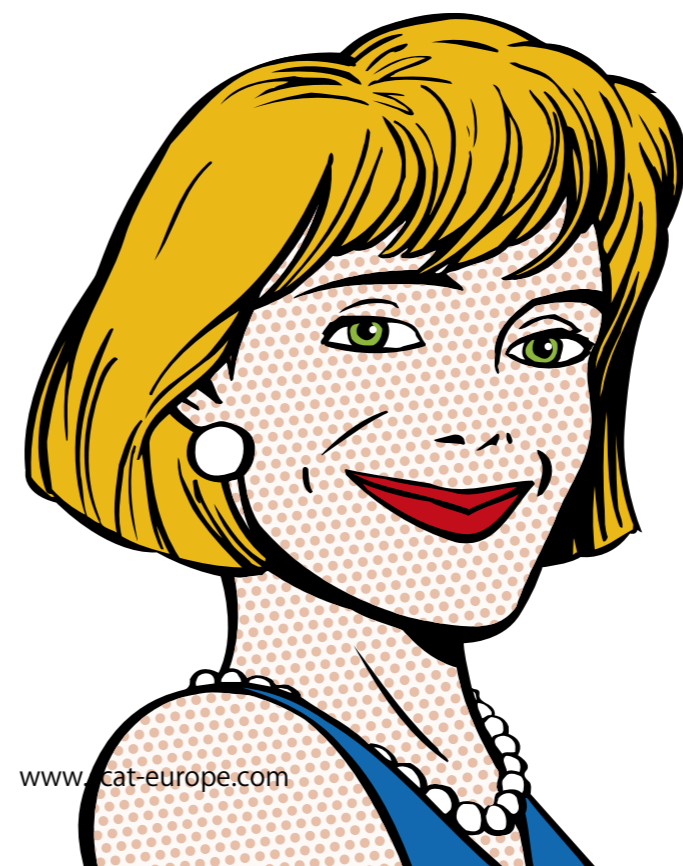
The practical funnel for filling smaller amounts of solvent, e.g. for preparing samples or emptying vials. When the button is released, the automatic mechanism closes and the canister never stands open in the laboratory. Harmful vapors can not escape without passing the exhaust filter.

For larger amounts we recommend our funnels with ball valve or hinged lid. An overview of the several types you will find on Page 80.



- » Safely collect sample residues and solvents
- » Valve closes automatically after filling (release button)

- » We recommend the use of exhaust filters with splash protection to avoid the filter from spillage of fluids.



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» 500 ml charge*

» Shutt-off

OPEN



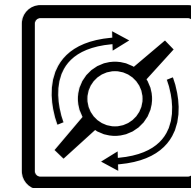
CLOSED



360°
FREE ROTATION

* Maximum charge (if the shut-off is closed): 500 ml. Filling the funnel with closed shut-off may cause shifting of weight at the waste system. The waste container should not be complete empty, we recommend that there should be a prior content. The waste system has to be installed stable.

SafetyWasteCaps Equipment features Safety funnels with shut-off



For filling closed receptacles without inconvenient unscrewing of the canister. For safe disposal of medium amounts of typical laboratory fluids. The funnel is opened and closed by turning the shut-off - this leaves both your hands free to handle bottles and beakers, and then re-close the container quickly and cleanly.



» Both hands free for filling

» Secure closing with shut-off

» Safety funnels are available for several containers and thread sizes! See Pages 51 to 73.



YOU WILL FIND FUNNELS FOR LARGER AMOUNTS STARTING FROM PAGE 80.



» Floater

- » Ideal for containers of opaque material
- » Recognize critical fill levels with a single glance



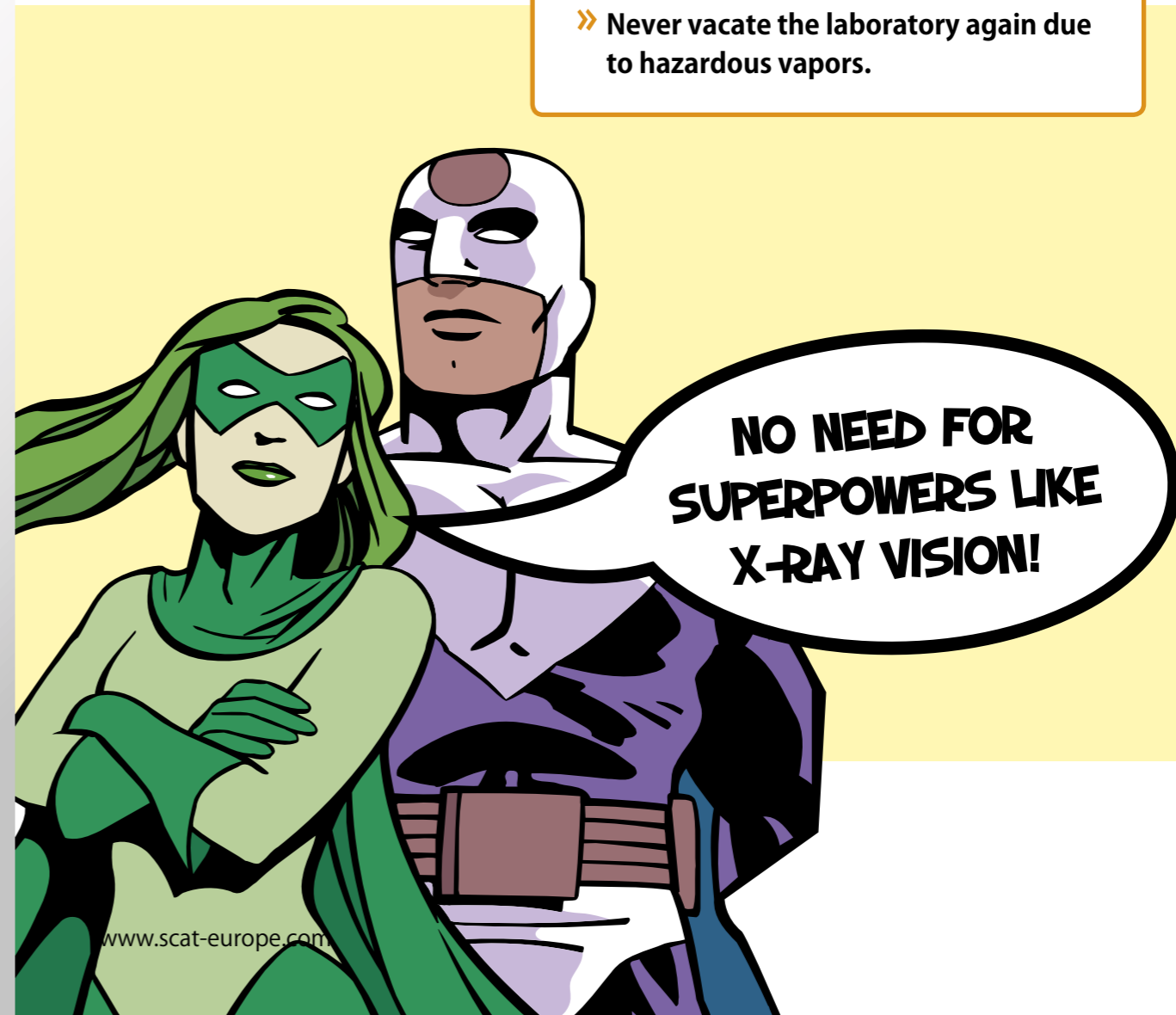
SafetyWasteCaps Equipment features Level control (mechanical)



Everybody uses them, everybody dumps into them, but who ensures that the containers don't overflow? However, overflowing waste containers in a laboratories can be dangerous when work is done with critical substances and solvents. Dangerous fumes can spread fast. This is not only dangerous for individual health but under certain circumstances, can also lead to an explosion.

- » **Optical signal for fill levels:**
The red floater is immediately visible when the container has reached the critical fill level. Even if there are many canisters, with a single glance you have everything under control. No overflow or interruption due to drained containers.

- » **Fill level monitoring can save lives!**
- » **Never vacate the laboratory again due to hazardous vapors.**





» Red floater

- » Monitor fill levels over greater distances
- » Up to 20 receptacles with one signal box
- » Light signal and audio warning
- » Automation and actuation of external devices for level warning

» Extension cable up to 200 m

SafetyWasteCaps Equipment features Level control (electronic)



Keep an eye on fill levels even from greater distances: Thanks to electronic level warning, you are informed in time when a waste container has filled up. Thanks to the extension cable, the signal box can be set up spatially separated from the container at variable distances.

If the critical filling level has reached, you will be informed about the status of the container by an acoustic signal and a LED warning light.

The new version of the S.C.A.T. signal box has a solid stand, power and status LEDs and a reset button to mute the warning signals by a single push. As usual external devices can be controlled by the switch contacts.



» Signal output for control of external devices on the back

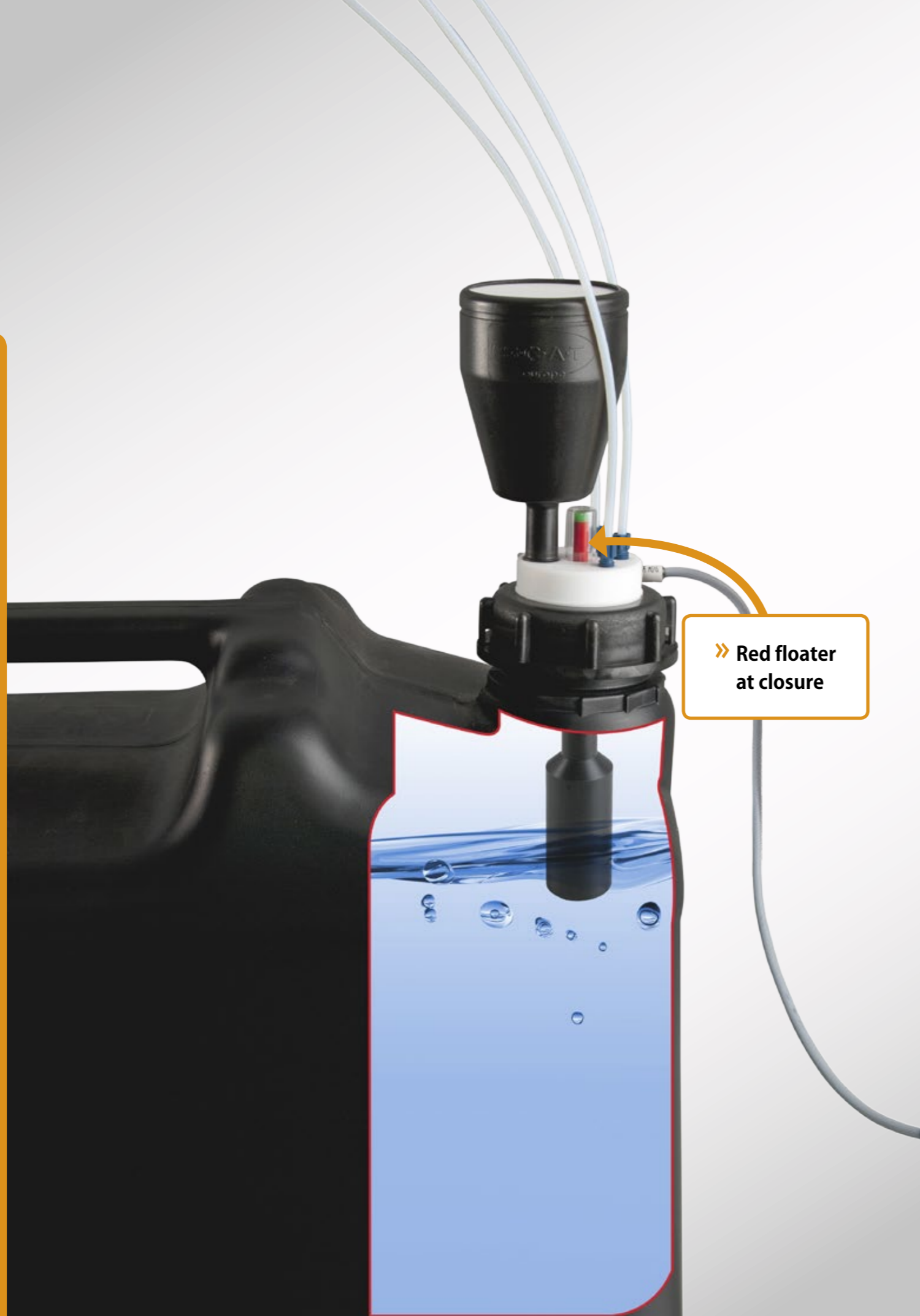


» Acoustic signal

NEW

» Light signal

SIGNAL BOXES ARE FOUND STARTING FROM PAGE 100.



» Red floater at closure

SafetyWasteCaps Equipment features Level control (electronic) – radio transmission



Monitor up to 20 containers at the same time. Works cable free and over large distances. Even if the waste containers are stored out of sight, e.g. in closed cabinets and protected zones, with our radio system you still maintain an overview.

- » ATEX-compliant for use in explosion-endangered zones
- » Level monitoring without cables
- » Tested by TÜV and DEKRA

NO CABLES!



» Acoustic signal

Receiver: Page 107

Transmitter: Page 106

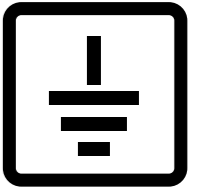


ATEX approval for use in explosion-endangered areas!



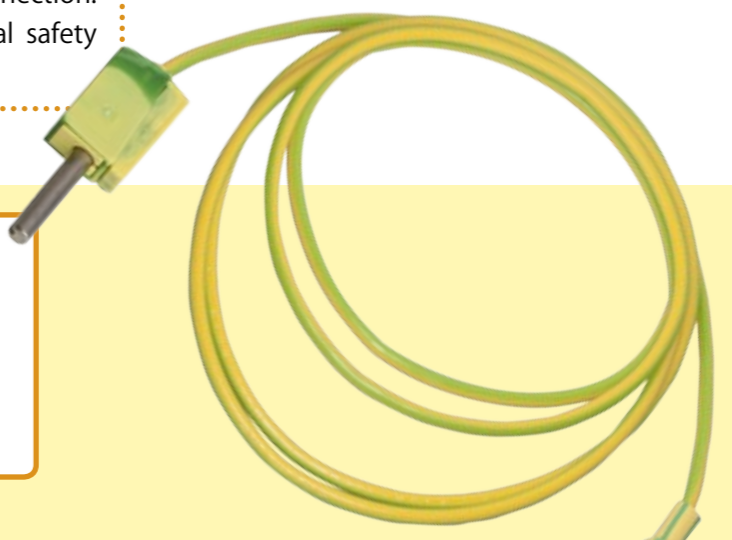
» Ground connection

SafetyWasteCaps Equipment features The ground connection



In order to prevent static discharge with fluids in plastic containers, the contents of the waste receptacles can be secured with the ground connection. This allows you to establish an additional safety factor when collecting combustible fluids.

» Suitable ground cables with mounted clamps and connectors you will find on page 172



LARGE ASSORTMENT OF ACCESSORIES FROM PAGE 156!



SafetyWasteCaps
Thread S 40 / GL 40
Thread GL45



YOU WILL FIND
INFORMATION REGARDING
FIRE RESISTANT MATERIALS
STARTING FROM PAGE 24

S 40 / GL 40
GL45

A 107 108

B 107 109

C 107 912

D 107 923

E 108 921

F 112 921

» **A B**

Thread S 40 / GL 40

Now you can use our proven safety system without an adapter, directly on containers with thread sizes S 40 and GL 40.

G 108 149

H 118 140

Exhaust filter: Page 74

Appropriate containers: Page 148

	Fig.	Part No.	Thread	Capillary connector 2,3 / 3,2 mm OD	Tube connector 6,4–9,0 mm ID	Connector for exhaust filter	Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
	A	107 108	S 40 / GL 40	3x	-	•	-	-	-
	B	107 109	S 40 / GL 40	2x	1x	•	-	-	-
	C	107 912	GL45	3x	-	•	-	-	-
FIRE RESISTANT	-	112 912	GL45	3x	-	•	-	-	-
	D	107 923	GL45	2x	1x	•	-	-	-
FIRE RESISTANT	-	112 923	GL45	2x	1x	•	-	-	-
	E	108 921	GL45	4x	1x	•	-	-	-
FIRE RESISTANT	F	112 921	GL45	4x	1x	•	-	-	-
	G	108 149	GL45	1x	1x	•	•	-	-
	H	118 140	GL45	1x	1x	•	-	•	-

» **Thread information**

GL45 is the most frequent thread size for supply and waste containers in the laboratory. Many chemicals are delivered in GL45 bottles.

Container



SCOPE OF DELIVERY
Fittings for capillaries with 2.3/3.2 mm outer diameter are included.

SafetyWasteCaps Thread S 50 (space-saving canister)

WASTE SYSTEMS

WASTE SYSTEMS



Exhaust filter: Page 74

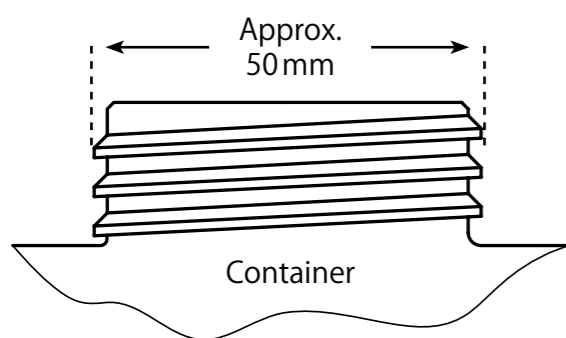


SCOPE OF DELIVERY

Fittings for capillaries with 2,3/3,2 mm outer diameter are included.

» Thread information

Appropriate threads for our space-saving canister.



» Space-saving canister: only 65 mm wide! Page 148

Base and more accessories for the space-saving canister: Page 174

» Filter systems against harmful vapors

You will find exhaust filters in different sizes starting from Page 74.

» Different thread sizes

Use SafetyWasteCaps on your available containers, or order the appropriate canisters at the same time! Starting from Page 144.

» Resistant against aggressive media

Because they are made of pure PTFE and PE-HD, SafetyWasteCaps are resistant against organic solvents, acids and lyes.



Fig.	Part No.	Capillary connector 2,3 / 3,2 mm OD	Tube connector 6,4–9,0 mm ID	Connector for exhaust filter	Level control (mechanical)	Level control (electronic)	Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
A	108 023	3x	-	•	-	-	-	-	-
B	108 024	3x	-	•	-	-	-	-	•
C	108 025	2x	1x	•	-	-	-	-	-
D	108 026	2x	1x	•	-	-	-	-	•
E	108 132	2x	-	•	-	-	•	-	-
F	118 141	2x	-	•	-	-	-	•	-

SafetyWasteCaps
Thread S 51



Exhaust filter: Page 74



SCOPE OF DELIVERY

Fittings for capillaries with 2.3/3.2 mm outer diameter are included.



» Filter systems against harmful vapors

You will find exhaust filters in different sizes starting from Page 74.

» Different thread sizes

Use SafetyWasteCaps on your available containers, or order the appropriate canisters at the same time! Starting from Page 144.

» Resistant against aggressive media

Because they are made of pure PTFE and PE-HD, SafetyWasteCaps are resistant against organic solvents, acids and lyes.

» Thread information

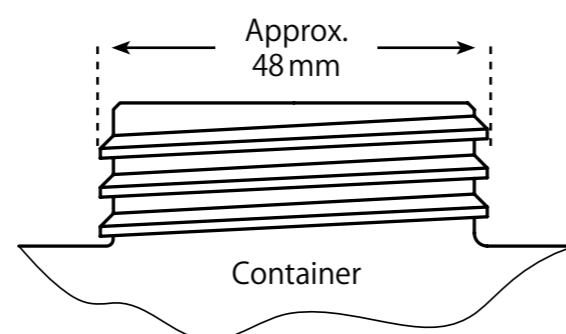


Fig.	Part No.	Capillary connector 2,3 / 3,2 mm OD	Tube connector 6,4–9,0mm ID	Connector for exhaust filter	Level control (mechanical)	Level control (electronic)	Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
A	107 930	3x	-	•	-	-	-	-	-
B	107 935	3x	-	•	-	-	-	-	•
C	107 922	2x	1x	•	-	-	-	-	-
D	107 942	2x	1x	•	-	-	-	-	•
E	107 241	2x	-	•	•	-	-	-	-
F	107 242	2x	-	•	-	•	-	-	-
G	107 243	1x	1x	•	-	-	•	-	-
H	107 244	1x	1x	•	-	-	-	•	-

Appropriate container: Page 149

SafetyWasteCaps Thread B 53

WASTE SYSTEMS

WASTE SYSTEMS



Exhaust filter: Page 74



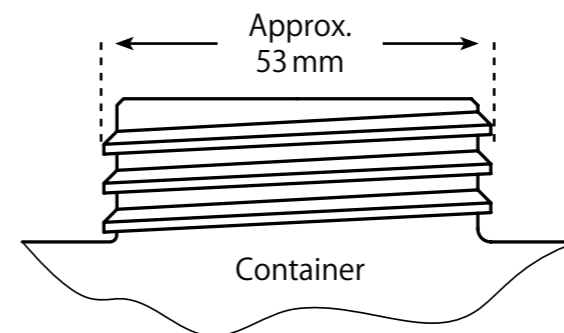
SCOPE OF DELIVERY

Fittings for capillaries with 2.3/3.2 mm outer diameter are included.

Fig.	Part No.	Capillary connector 2,3 / 3,2 mm OD	Tube connector 6,4 – 9,0 mm ID	Connector for exhaust filter	Level control (mechanical)	Level control (electronic)	Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
A	107 037	4x	1x	•	-	-	-	-	-
B	107 054	3x	1x	•	-	-	-	-	•
C	107 245	1x	1x	•	•	-	-	-	-
D	107 246	1x	1x	•	-	•	-	-	-
E	107 057	1x	1x	•	-	-	•	-	-
F	118 142	1x	1x	•	-	-	-	•	-

» Thread information

Suitable for bottles and canisters of the brand NALGENE®.

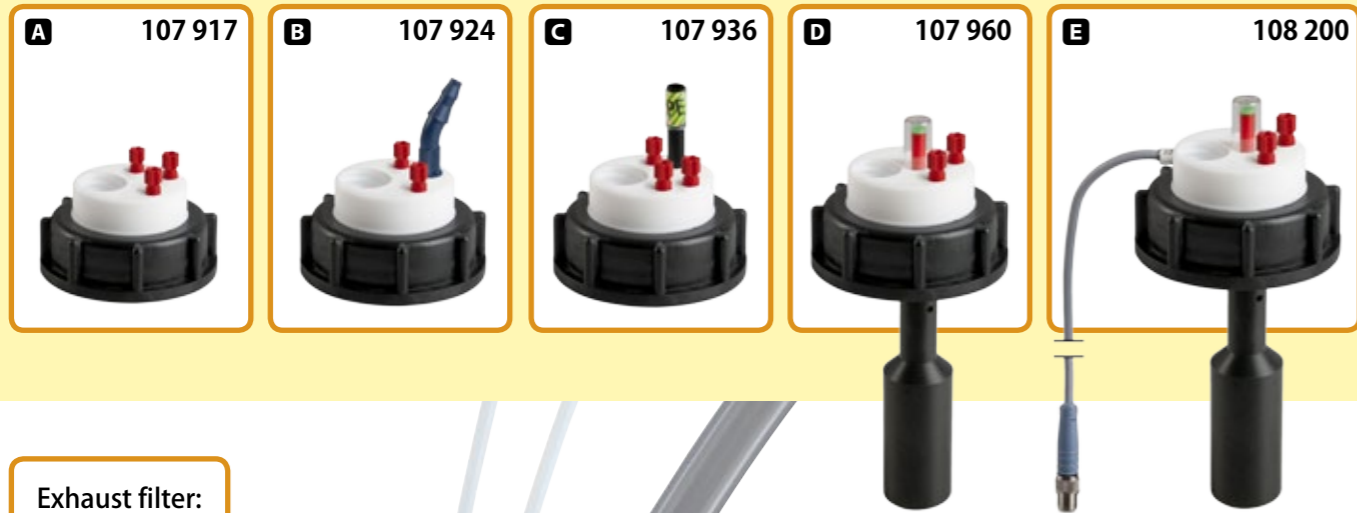


APPROPRIATE CONTAINERS
ARE FOUND ON PAGE 149.

SafetyWasteCaps
Thread S 55

WASTE SYSTEMS

WASTE SYSTEMS



Exhaust filter:
Page 74



Appropriate container: Page 148

» Thread information
The number "51" is often in the cover of many canisters.



SCOPE OF DELIVERY
Fittings for capillaries with 2.3/3.2 mm outer diameter are included.

Fig.	Part No.	Capillary connector 2,3 / 3,2 mm OD	Tube connector 6,4–9,0 mm ID	Connector for exhaust filter	Level control (mechanical)	Level control (electronic)	Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
A	107 917	3x	-	•	-	-	-	-	-
B	107 924	2x	1x	•	-	-	-	-	-
C	107 936	3x	-	•	-	-	-	-	•
-	107 943	2x	1x	•	-	-	-	-	•
D	107 960	3x	-	•	•	-	-	-	-
-	107 963	2x	1x	•	•	-	-	-	-
-	108 030	3x	-	•	•	-	-	-	•
E	108 200	3x	-	•	-	•	-	-	-
-	108 201	2x	1x	•	-	•	-	-	-
F	108 033	2x	-	•	-	-	•	-	-
-	108 128	-	-	•	-	-	•	-	-
G	118 143	2x	-	•	-	-	-	•	-
-	118 149	-	-	•	-	-	-	•	-

SafetyWasteCaps
Thread S 60/61



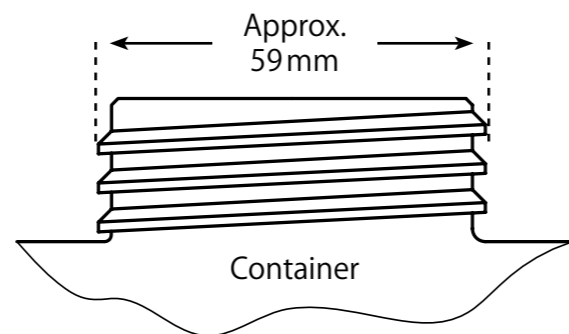
Exhaust filter:
Page 74











SCOPE OF DELIVERY
Fittings for capillaries with 2.3/3.2 mm outer diameter are included.

» Thread information

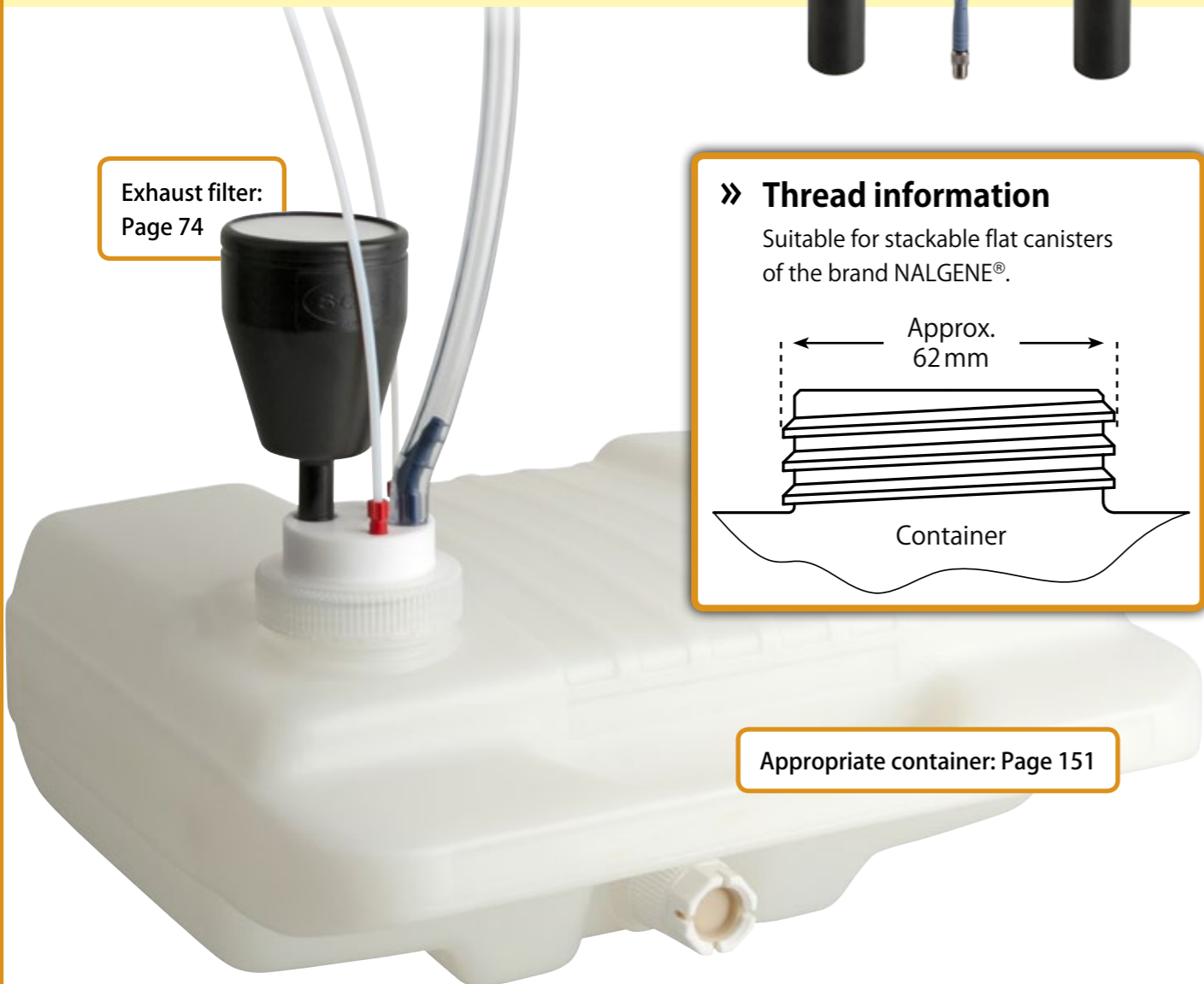
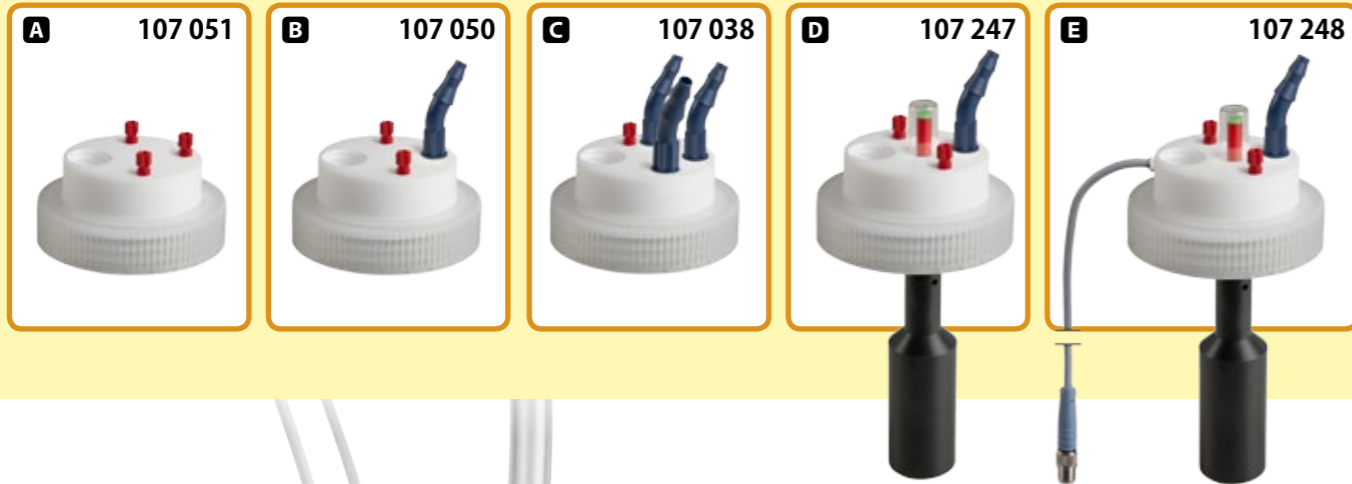
The number "61" is often in the cover of many canisters.



Appropriate container: Page 150

Fig.	Part No.	 Capillary connector 2,3 / 3,2 mm OD	 Tube connector 6,4–9,0 mm ID	 Connector for exhaust filter	 Level control (mechanical)	 Level control (electronic)	 Safety funnel with automatic closure	 Safety funnel with shut-off	 Ground connection
A	107 918	3x	-	•	-	-	-	-	-
B	107 925	2x	1x	•	-	-	-	-	-
C	107 916	3x	-	•	-	-	-	-	•
-	107 944	2x	1x	•	-	-	-	-	•
D	107 964	2x	1x	•	•	-	-	-	-
-	108 964	2x	1x	•	•	-	-	-	•
-	107 961	3x	-	•	•	-	-	-	-
-	108 961	3x	-	•	•	-	-	-	•
E	108 403	2x	1x	•	-	•	-	-	-
-	108 404	2x	1x	•	-	•	-	-	•
-	108 401	3x	-	•	-	•	-	-	-
-	108 402	3x	-	•	-	•	-	-	•
F	108 034	2x	-	•	-	-	•	-	-
-	108 134	2x	-	•	•	-	•	-	-
-	108 138	2x	1x	•	•	-	•	-	-
-	118 034	2x	-	•	-	•	•	-	-
G	118 038	2x	1x	•	-	•	•	-	-
-	108 129	-	-	•	-	-	•	-	-
H	118 144	2x	-	•	-	-	-	•	-
-	118 244	2x	-	•	•	-	-	•	-
-	118 242	2x	1x	•	•	-	-	•	-
-	118 150	-	-	•	-	-	-	•	-

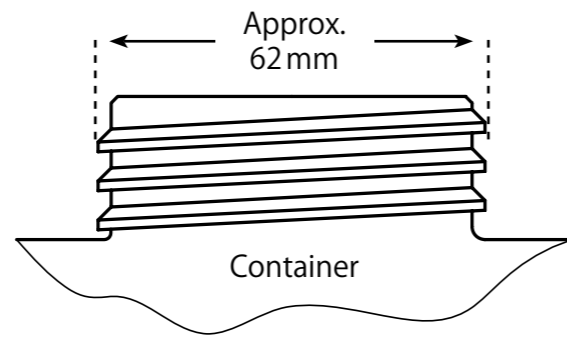
SafetyWasteCaps
Thread B 63



Exhaust filter:
Page 74

» Thread information

Suitable for stackable flat canisters of the brand NALGENE®.



Appropriate container: Page 151



SCOPE OF DELIVERY

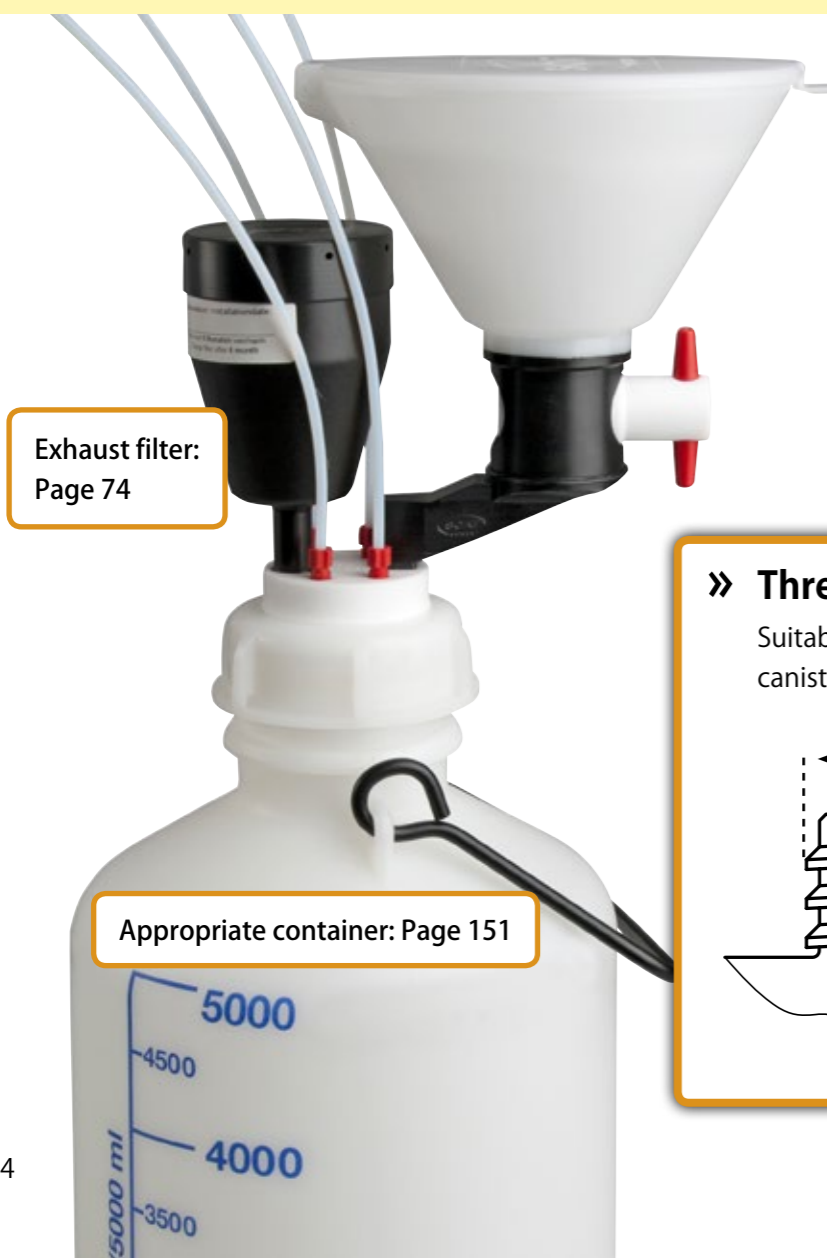
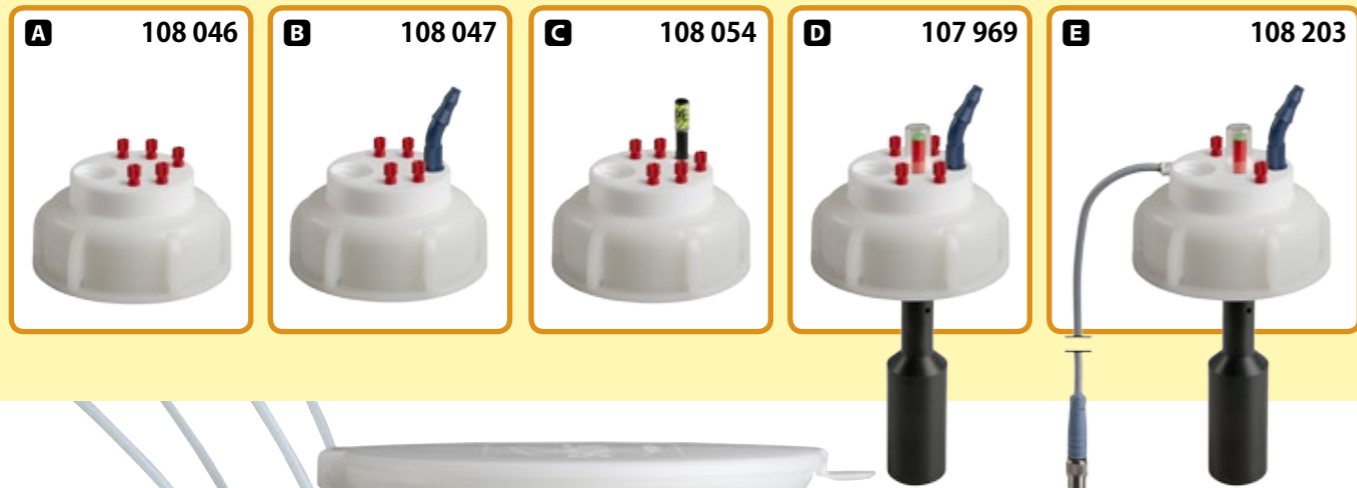
Fittings for capillaries with 2.3/3.2 mm outer diameter are included.

Fig.	Part No.	Capillary connector 2,3 / 3,2 mm OD	Tube connector 6,4–9,0 mm ID	Connector for exhaust filter	Level control (mechanical)	Level control (electronic)	Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
A	107 051	3x	-	•	-	-	-	-	-
B	107 050	2x	1x	•	-	-	-	-	-
C	107 038	1x	3x	•	-	-	-	-	-
D	107 247	2x	1x	•	•	-	-	-	-
E	107 248	2x	1x	•	-	•	-	-	-
F	107 249	2x	1x	•	-	-	•	-	-
-	107 250	2x	1x	•	•	-	•	-	-
G	107 251	2x	1x	•	-	•	•	-	-
H	107 252	2x	1x	•	-	-	-	•	-
-	107 253	2x	1x	•	•	-	-	•	-
-	107 254	2x	1x	•	-	•	-	•	-

SafetyWasteCaps
Thread S 65

WASTE SYSTEMS

WASTE SYSTEMS



Exhaust filter:
Page 74

Appropriate container: Page 151

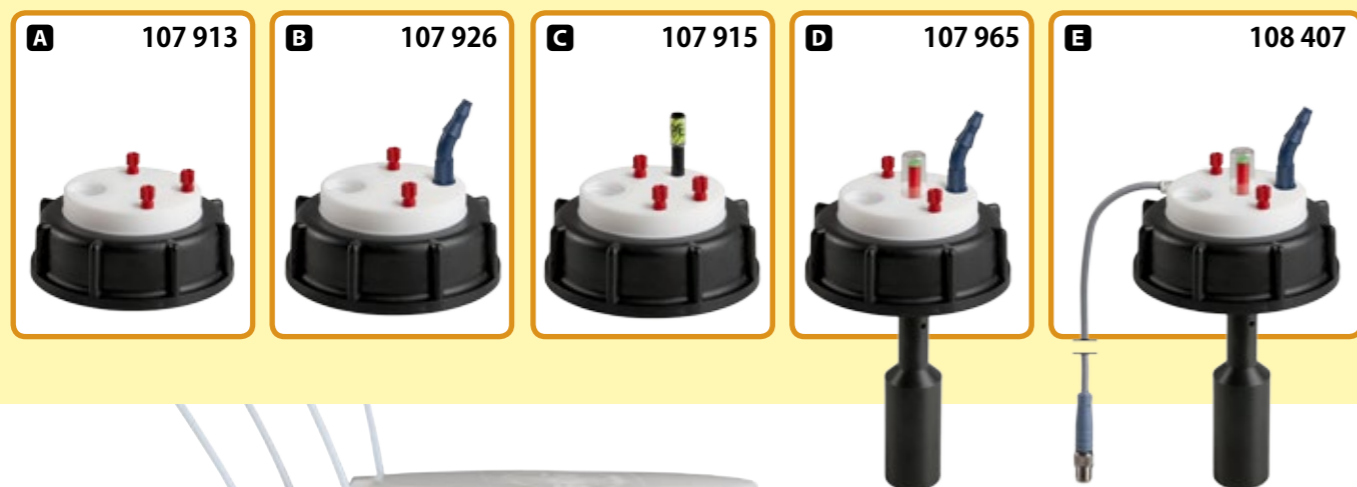
» Thread information
Suitable for bottles and canisters of the brand KAUTEX®.



SCOPE OF DELIVERY
Fittings for capillaries with 2.3/3.2 mm outer diameter are included.

Fig.	Part No.	HPLC Capillary connector 2,3 / 3,2 mm OD	Tube connector 6,4–9,0 mm ID	Connector for exhaust filter	Level control (mechanical)	Level control (electronic)	SAFETY Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
A	108 046	5x	-	•	-	-	-	-	-
B	108 047	4x	1x	•	-	-	-	-	-
C	108 054	5x	-	•	-	-	-	-	•
-	108 055	4x	1x	•	-	-	-	-	•
D	107 969	4x	1x	•	•	-	-	-	-
-	108 202	3x	-	•	-	•	-	-	-
E	108 203	2x	1x	•	-	•	-	-	-
F	108 150	4x	-	•	-	-	•	-	-
-	108 133	3x	1x	•	•	-	•	-	-
-	108 135	4x	-	•	•	-	•	-	-
-	118 035	4x	-	•	-	•	•	-	-
G	118 039	3x	1x	•	-	•	•	-	-
H	118 145	4x	-	•	-	-	-	•	-
-	118 245	4x	-	•	•	-	-	•	-
-	118 246	3x	1x	•	•	-	-	•	-

SafetyWasteCaps
Thread S 70/71



Exhaust filter:
Page 74

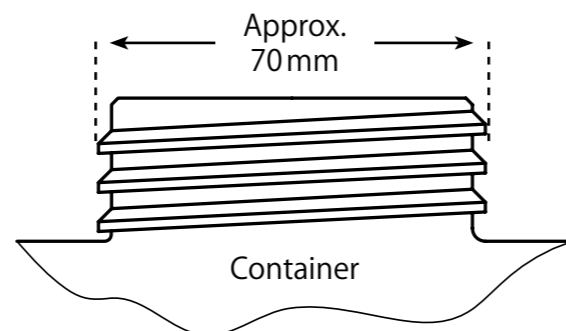


SCOPE OF DELIVERY

Fittings for capillaries with 2.3/3.2 mm outer diameter are included.

» **Thread information**

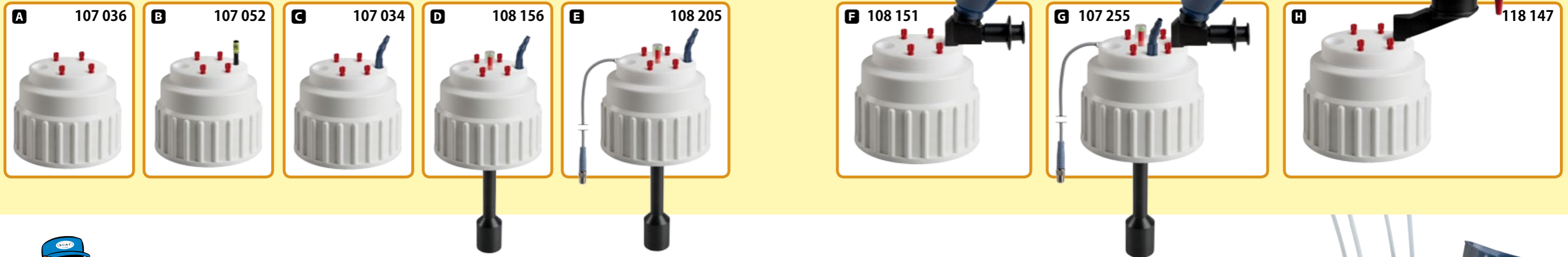
The number "71" is often in the cover of many canisters.



Appropriate container: Page 152

Fig.	Part No.	Capillary connector 2,3 / 3,2 mm OD	Tube connector 6,4–9,0 mm ID	Connector for exhaust filter	Level control (mechanical)	Level control (electronic)	Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
A	107 913	3x	-	•	-	-	-	-	-
B	107 926	2x	1x	•	-	-	-	-	-
C	107 915	3x	-	•	-	-	-	-	•
-	107 945	2x	1x	•	-	-	-	-	•
-	107 962	3x	-	•	•	-	-	-	-
D	107 965	2x	1x	•	•	-	-	-	-
-	108 405	3x	-	•	-	•	-	-	-
-	108 406	3x	-	•	-	•	-	-	•
E	108 407	2x	1x	•	-	•	-	-	-
-	108 408	2x	1x	•	-	•	-	-	•
F	108 035	4x	-	•	-	-	•	-	-
-	108 136	4x	-	•	•	-	•	-	-
-	108 139	3x	1x	•	•	-	•	-	-
-	118 036	4x	-	•	-	•	•	-	-
G	118 040	4x	1x	•	-	•	•	-	-
H	118 146	4x	-	•	-	-	-	•	-
-	118 247	4x	-	•	•	-	-	•	-
-	118 248	4x	1x	•	•	-	-	•	-

SafetyWasteCaps Thread B 83



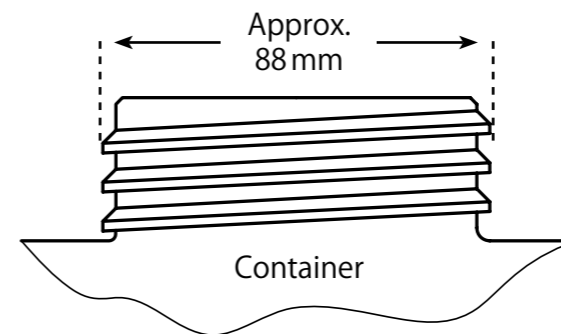
SCOPE OF DELIVERY

Fittings for capillaries with 2.3/3.2 mm outer diameter are included.

Fig.	Part No.	Capillary connector 2,3 / 3,2 mm OD	Tube connector 6,4–9,0 mm ID	Connector for exhaust filter	Level control (mechanical)	Level control (electronic)	Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
A	107 036	4x	-	•	-	-	-	-	-
B	107 052	4x	-	•	-	-	-	-	•
C	107 034	4x	1x	•	-	-	-	-	-
-	107 053	4x	1x	•	-	-	-	-	•
-	108 155	4x	-	•	•	-	-	-	-
D	108 156	4x	1x	•	•	-	-	-	-
E	108 205	4x	1x	•	-	•	-	-	-
-	108 204	4x	-	•	-	•	-	-	-
F	108 151	4x	-	•	-	-	•	-	-
G	107 255	4x	1x	•	-	•	•	-	-
H	118 147	4x	-	•	-	-	•	-	-

» Thread information

Suitable for bottles and canisters of the brand NALGENE®.



Exhaust filter:
Page 74

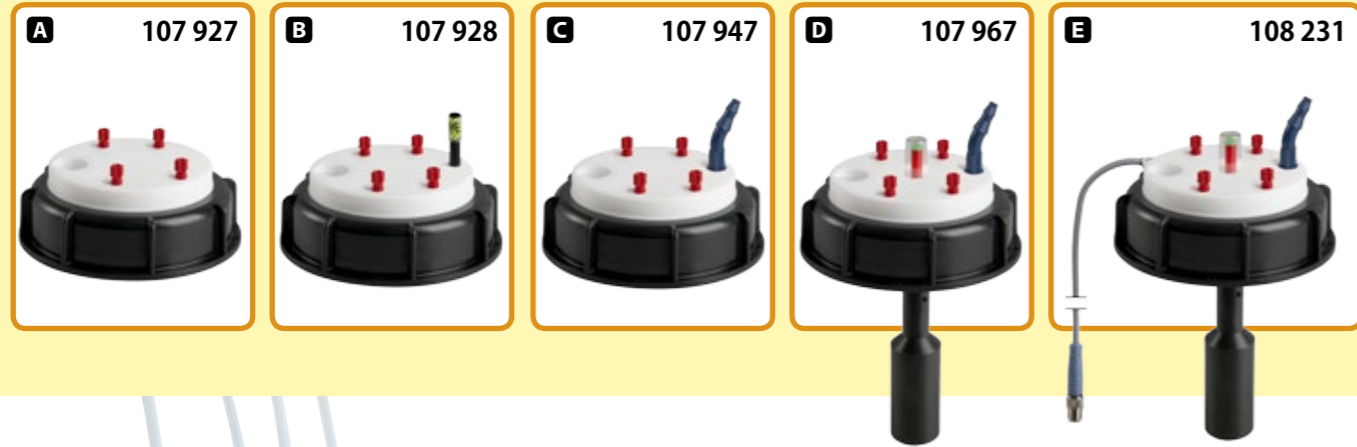
Appropriate container: Page 152



SafetyWasteCaps
Thread S 90

WASTE SYSTEMS

WASTE SYSTEMS



Exhaust filter: Page 74

Containers with level monitoring starting from Page 150



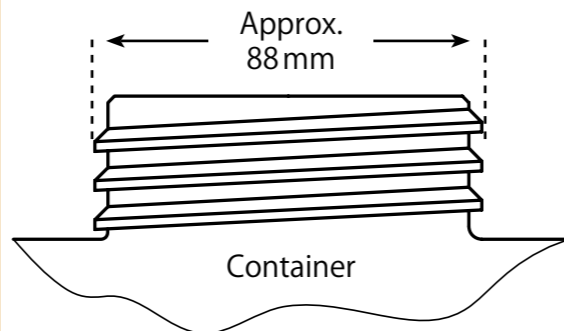
SCOPE OF DELIVERY

Fittings for capillaries with 2.3/3.2 mm outer diameter are included.

» **Thread information**

The number "D90" is often in the cover of many canisters.

Especially large opening for easy pouring.



Capillary connector 2,3 / 3,2 mm OD



Tube connector 6,4–9,0 mm ID



Connector for exhaust filter



Level control (mechanical)



Level control (electronic)



Safety funnel with automatic closure



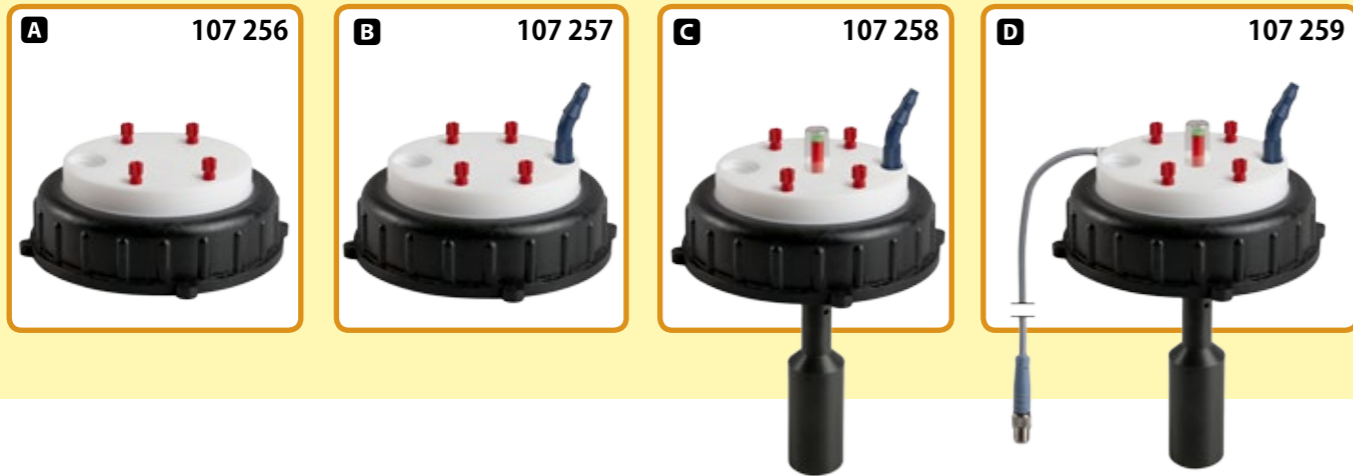
Safety funnel with shut-off



Ground connection

Fig.	Part No.	Capillary connector 2,3 / 3,2 mm OD	Tube connector 6,4–9,0 mm ID	Connector for exhaust filter	Level control (mechanical)	Level control (electronic)	Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
A	107 927	4x	-	•	-	-	-	-	-
B	107 928	4x	-	•	-	-	-	-	•
C	107 947	4x	1x	•	-	-	-	-	-
-	107 949	4x	1x	•	-	-	-	-	•
-	107 966	4x	-	•	•	-	-	-	-
D	107 967	4x	1x	•	•	-	-	-	-
-	108 031	4x	-	•	•	-	-	-	•
-	108 230	4x	-	•	-	•	-	-	-
E	108 231	4x	1x	•	-	•	-	-	-
F	108 152	4x	-	•	-	-	•	-	-
-	108 137	4x	-	•	•	-	•	-	-
-	108 140	4x	1x	•	•	-	•	-	-
-	118 037	4x	-	•	-	•	•	-	-
G	118 041	4x	1x	•	-	•	•	-	-
H	118 148	4x	-	•	-	-	-	•	-
-	118 249	4x	-	•	•	-	-	•	-
-	118 250	4x	1x	•	•	-	-	•	-

SafetyWasteCaps Thread S 95



SCOPE OF DELIVERY

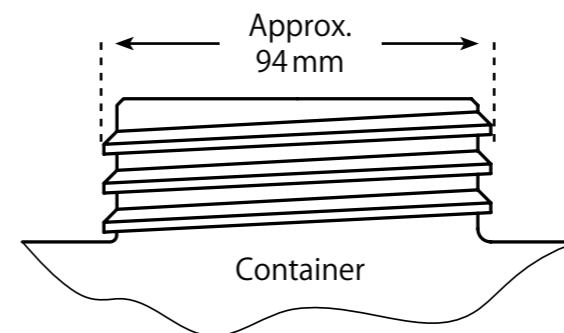
Fittings for capillaries with 2.3/3.2 mm outer diameter are included.

Fig.	Part No.	Capillary connector 2,3 / 3,2mm OD	Tube connector 6,4–9,0mm ID	Connector for exhaust filter	Level control (mechanical)	Level control (electronic)	Safety funnel with automatic closure	Safety funnel with shut-off	Ground connection
A	107 256	4x	-	•	-	-	-	-	-
B	107 257	4x	1x	•	-	-	-	-	-
C	107 258	4x	1x	•	•	-	-	-	-
D	107 259	4x	1x	•	-	•	-	-	-
E	107 260	4x	1x	•	-	-	•	-	-
-	107 261	4x	1x	•	•	-	•	-	-
F	107 262	4x	1x	•	-	•	•	-	-
G	107 263	4x	1x	•	-	-	-	•	-
-	107 264	4x	1x	•	•	-	-	•	-
-	107 265	4x	1x	•	-	•	-	•	-

Exhaust filter:
Page 74

» Thread information

Largest thread from our standard assortment. For additional sizes, we also offer customized products according to customer specifications.



Appropriate container:
Page 153



SafetyWasteCaps Accessories Exhaust Filters



Fig.	Part No.	Filter size	Recommended for waste containers with a volume of...	Accessories	Service life
A	107 911	S (small)	Up to 5 liters	-	3 months
A	112 911	S (small)	Up to 5 liters	Fire resistant	3 months
B	107 914	M (medium)	Up to 20 liters	-	6 months
B	112 914	M (medium)	Up to 20 liters	Fire resistant	6 months
C	107 615	L (large)	More than 20 liters	-	9 months
D	107 985	S (small)	Up to 5 liters	Splash protection	3 months
D	610 534 NEW	S (small)	Up to 5 liters	Change indicator + Splash protection	3 months
E	107 982	M (medium)	Up to 20 liters	Splash protection	6 months
E	610 535 NEW	M (medium)	Up to 20 liters	Change indicator + Splash protection	6 months
F	107 986	L (large)	More than 20 liters	Splash protection	9 months



» Safety on stock!

The economy packages guarantee not only price advantages; you are always well-prepared for the upcoming filter change. Clever users plan their annual requirement in advance!

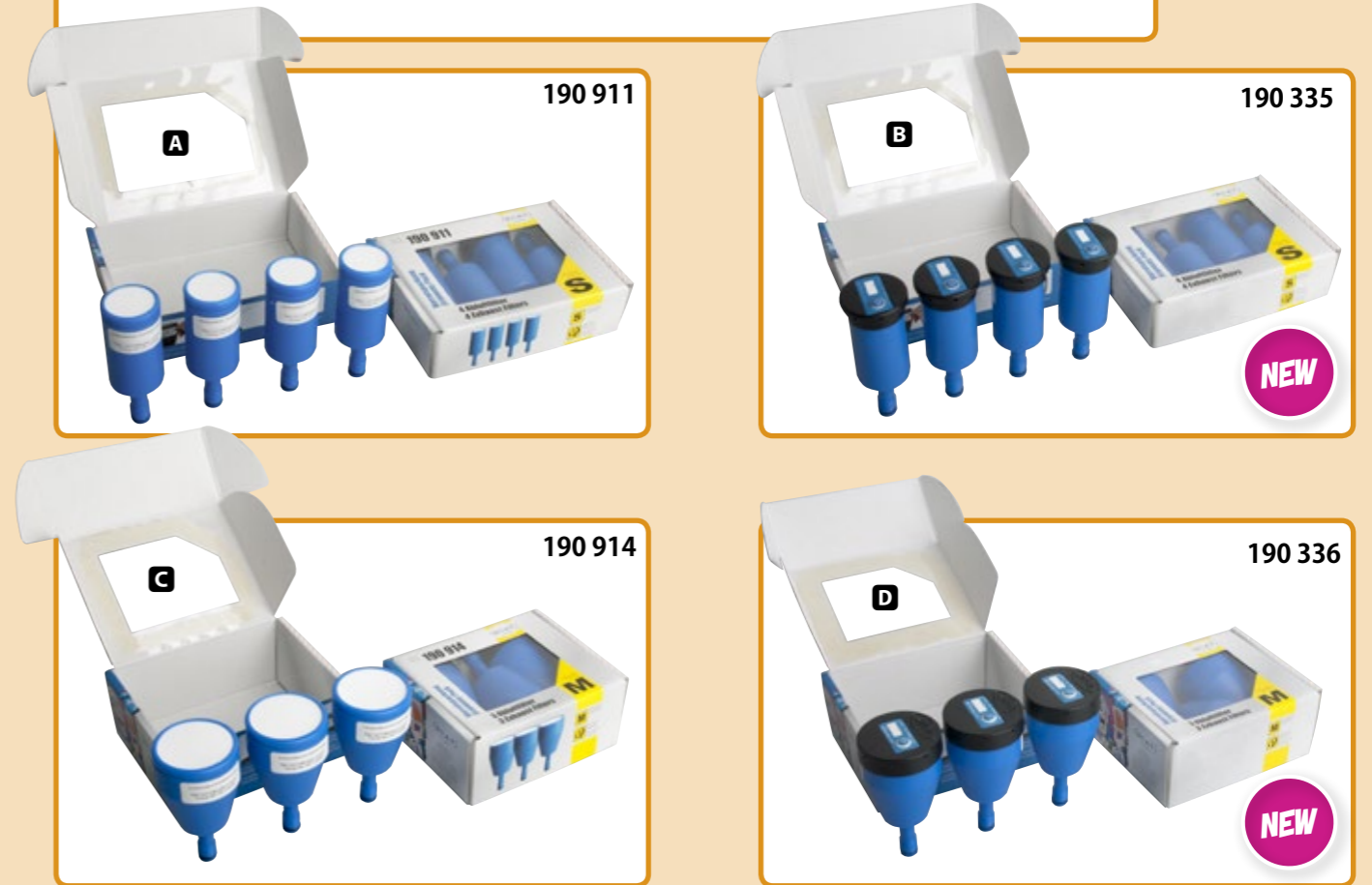


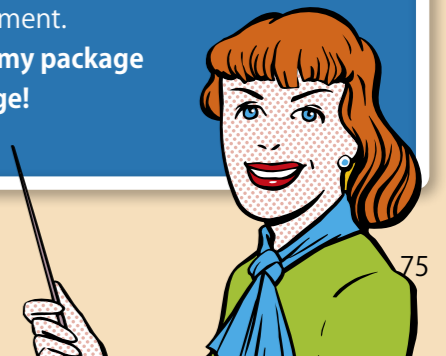
Fig.	Part No.	Description	Filter size	Number/unit
A	190 911	Economy package, exhaust filters	S (small)	4 each
B	190 335 NEW	Economy package, exhaust filters with change indicator	S (small)	4 each
C	190 914	Economy package, exhaust filters	M (medium)	3 each
D	190 336 NEW	Economy package, exhaust filters with change indicator	M (medium)	3 each



Why are these filters blue?

These filters are not technically different from our standard filters. But the blue color enables you to see whether you have filters from a supply package at a single glance. This means before you place a new order, you can more easily check your existing stock and plan your annual requirement.

Use the economy package price advantage!





» Safety funnel with double thread for barrels: Page 85

» Total active filter surface:
 Exhaust filter for barrels (XL) for containers 60–100 liters 624,000 m²
 Exhaust filter for barrels (XXL) for containers from 100 liters 1,188,000 m²

SafetyWasteCaps Accessories Exhaust filters for barrels



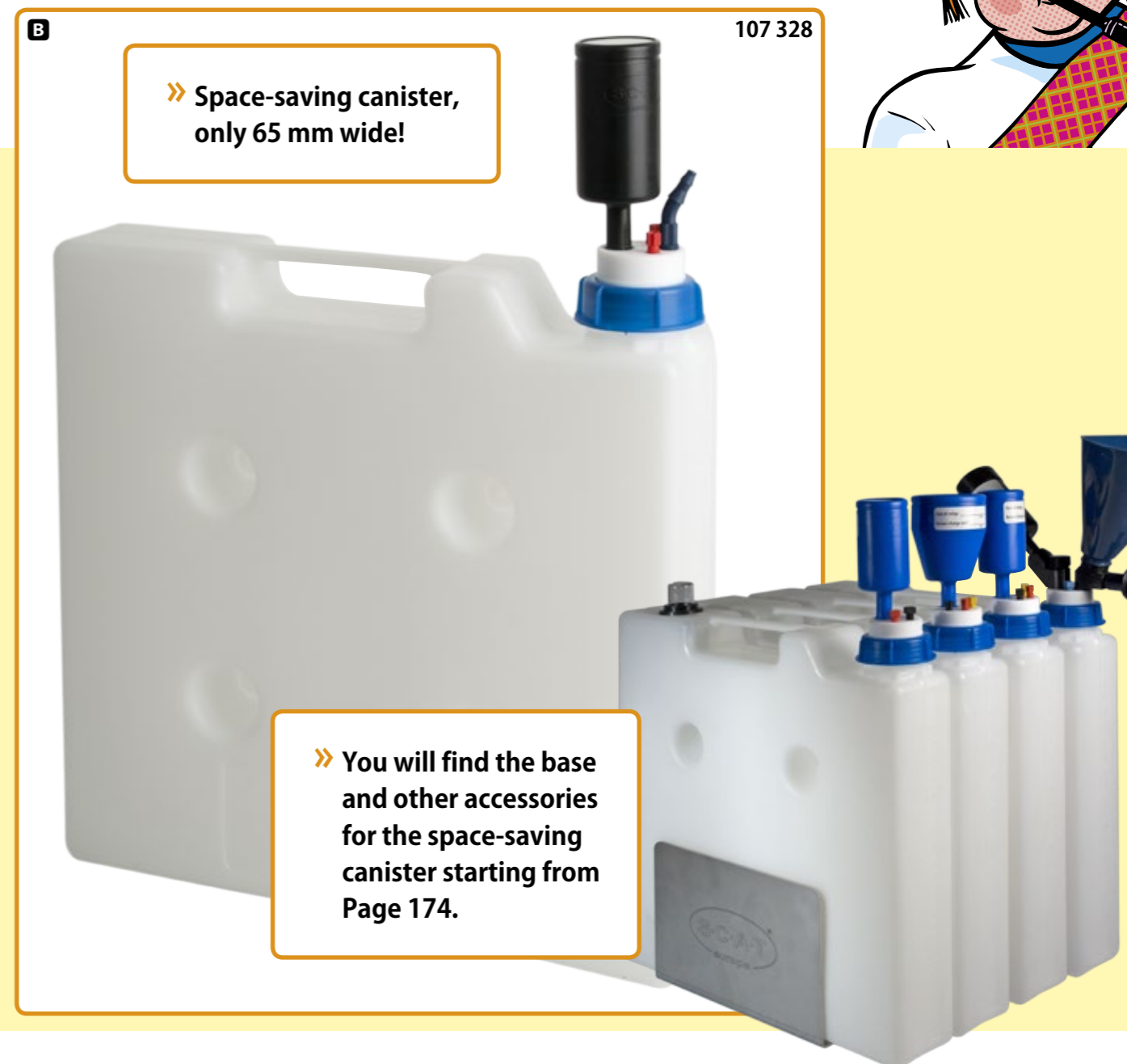
Fig.	Part No.	Filter size	Fill amount	Thread size	Recommended for barrel size	Service life	Unit
A	108 986	XXL	990 g	2" Mauser (BCS 70x6)	from 100 liters	12 months	1
-	108 987 <i>NEW</i>	XXL	990 g	Double thread R 2" BSP/ G2" + 2" Tri-Sure	from 100 liters	12 months	1
B	108 985	XL	520 g	G 3/4"	60–100 liters	9 months	1

SafetyWasteCaps Complete set

**SPECIAL
SET PRICES!**





» In order to get your waste fluid collection site ready for operation quickly, we have put the most popular combinations together in a complete set.



» Space-saving canister, only 65 mm wide!

» You will find the base and other accessories for the space-saving canister starting from Page 174.

- » Only one article number for the comprehensive safety system
- » No time consuming compilation of a configuration
- » Price advantage compared to ordering piece by piece
- » The delivery is made complete. The system is immediately ready for use.

Fig.	Part No. SET	 Capillary connector 2,3 / 3,2mm OD	 Tube connector 6,4-9mm ID	Scope of delivery	Dimensions W x H x D (mm)
A	107 307	2x	1x	107 951 Canister 5 liters, PP, thread GL 45 107 923 SafetyWasteCap, thread GL 45 107 911 Exhaust filter, size S	150 x 365 x 195
-	107 310	2x	1x	107 952 Canister 10 liters, PP, thread GL 45 107 923 SafetyWasteCap, thread GL 45 107 911 Exhaust filter, size S	190 x 415 x 230
B	107 328	2x	1x	107 998 Space-saving canister, 5 liters, PP, thread S 50 108 025 SafetyWasteCap, thread S 50 107 911 Exhaust filter, size S	65 x 455 x 330

SAFETY FUNNELS

Together with our users, we have further optimized the S.C.A.T. safety funnels. The new design is optimized for areas with low ceilings. The PE-HD filters are suitable for all types of chemicals. The models in black are electrically conductive as well and are delivered with a grounding clamp.

Filters with integrated ball valve make sure that the containers remain securely closed after filling. The screw cap rotates freely, making it easier to unscrew the funnel.



» Optimal protection when collecting waste fluids in laboratories and technical schools

» What does disposal of waste fluids look like?

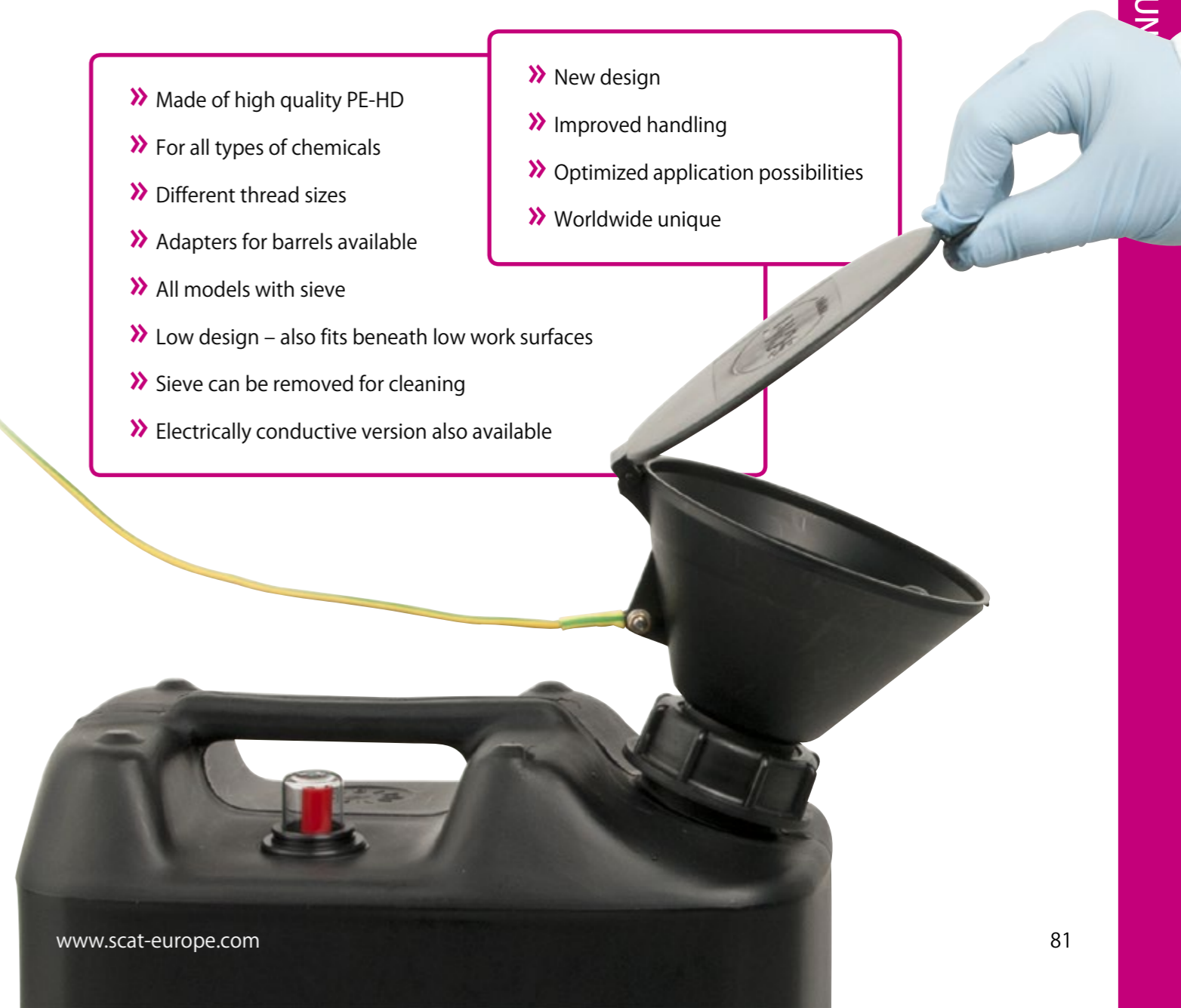
Even laboratories often have archaic conditions for this. Open canisters and funnels, often without collecting tray – in the rarest cases, positioned under the exhaust – this is what the tragic reality looks like. But now there are closure systems corresponding to nearly all current waste containers, so retrofitting is easy to carry out without sacrificing flexibility.

» Conclusion

Those who want to get their waste disposal under control and to create ideal solvent conditions for their HPLC need a coherent concept. And S.C.A.T. Europe can provide this. More protection for humans and the environment: Our safety funnels are a one-time investment for many years of health and safety.

- » Made of high quality PE-HD
- » For all types of chemicals
- » Different thread sizes
- » Adapters for barrels available
- » All models with sieve
- » Low design – also fits beneath low work surfaces
- » Sieve can be removed for cleaning
- » Electrically conductive version also available

- » New design
- » Improved handling
- » Optimized application possibilities
- » Worldwide unique



Safety funnels With ball valve



Ø ca. 200 mm

ca. 200 mm
(depending on
container thread)

» **Useful angle adapter**
on Page 171: Just place your
laboratory bottles on the sieve
and let them drip down.

108 058

**CONTAINERS WITH LEVEL
CONTROL STARTING FROM
PAGE 112.**



» **Sieve**
For trapping stirrers or larger contaminant particles.
Now made of PE-HD instead of stainless steel, so no
corrosion by acids or lyes.

» **Splash protection**
For uniform discharge without splashes.

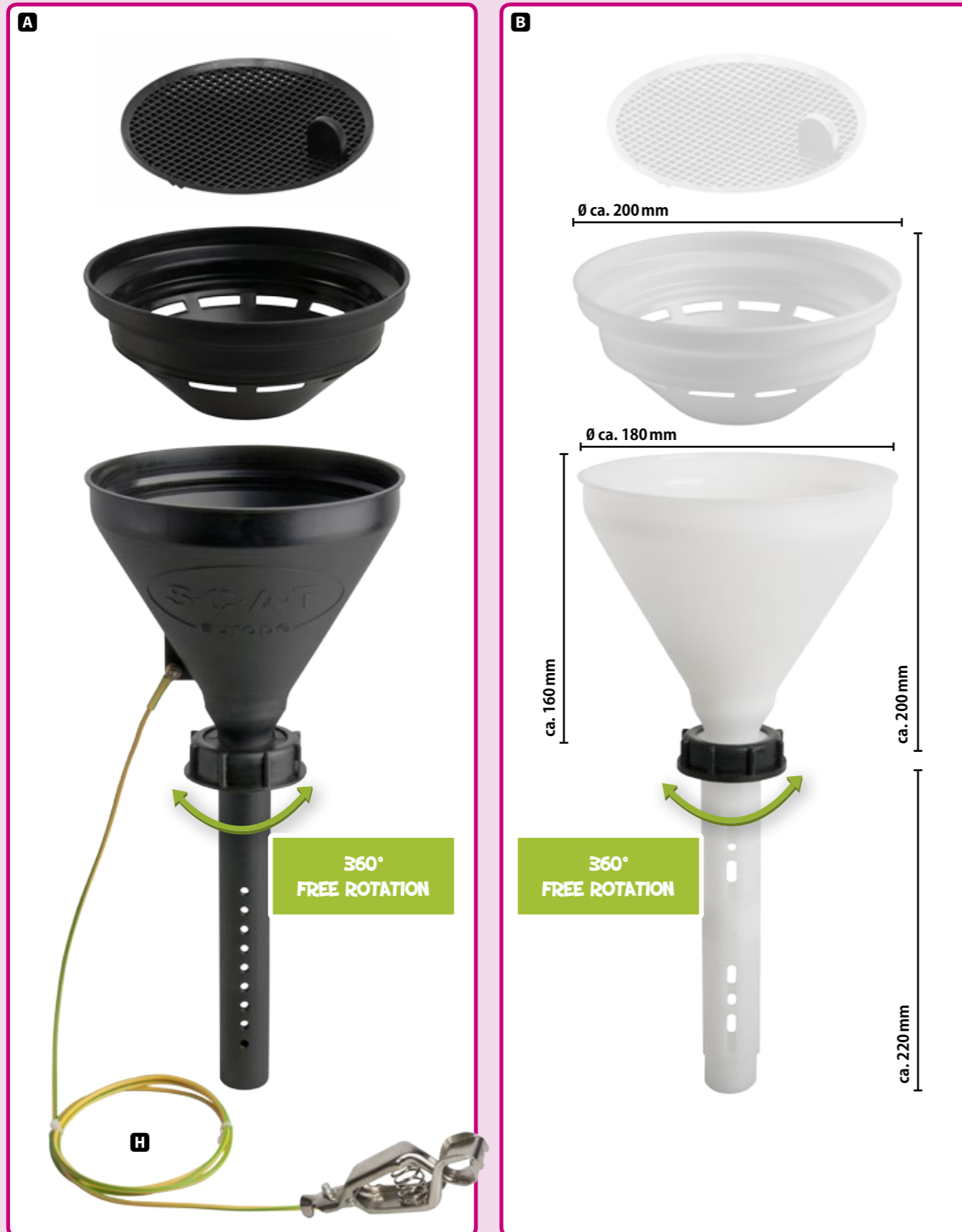
» **Ball valve**
The ball floats and automatically closes after filling.
For the disposal of small quantities and sticky liquid waste
into the container, we recommend to rinse enough with
water after using the funnel with ball valve, to prevent
a potential sticking or stucking of the ball valve.

» **Freely rotatable cap**
In different thread sizes for a wide variety of containers.
You will find suitable canisters starting from Page 144.

» **Safety lance**
Ensures clean outflow without contaminating the container opening.
With electrically conductive funnels (black), the lance facilitates a
safe additional grounding of the contents.

» **Electrically conductive PE-HD**
Models in black are made of electrically
conductive PE-HD and have a ground
connection to prevent sparking hazards.

Safety funnels With ball valve



SCOPE OF DELIVERY

Delivery incl. sieve and splash protection. Each of these can also be ordered individually (see Table).

Type/Fig.	Part No.	Thread size	Description	Material
A	117 629	S 50	Safety funnel	PE-HD, electrically conductive (black)
A	117 624	S 51	Safety funnel	PE-HD, electrically conductive (black)
A	117 625	S 55	Safety funnel	PE-HD, electrically conductive (black)
A	117 621	S 60/61	Safety funnel	PE-HD, electrically conductive (black)
A	117 626	S 65 NEW	Safety funnel	PE-HD, electrically conductive (black)
B	117 642	GL 45	Safety funnel	PE-HD, white
B	117 649	S 50	Safety funnel	PE-HD, white
B	117 644	S 51	Safety funnel	PE-HD, white
B	117 645	S 55	Safety funnel	PE-HD, white
B	117 641	S 60/61	Safety funnel	PE-HD, white
C	117 630	R 2" BSP/G2" (m) + 2" Tri-Sure (m)	Safety funnel	PE-HD, electrically conductive (black)
Accessories				
D	117 620	-	Sieve	PE-HD, electrically conductive (black)
E	117 640	-	Sieve	PE-HD, white
F	117 631	-	Splash protection	PE-HD, electrically conductive (black)
G	117 639	-	Splash protection	PE-HD, white
H	117 982	-	Ground cable with clamp	Copper cable (yellow with green coding)

Safety funnels with hinged lid

This compact version with lid is optimally suited for restricted space conditions in the laboratory. Electrically conductive models are delivered with ground cable and clamp. The sieve can be removed for cleaning.

Containers with level control:
Page 112

» **Useful angle adapter on Page 171:** Just place your laboratory bottles on the sieve and let them drip down.

108 058

» Sieve

For trapping stirrers or larger contaminant particles. Now made of PE-HD, so no corrosion by acids or lyes.

» Hinged lid

for clean closure.

» Freely rotatable cap

In different thread sizes for a wide variety of containers. You will find suitable canisters starting from Page 144.

» Safety lance

Ensures clean outflow without contaminating the container opening. With electrically conductive funnels (black), the lance facilitates a safe additional grounding of the contents.

» Electrically conductive PE-HD

Models in black are made of electrically conductive PE-HD and have a ground connection to prevent the sparking hazards.

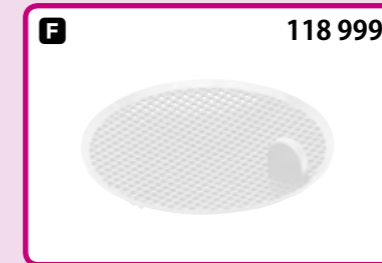
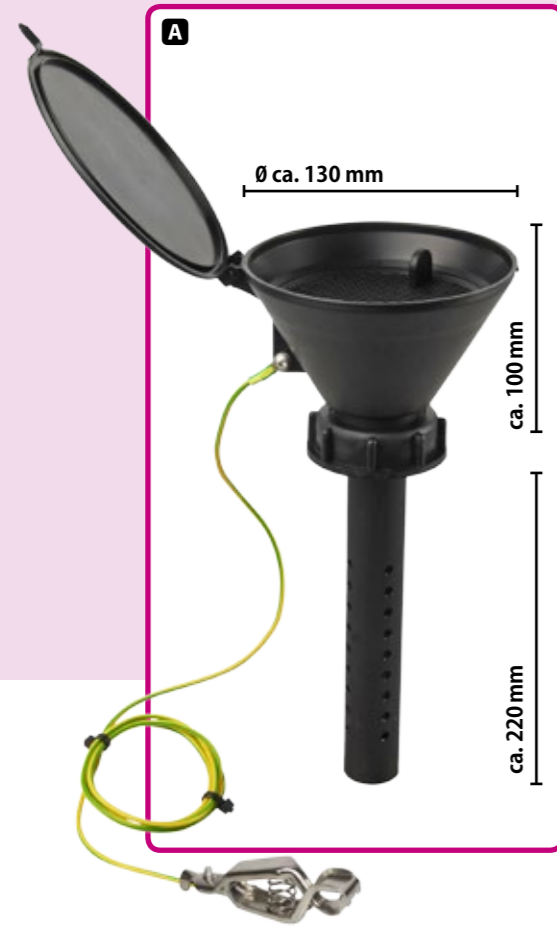
Safety funnels With hinged lid

**SAFE AT THE
RIGHT MOMENT!**

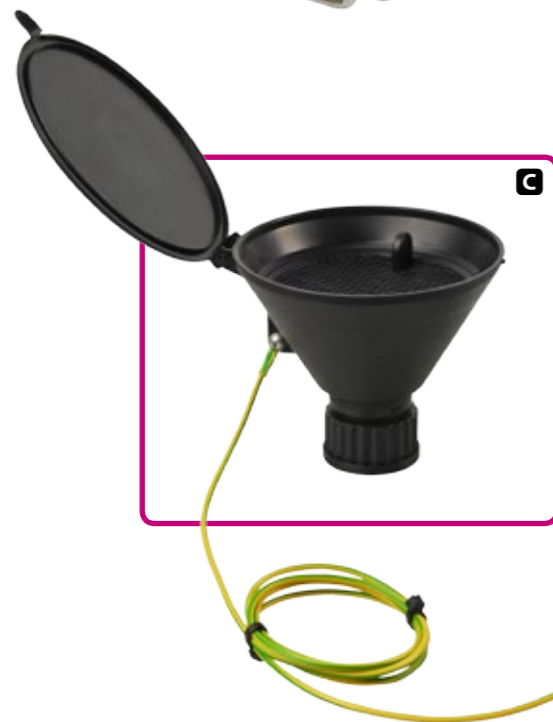


» XL funnel with hinged lid
and new click-closure

NEW



Double thread for barrels!



SCOPE OF DELIVERY

Delivery incl. hinged lid, sieve and ground cable. Each of these can also be ordered individually (see Table).

	Type A PE-HD-el (black) Safety lance Ground connection	Type B PE-HD, white Safety lance	Type C PE-HD-el (black) Ground connection	Type D PE-HD, white
Thread size				
GL 45	-	118 992	118 962	118 952
GL 45 XL funnel with click-closure			117 633 NEW	
S 50	118 985	118 995	-	118 955
S 51	118 983	118 993	-	118 953
S 55	118 981	118 991	118 961	118 951
S 60/61	118 980	118 990	118 960	118 950
S 60/61 XL funnel with click-closure			117 634 NEW	
S 65	118 984	118 994	118 964	118 954
E Double thread R 2" BSP/G2" + 2" Tri-Sure	-	-	118 630	-

Fig.	Part No.	Description	Material
F	118 999	Sieve for safety funnel (white)	PE-HD, white
G	118 989	Sieve for safety funnel (black)	PE-HD-el (black)
H	117 982	Ground cable	Copper cable (yellow with green coding)

Safety funnels With hinged lid



108 670



107 970



Funnel with hinged lid: Page 89

Container with floater for level control: Page 112

Collecting tray: Page 155

Anti-static mat: Page 173

DELIVERED WITHOUT CONTAINER. YOU WILL FIND SUITABLE CONTAINERS STARTING FROM PAGE 144.




Fig.	Part No.	Thread size	Material	Accessories
-	107 670	S 60 / 61	PE-HD (red)	Hinged lid Stainless steel sieve
A	108 670	Double thread 2" BSP and 2" Tri-Sure	PE-HD (red)	Hinged lid Stainless steel sieve
B	107 970	S 60 / 61	Stainless steel	Hinged lid Stainless steel safety lance

Safety funnels Disposal units

In order to get your waste fluid collection site ready for operation quickly, we have put the most popular combinations together in a complete set.

A 107 320

- » Only one part number for the comprehensive safety system
- » No time consuming compilation of a configuration
- » Price advantage compared to ordering piece by piece
- » The delivery is made complete – the system is immediately ready for use



107416



107321

Fig.	Part No. SET	Funnel	Container	Dimensions W x H x D (mm)
A	107 320	117 621 - Ball valve - PE-HD, electrically conductive - Splash protection - Sieve - Ground cable	108 042 - 10 liters - PE-HD, electrically conductive - Float for level control	210 x 460 x 430
-	107 315	118 960 - Hinged lid - Sieve - PE-HD, electrically conductive - Ground cable	107 953 - 10 liters - PE-HD, electrically conductive - With collecting tray 117 985	445 x 405 x 350
B	107 416	118 960 - Hinged lid - Sieve - PE-HD, electrically conductive - Ground cable	108 042 - 10 liters - PE-HD, electrically conductive - Float for level control - With collecting tray 117 985	445 x 405 x 350
C	107 321	117 621 - Ball valve - PE-HD, electrically conductive - Splash protection - Sieve - Ground cable	108 043 - 20 liters - PE-HD, electrically conductive - Float for level control	210 x 710 x 430



- » Fill level monitoring can save lives!
- » No overflowing – the plant fire brigade stays in the garage.
- » Never vacate the laboratory again due to hazardous vapors.

LEVEL CONTROL

Disposing with care

Everyday tasks in the laboratory that have become „The back of our hands“ – and we know, especially this is where the danger lurks. One of those seemingly trivial tasks is the disposal of solvents into the available containers.

Everybody uses them, everybody dumps into them, but who ensures that the containers don't overflow? However, overflowing waste containers in laboratories can be dangerous when work is done with critical substances and solvents. Dangerous fumes can spread fast. This is not only dangerous for individual health but under certain circumstances, can also lead to an explosion.

Mechanically or electronically controlled containers provide more operational safety and protection from such serious consequences. The level control developed by S.C.A.T. gives warning through an optical and acoustic signal before the waste container overflows.

In addition, connecting devices such as pumps and valves can be actuated via contact switches. Depending on demand, the different containers can be equipped either with non-contact sensors for exterior attachment or with float-controlled mechanical/optical and electronic/optical sensors. With these sensors, up to 20 containers can be monitored at the same time.

Liquid waste can be safely collected by tubes or manually; the sensor triggers an alarm if a critical fill level is reached. In addition, an integrated safety funnel can be attached to the safety cap. It is only opened during filling and closes automatically afterwards.

Running on empty can also cause damage

Also, in the opposite case, an empty level indicator might be required when the containers should not run empty. Some think timely refilling is sufficient and so undertake the risk, refilling might be forgotten. S.C.A.T. Europe offers just the right equipment for this.

All sizes of laboratory glass bottles, canisters, barrels and tank containers can be equipped with the system. Additional installations are not required for this. According to the motto: "Plug and Play", every level control is delivered as fully operational and with all the necessary components.



Source: labor&more 03/2007, Pages 18–19

Level control Disc sensor

- » Select between alarm for full or empty state
- » The sensitivity can be adjusted to different wall strengths
- » Fastening material included

Fill level detection without touching the content of the container. The sensitivity of the sensor can be adjusted to different wall strengths. The signal box emits an optical and acoustic signal before a previously set fill height is reached. Suitable for all containers made of glass and non-conductive plastic. Just connect the sensor to the container wall at the desired fill level (fastening material is included with delivery), connect mains plug – done. No technical modifications to the receptacle are required.

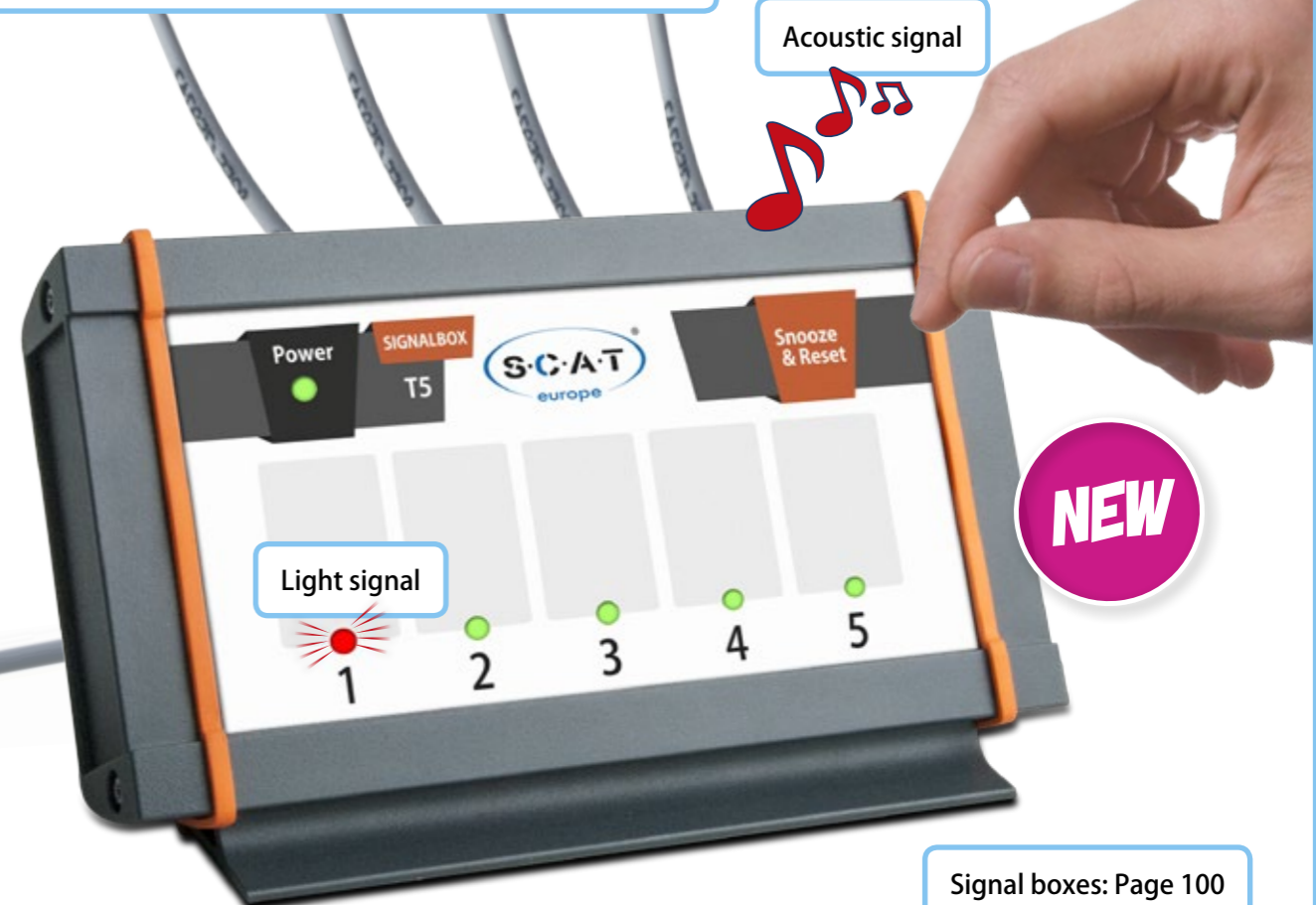
» **Disc sensor**
Recognizes fluids through all glass or plastic walls. Not suitable for stainless steel containers or canisters made of conductive plastic. Page 103

Signal cables in various lengths: Page 103

- » Simple installation
- » For all typical containers made of glass or non-conductive plastic
- » Reusable when the receptacle is empty
- » Monitor several receptacles at the same time



Acoustic signal



Signal boxes: Page 100

Level control with SafetyWasteCaps

Exhaust filter: Page 74

SafetyWasteCaps with electric
level control: Page 55 – 73



For containers made of
conductive plastic or metal,
the level control can be
accomplished through the
closure. All SafetyWasteCaps
with this mark can be
connected to our
signal boxes:




» **Signal cable**
Connection between SafetyWasteCap and signal box.
Available in various lengths, can be combined to lengths up
to 200m. Also suitable for controlling externally connected
devices through the contact switch.



LEVEL CONTROL

LEVEL CONTROL

Level control SIGNALBOX T1 and T5

» **BETTER LEVEL CONTROL
WITH OUR NEW SIGNAL BOXES!**

» **POWER AND STATUS LEDs**

Keep the operating of the signal box and the filling levels of the connected containers easily and safe in mind.

» **SNOOZE & RESET BUTTON**

Control of the optical and acoustic warning signals at the push of a button.

» **SOLID STAND**

The solid stand enables a flexible and safe positioning in the working environment.

» **CONTACT SWITCH**

Due to the potential-free contacts, external devices such as pumps or valves can be controlled. Thanks to separated channels there can be a respond to single sensors.

» **SPACE FOR LABELLING**

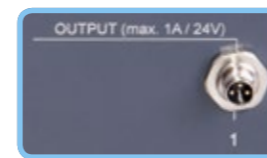
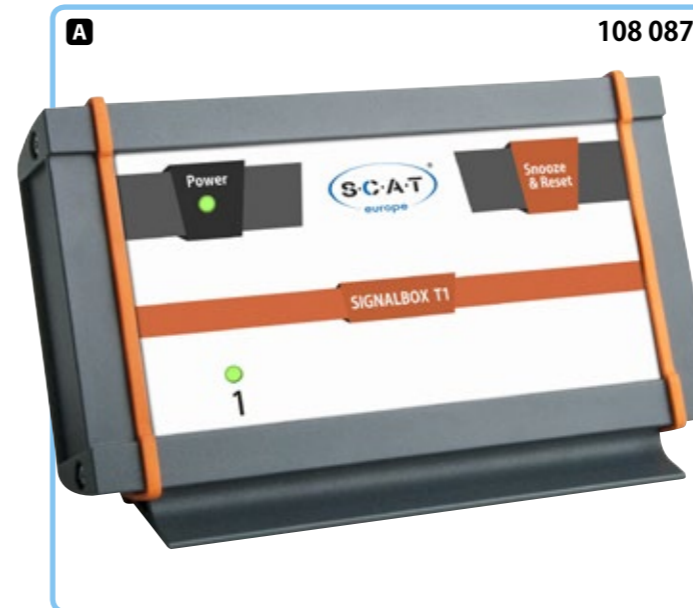
Useful title blocks enable easy classifying of the connected containers.



BACK SIDE SIGNALBOX T5

Level control Signal boxes

NEW



» **Contact switch
(potential-free contact)**

For controlling external devices such as pumps or valves.



» **Contact switch 1-5 and „ALL“
(potential-free contacts)**

The Signalbox T5 can respond to single sensors. The output „ALL“ reacts to all connected sensors, regardless of their number or channel.

Signal boxes incl. power supply

Fig.	Part No.	Description	Connectors	Dimensions mm (W x H x D)	Incl. power supply
A	108 087 NEW	Signalbox T1	1	180 x 105 x 55	EU
B	108 088 NEW	Signalbox T5	5	180 x 105 x 55	EU
A	108 119 NEW	Signalbox T1	1	180 x 105 x 55	USA
B	108 121 NEW	Signalbox T5	5	180 x 105 x 55	USA
A	108 122 NEW	Signalbox T1	1	180 x 105 x 55	UK / England
B	108 124 NEW	Signalbox T5	5	180 x 105 x 55	UK / England



Level control Signal box sets



Signal box sets

Fig.	Part No.	Description
C	108 125 NEW	Signalbox T1 with disc fill level sensor , signal cable 3 meters, hook and loop fastener for disc sensor 2 meters, EU power supply
C	108 157 NEW	Signalbox T1 with disc low level sensor , signal cable 3 meters, hook and loop fastener for disc sensor 2 meters, EU power supply
-	108 158 NEW	Signalbox T1 with disc fill level sensor , signal cable 3 meters, hook and loop fastener for disc sensor 2 meters, USA power supply
-	108 159 NEW	Signalbox T1 with disc low level sensor , signal cable 3 meters, hook and loop fastener for disc sensor 2 meters, USA power supply
-	108 160 NEW	Signalbox T1 with disc fill level sensor , signal cable 3 meters, hook and loop fastener for disc sensor 2 meters, UK/England power supply
-	108 161 NEW	Signalbox T1 with disc low level sensor , signal cable 3 meters, hook and loop fastener for disc sensor 2 meters, UK/England power supply

Level control Accessories single

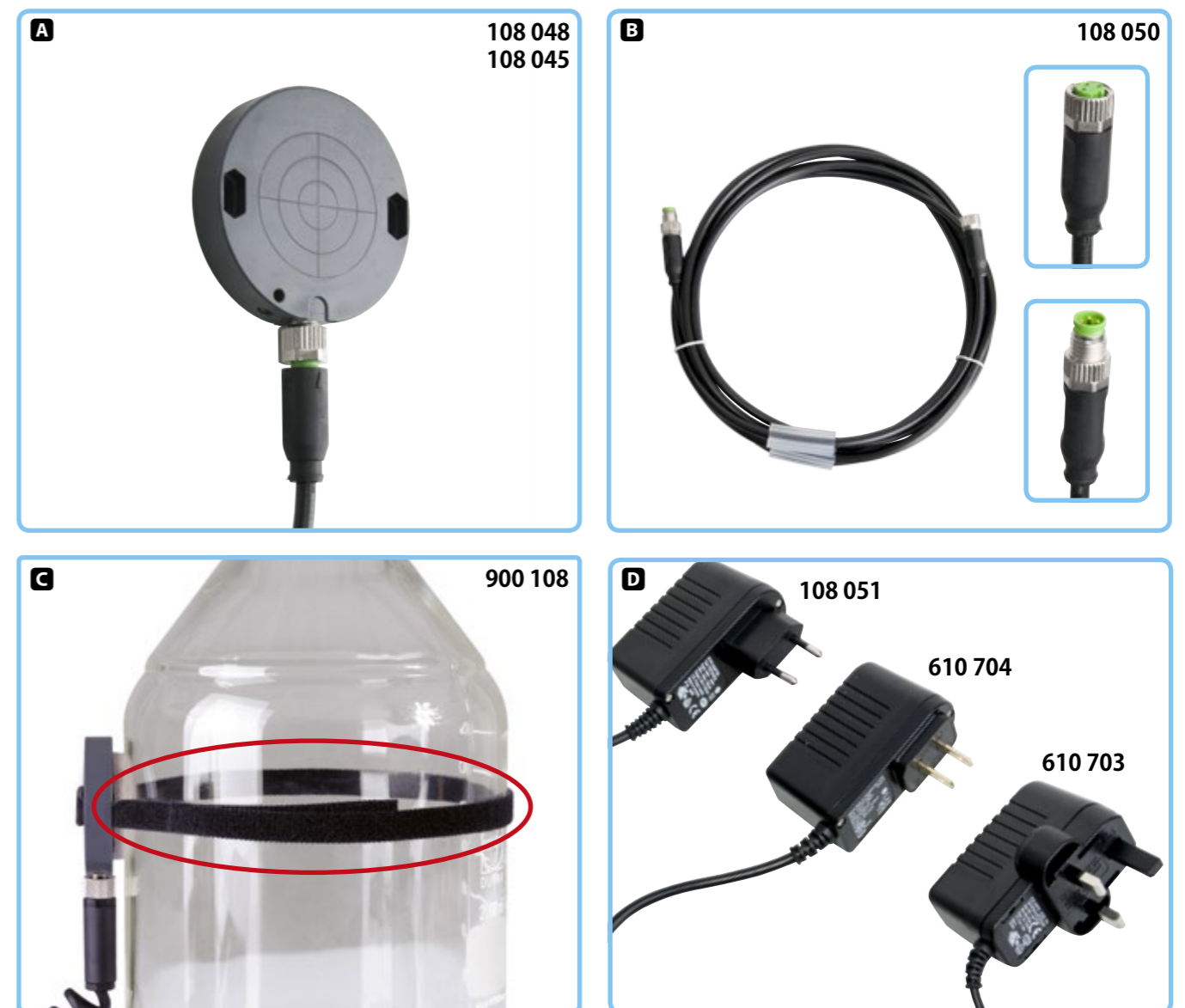


Fig.	Part No.	Description
A	108 048	Disc sensor (alarm at full state)
A	108 045	Disc sensor (alarm at empty state)
B	108 050	Signal cable, length 3 meters
	108 037	Signal cable, length 5 meters
	108 038	Signal cable, length 10 meters
C	900 108	Velcro® strip for disc sensor, length 2 meters
-	900 107	Dual Lock (releasable pressure) closure for disc sensors, approx. 20 x 20 mm. Tougher and longer lasting than a conventional hook and loop fastener.
D	108 051	EU power supply
D	610 704	USA power supply
D	610 703	UK/England power supply

Level control Radio transmission

Monitor up to 20 containers with one receiver – without cables! If the waste containers are stored out of sight, e.g. in closed cabinets and protected zones, with our radio system you still maintain an overview.



» No cables!

Receiver:
Page 107

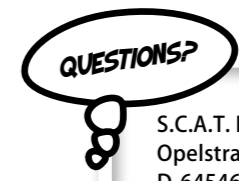
Transmitter:
Page 106



The transmitter is ATEX-compliant for operation in explosion-endangered areas. When a critical level is reached, you are promptly warned by the receiver. The receiver is equipped to monitor up to 20 containers.



ATEX-compliant for explosion-endangered areas!



S.C.A.T. Europe GmbH
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D-64546 Mörfelden

Tel: +49 - (0) 6105 - 30 55 86 - 0
Fax: +49 - (0) 6105 - 30 55 86 - 99
e-Mail: info@scat-europe.com
Web: www.scat-europe.com



Level control Radio transmission Transmitter



ATEX-compliant for use in explosion-endangered areas!

The FSG 1 transmitter is suitable for all S.C.A.T. caps with electronic level control* and transmits a warning signal to the receiver if a critical level is reached, without cables. It is ATEX-compliant and has been tested for use in explosion-endangered areas. Thus you can also comfortably monitor critical fill states from the safety zone.

* Look for this sign:



Technical data

Dimensions (WxHxD)	89 x 49 x 34 mm
Weight	approx. 100 g
Power supply (incl.)	3 V lithium cell (CR1/2AA) Manufacturer: VARTA
Power consumption	Standby: 5 µA Transmission and reception operation: 30 mA
Frequency	868 MHz - 870 MHz
Frequency USA	915 MHz
Transmission power	100 mW
Transfer	Request/acknowledge protocol CRC error protection
Inputs	Opener + closer for redundant evaluation of a level state

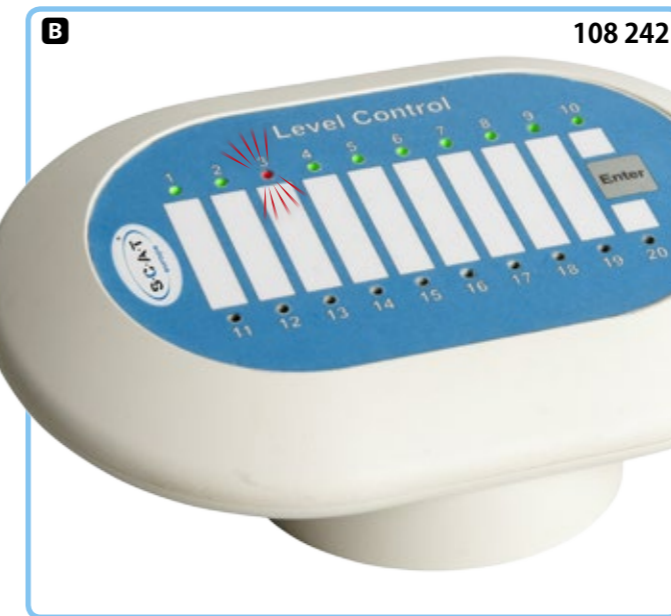
Ordering information

Fig.	Part No.	Description	Atex-compliant
A	108 241	Transmitter FSG 1 incl. battery	●
-	108 245	Transmitter FSG 1 (package with 5 pieces) incl. battery	●
-	108 247	Transmitter FSG 1 (USA) incl. battery	-
-	108 261	Transmitter FSG 1 (USA) (package with 5 pieces) incl. battery	-
-	108 249	Replacement battery for transmitter FSG 1	-

Description: II 1G Ex ia IIC T5 Ga

The ATEX directive consists of two EU directives describing what equipment and work environment is allowed in an environment with an explosive atmosphere. ATEX derives its name from the French title of the 94/9/EC directive: Appareils destinés à être utilisés en ATmosphères EXplosives.

Level control Radio transmission Receiver



Optical and acoustic signals

at critical level state. Meaning of the optical signals:

- Green = Container connected and OK.
- Red + acoustic signal = Critical fill state / container full.
- Yellow = Change transmitter battery



- » We also provide solutions for highly isolated or shielded areas in laboratory
- » Informations regarding repeaters (signal amplifier) you receive of course by request

Monitor up to 20 containers at the same time with this receiver. If one of the transmitters registers a critical fill level, a warning signal is emitted and the LED of the affected container lights up red. A power supply unit for connection to the 230 V power supply is included in the scope of delivery.

Technical data

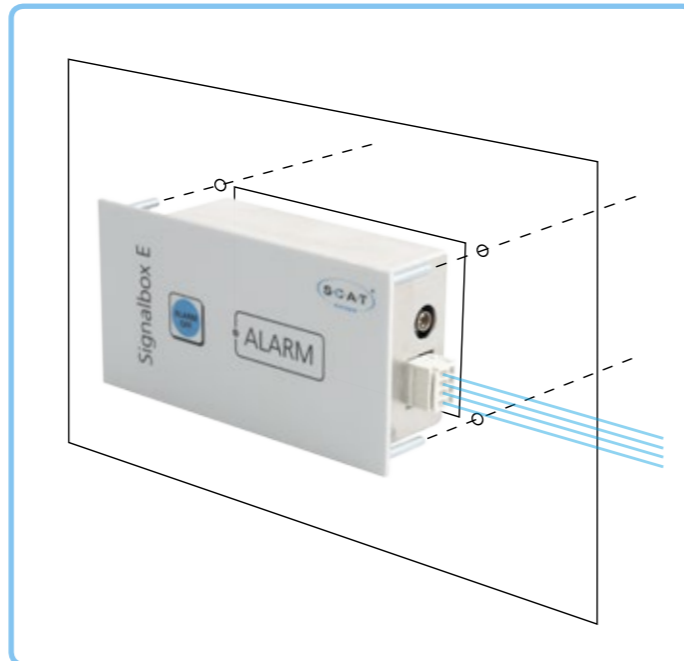
Dimensions (WxHxD)	163 x 56 x 94 mm
Weight	approx. 150 g
Power supply	24 V plug-in power supply unit
Power consumption	max. 100 mA
Frequency	868-870 MHz
Frequency USA	915 MHz
Transmission power	10 mW
Transfer	Request/acknowledge protocol CRC error protection
Outputs	Piezo buzzer 100 V / 1 A m~V RS485 mod bus interface (e.g. for connecting to building technology)

Ordering information

Fig.	Part No.	Description	Atex-compliant
B	108 242	Receiver FSS 1 with power supply unit for Germany / EU	
-	108 243	Receiver FSS 1 with power supply unit for England / UK	
-	108 244	Receiver FSS 1 with power supply unit for USA	
-	108 240	Complete radio level control set 1x receiver signal box FSS 1 20 channels 1x transmitter FSG 1 1x EU power supply unit for receiver 1x battery for transmitter	●
-	108 246	Complete radio level control set 1x receiver signal box FSS 1 20 channels 5x transmitter FSG 1 1x EU power supply unit for receiver 5x battery for transmitter	●
Repeater FSR 1 (signal amplifier)			
-	108 258	with power supply unit for Germany / EU	
-	108 259	with power supply unit for England / UK	
-	108 260	with power supply unit for USA	

Level control Built-in signal box

NEW



The signal box is inserted into the allocated gap of your laboratory furniture front panel and fasten with four bolts including screw connection. Of course we have a drill template available. On the front of the built-in signal box are the users basic information and control panels. The built-in signalbox has a LED display and an acoustic warning signal which lights up and beep if the filling status of the monitoring waste container has reached the critical level. To change the full container unhurriedly the built-in signal box has a button to mute the acoustic warning signal for the time of changeover.

Perfect integration of the level control in laboratory furniture. All connectors are assembled at the side and vanish out of the viewing range.



A SafetyWasteCap or a disc sensor can be directly connected with the use of a signal cable. Also a peripheral device (pump, etc.) can be connected.



If it should be necessary to secure a S.C.A.T. SafetyWasteCap from the laboratory installation series with a switching amplifier, this can also be connected to the built-in signal box.

Function of switch amplifier:

Switch amplifiers are used to protect intrinsically-safe circuits in hazardous areas. Next to power and voltage limitation they also have a galvanic separation between field circuit and control. The proximity sensor or switch controls by a change-over relay contact the load in the safe area.



ATEX-compliant for use in explosion-endangered areas!

Technical data

Dimensions (WxHxD)	135 x 70 x 46 mm
Weight	ca. 195 g (without power supply)
Supply voltage	24 V
Connectors	2 x 3-pin circular connector M8 2 x board connector 3/4-pin
Display/control	1 x LED Status/Alarm 1 x Key, alarm mute for changeover.





















Ordering information

Fig.	Part No.	Description
A	106 418	Built-in signal box with EU power supply
B	108 114	Switch amplifier (Technical data sheet and further informations you will receive by request)

» Which Box...

» ...for which purpose?

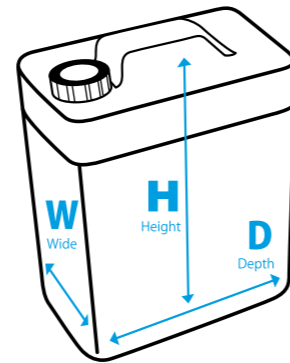
Compatible with...

Box type	Control filling levels	Potential free contacts	Switch amplifier adaptable	RS485	Compatible with...			
 Signalbox T1	1	1	-	-	 signal cable (extension): Page 103	 Disc sensor: Page 103	 SafetyWasteCaps standard: Page 55-73	 SafetyWasteCaps Lab-installation: Page 140
 Signalbox T5	5	5 + 1 (ALL)	-	-	 signal cable (extension): Page 103	 Disc sensor: Page 103	 SafetyWasteCaps standard: Page 55-73	 SafetyWasteCaps Lab-installation: Page 140
 Radio transmission	20	-	-	●	 Transmitter: Page 106	 signal cable (extension): Page 103	 SafetyWasteCaps standard: Page 55-73	 SafetyWasteCaps Lab-installation: Page 140
 Built-in signal box	1	1	●	-	 signal cable (extension): Page 103	 Disc sensor: Page 103	 SafetyWasteCaps standard: Page 55-73	 SafetyWasteCaps Lab-installation: Page 140

Level control Container with integrated floater



Safely collect fluid laboratory waste! The integrated floater gives a warning in time to prevent overfilling. Ideal for use with S.C.A.T safety funnels (starting on Page 80)

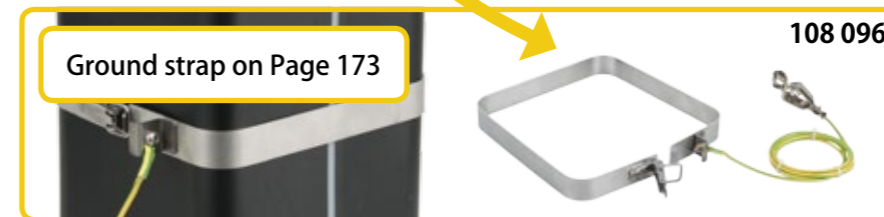


» Electrically conductive canister with viewing strip!



Container from electrically conductive plastic counteracts electrostatic discharge and can be grounded. Thus they are especially well-suited for use in protected areas.

Ground strap on Page 173



Protective cage against damages to the viewing glass

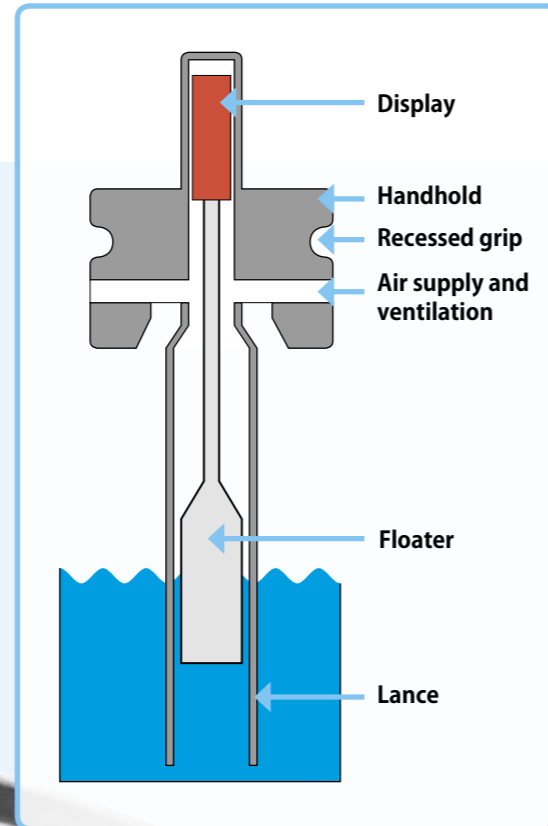


Fig.	Part No.	Description	Contents	Material	Thread size	Dimensions (W x H x D)
A	108 945	Space-saving canisters with float	5 liters	PP, white	S 50	65 x 405 x 330 mm
B	108 320	Canister with floater	10 liters	PE-HD, white	S 90	195 x 400 x 195 mm
C	108 056	Canister with floater	20 liters	PE-HD, white	S 60 / 61	260 x 455 x 285 mm
D	108 420	Canister with viewing strip with UN-Y approval	10 liters	PE-HD, black electrically conductive	S 90	195 x 400 x 195 mm
E	108 042	Canister with floater	10 liters	PE-HD, black electrically conductive	S 60 / 61	185 x 280 x 290 mm
F	108 043	Canister with floater	20 liters	PE-HD, black electrically conductive	S 60 / 61	185 x 515 x 290 mm
-	107 740	Canister with floater	60 liters	PE-HD, black electrically conductive	S 70 / 71	330 x 690 x 395 mm
G	199 013	Protective cage for floater				

Level control For barrels

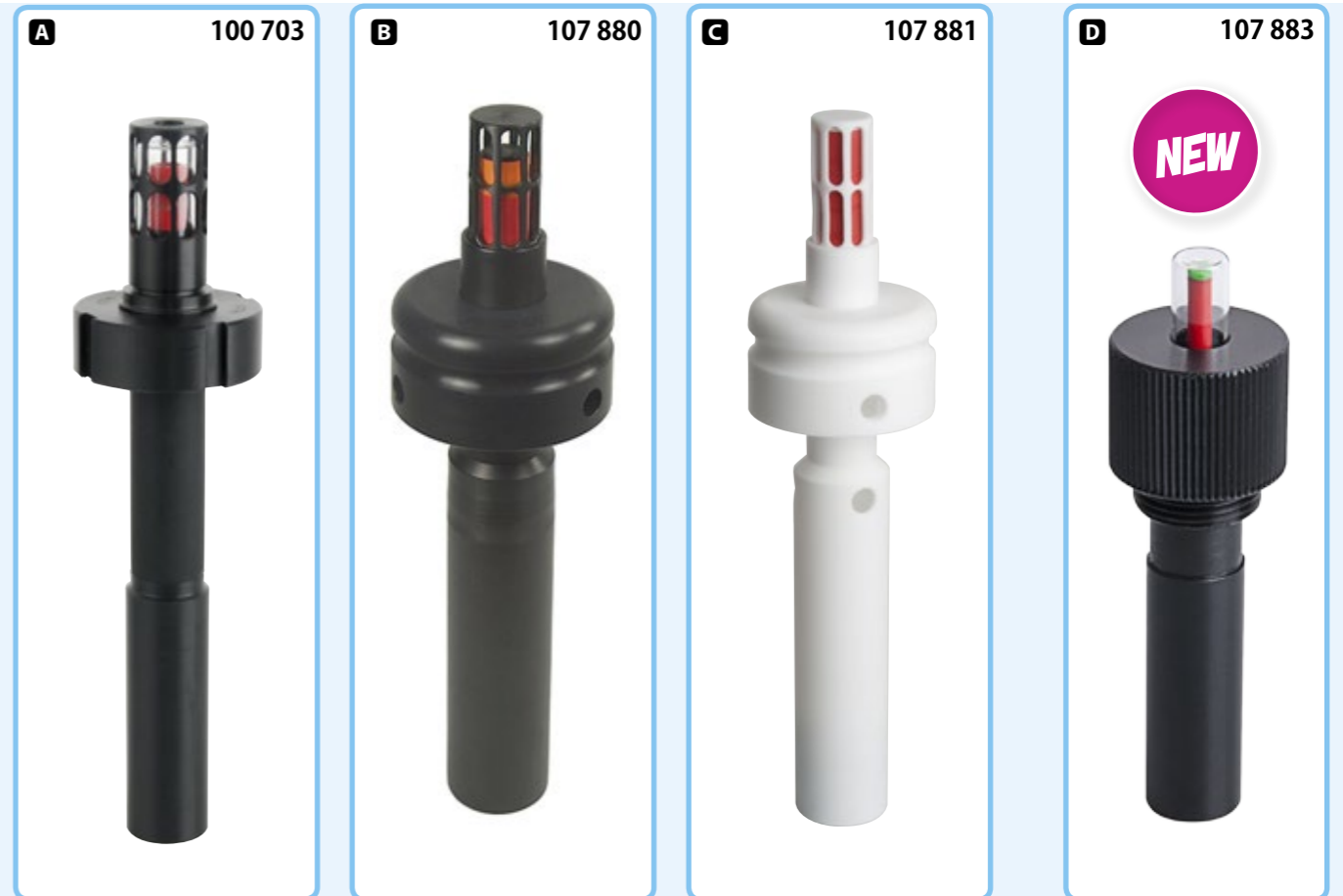
» Fill barrels safely.

Dependable protection from overflow when filling barrels. Practical, large handle for simple handling, even with gloves. The float positions itself securely at the opening by its own weight while the barrel fills up. The integrated ventilation ensures a safe pressure equalization.



XXL LEVEL CONTROL FITS ALL OPENINGS FROM 50MM DIAMETER

FOR 3/4"
THREAD



- » Dependable fill level control for containers up to 200 liters
- » Ideal for safe barrel filling
- » Available in different materials, therefore suitable for all chemicals

Fig.	Part No.	Description	Lance length	Lance diameter	Material
A	100 703	Level control for barrels with milk pipe thread	250 mm	31 mm	Lance: PE-HD, black Floater: PE-HD, black Display: ETFE, red
B	107 880	Level control for barrels (fits all openings from Ø 50 mm) (up to max. Ø 100 mm)	250 mm	50 mm	Lance: PE-HD, black Floater: PE-HD, black Display: ETFE, red
C	107 881	Level control for barrels (fits all openings from Ø 50 mm) (up to max. Ø 100 mm)	250 mm	50 mm	Lance: PTFE, white Floater: PFA, white Display: ETFE, red
D	107 883 NEW	Level control for barrels Thread G3/4"	150 mm	18 mm	PE-HD-el
	107 882 NEW	Level control for barrels Thread G3/4"	150 mm	18 mm	PE-HD
	107 884 NEW	Level control for barrels Thread G3/4"	150 mm	18 mm	Lance: PTFE, white Floater: PFA, white Display: PE, red

LABORATORY INSTALLATION



With our installation solutions, you can integrate the proven, space-saving and practical S.C.A.T. safety system into your laboratory equipment. As early as the planning stage for new laboratory buildings, the flexible system is included by leading laboratory outfitters.

Sample texts for tendering your laboratory construction project are available for free download at www.scat-europe.com

» **Adapted to your daily work processes.**

The filling funnel is placed right where it is needed – directly in your work area.

» **No disturbances or interruptions.**

Long distances to the supply receptacles are a thing of the past – your experiment setup is never left unsupervised.

» **Level control.** No overflowing waste receptacles.

» **Space-saving & compliant to rules!** No more storage of waste containers in fume cupboards.

» **More free space in the exhaust hood or on the worktable.**

No bulky waste receptacles – economic and efficient work surface utilization. The disposal receptacles are stored separately and can be used from several work stations at the same time.



Safety funnels:
Page 128



Built-in signalbox:
Page 108



SafetyWasteCaps:
Page 140

Safe and Sustainable Procedures for the Storage of Hazardous Substances in the Laboratory



Image source: Hohenloher

With regard to personal protection, there is a clear hierarchy of measures for dealing with hazardous substances. The primary objective is the avoidance of direct contact, i.e. handling in closed systems. If open handling is necessary, appropriate protective measures are required, such as working in fume cupboards or with local extraction systems or even the use of personal protective equipment. In this chain of measures, laboratory ventilation is the last resort because, with the usual laboratory ventilation of $25 \text{ m}^3/\text{h}\cdot\text{m}^2$, there is no certainty of preventing contamination of persons by pollutants in the laboratory space. The optimum laboratory ventilation is an ideal mixing vessel, i.e. there is the same concentration and temperature at every point in the room. To put it another way, laboratory ventilation works only by dilution and prevents, by this dilution, the concentration of substances in the room air.

In laboratories world-wide, the objective (in Germany standard) is to make the necessary number of fume cupboards available and to carry out work with substances endangering health in a fume cupboard. The revision of the corresponding European standards placed particular emphasis on containment in the type testing. Solvents are not stored in the open area but in safety cabinets with extraction systems that meet the European standard EN 14470.

Once opened, a solvent bottle is a source of continued emissions and should not be stored in the open laboratory area. Such opened containers, as well as closed containers and waste canisters, must be placed in an appropriately equipped storage area on completion of work. **In the past, this step was frequently neglected so that the fume cupboards were often incorrectly used for the storage of hazardous substances.** Based on this recognition, the creation of hazardous substance centres has since proven itself as a planning concept: Hazardous substances are handled in the fume cupboard. The substances should therefore be accessible in the immediate vicinity, i.e. safety cabinets for solvents and acid/alkali cabinets are built in beneath or next to the fume cupboards. Space is thus not only

made available for supply but also for segregated waste collection.

In a sustainable laboratory building, the laboratory ventilation, especially with the associated safety installations, is both the most important contribution to the protection of personnel from substances that endanger health and also the largest energy consumer in the laboratory building. While personal safety is the highest priority, the laboratory building's energy consumption must nevertheless be reduced.

The German Safety At Work Regulation (Arbeitsstättenverordnung) points the way towards the implementation of these contradictory requirements: contact with hazardous substances is to be prevented, which means the long-term removal of emission sources in a laboratory area, as well as the prevention of uncontrolled release. Solvents are to be stored and held available in the safety cabinet.

However, they are handled not only in the fume cupboard but also, to a not insignificant extent, at laboratory apparatus. **The supply of solvent to and collection of waste from HPLC units is a frequently underestimated source of emissions, especially in analytical laboratories. Air must be allowed to enter the solvent supply bottle standing adjacent to the HPLC unit, the system is thus open to the room and a part of the solvent evaporates.**

In accordance with the relevant laws, this local release is captured in many laboratories by local extraction systems. However, this significantly increases the air quantities in analytical laboratories. An example: The use of 10 HPLC systems in a laboratory is not unusual, increasing the air quantity in this space by about $850 \text{ m}^3/\text{h}$. This quantity of air is significantly higher than the amount extracted from a fume cupboard with a width of 1.5 m and corresponds to the energy consumption of a single family house over a year.



The installation of a safety cap with an air inlet valve on the solvent bottle is the sustainable option since emissions are immediately suppressed. Installation of the valve leads to no increase in the air quantity. Evaporation of the solvent is effectively prevented, thus reducing not only the release of solvent vapours into the environment but also the overall solvent consumption. **With this simple measure, it is not only possible to improve work safety but also to reduce energy costs since the use of local extraction becomes superfluous.**



Figure 1
Working principle of a safety cap with an air inlet valve. When the liquid is drawn off, air can flow in. Evaporation of the liquid is prevented by a valve membrane.



Figure 2
Arrangement for HPLC waste collection with collector fitting, collection container and level monitoring

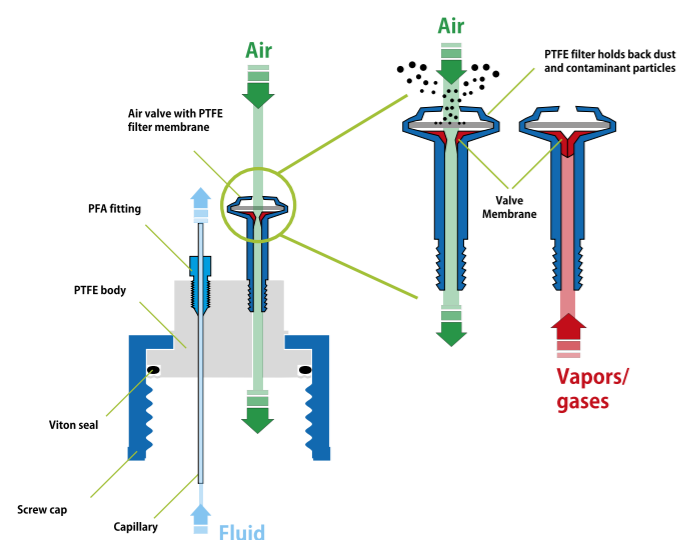


Figure 3
Collection system in a safety cabinet below a fume cupboard

The collection of solvent wastes in a laboratory depends on the disposal concept in the building. For example, solvent disposal by means of an ITC (intermediate bulk container) enables contamination-free transfer by means of a pump-out vehicle and collection in stationary tanks.

The solvent collection at the chromatograph outlet should take place in safety cabinets with extraction so that this source of emissions is also eliminated. The waste from several HPLC units can thereby be brought together and collected in a single base unit cabinet. Safety in analytical laboratories that use the HPLC method is significantly improved by the measures described.

For a small number of workstations with large quantities of solvent, this is a very complex and expensive procedure. Where disposal for the building is only with canisters, this method with a pump-out vehicle cannot be used.

Another possibility for collecting solvent wastes is their disposal in canisters in a safety cabinet mounted in the base units with continuous extraction.

Ideally, the disposal in laboratories with very high turnovers of chemicals takes place directly in the fume cupboard by means of a funnel.

For this purpose, a collection system with level indication and acoustic level warning is required for the safety cabinet in the base unit, enabling toxic solvents to be handled only in the fume cupboard rather than by pouring them directly into the canister.



Figure 4
Funnel in the fume cupboard

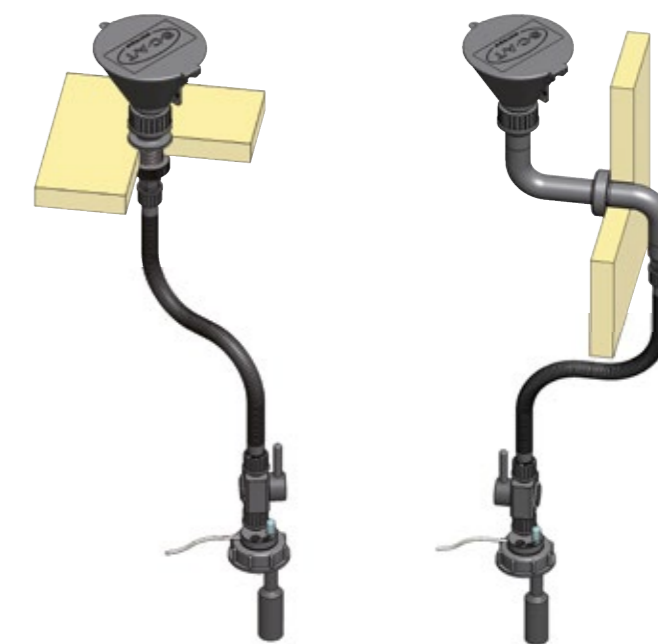


Figure 5
Schematic diagram of a funnel with a discharge pipe and level monitoring for installation in a fume cupboard.

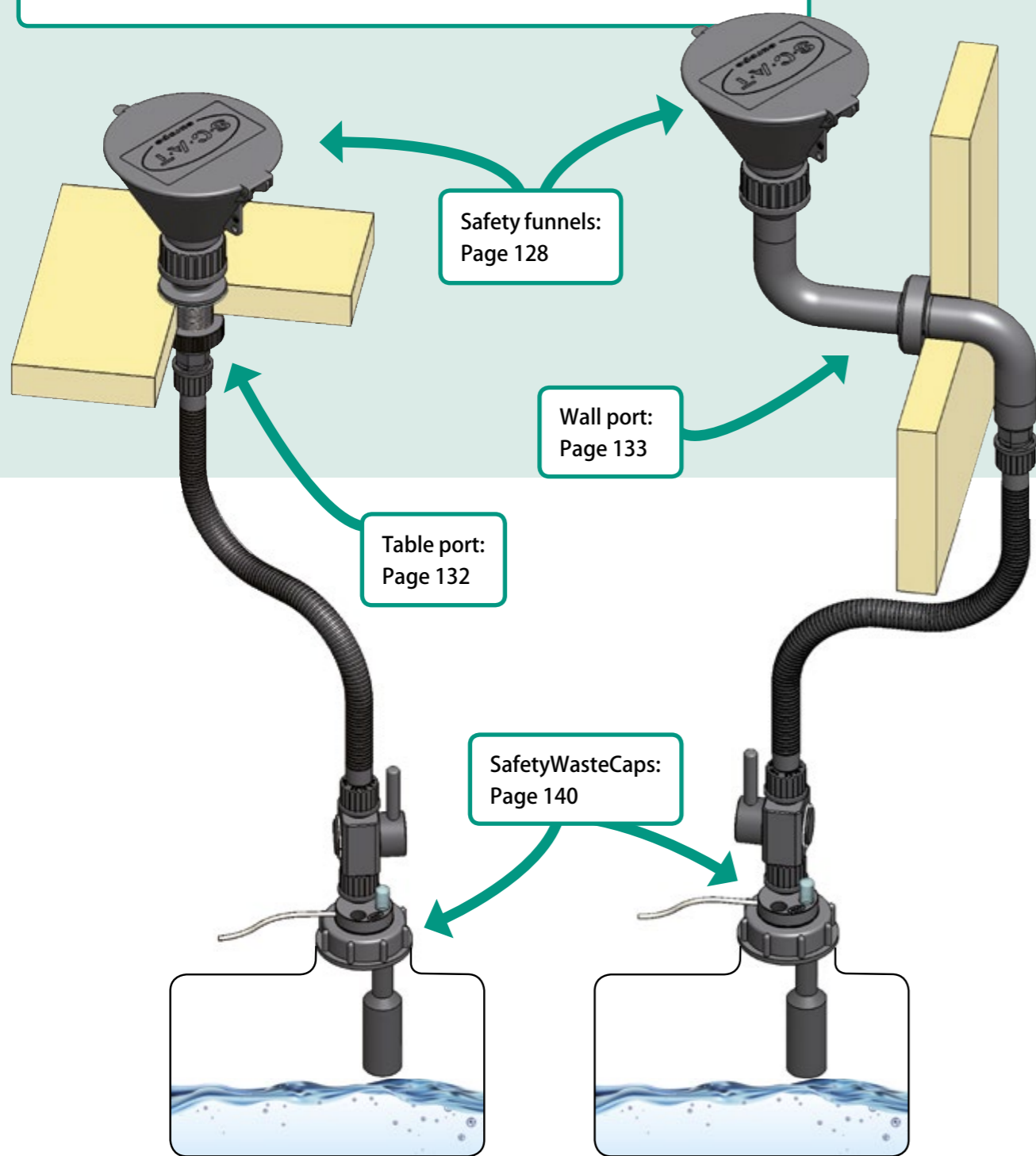
With a comprehensive approach at the planning stage, the proper handling of hazardous substances, as well as their storage and disposal, will be made easier for the later users of the laboratory.

Dr. Christoph Heinekamp
dr. heinekamp Labor- und Institutsplanung GmbH

Laboratory installation

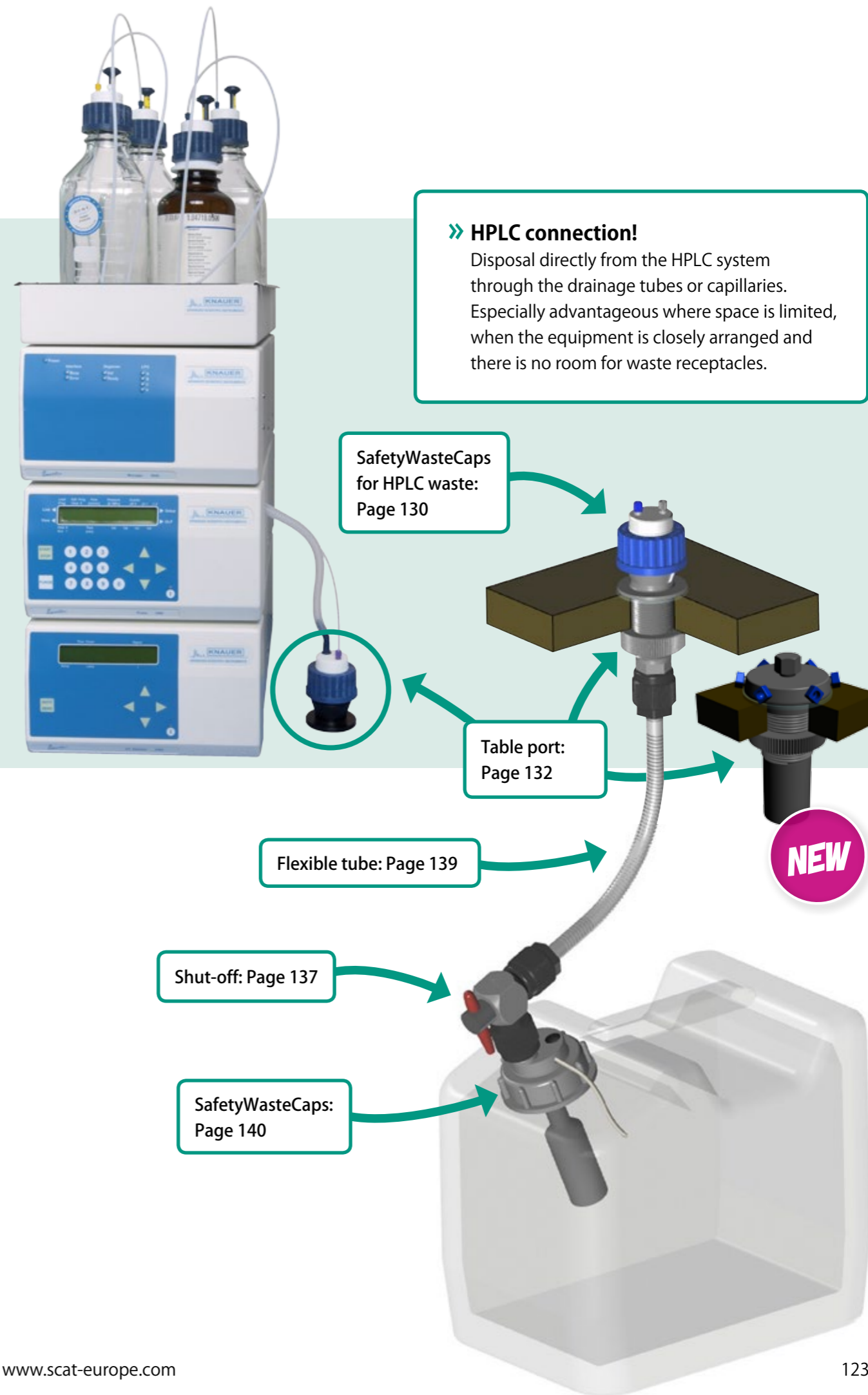
» On wall, table or exhaust hood.

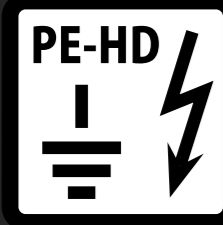
The components of the tube system are an optimum fit to your on-site installation requirements. With these components, fill heads can be mounted on worktables, in exhaust hoods or rear walls.



» HPLC connection!

Disposal directly from the HPLC system through the drainage tubes or capillaries. Especially advantageous where space is limited, when the equipment is closely arranged and there is no room for waste receptacles.





» Electrical conductive PE-HD

» Ground connection



SCOPE OF DELIVERY

Electrically conductive funnels are delivered with ground cable and clamp.

Laboratory installation Electrical conductivity

» **Against static discharge and sparking**

Particular caution is needed when collecting combustible fluids. Static charges may build up during outflow, which may cause sparks and increase the hazard of fire. S.C.A.T. installation solutions from electrically conductive PE-HD prevent static discharge and can be secured via an additional ground cable.

» **The alternative to heavy stainless steel**

Thanks to its low weight, our conductive PE-HD is the ideal material for laboratory application. Heavy stainless steel containers can only be transported with difficulty when full.

This is where the S.C.A.T. products have a significant weight advantage.

» **No corrosion by acids or lyes**

Even organic solvents or other aggressive substances can be safely collected with the S.C.A.T. system. As opposed to stainless steel, corrosion problems never arise.



Safety funnel:
Page 128

NEW

» **XL funnel with hinged lid and new click-closure**



A

117 633
NEW

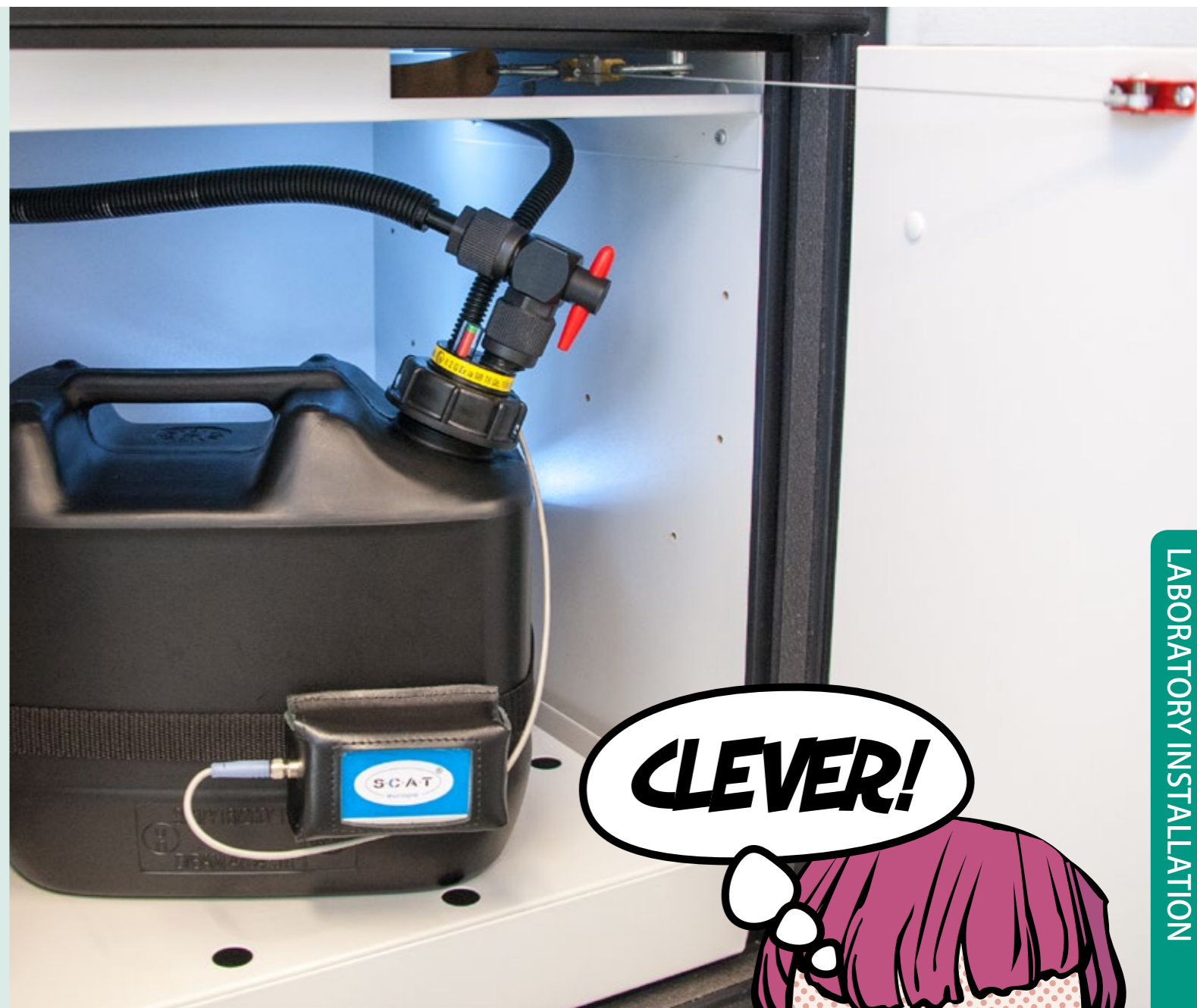
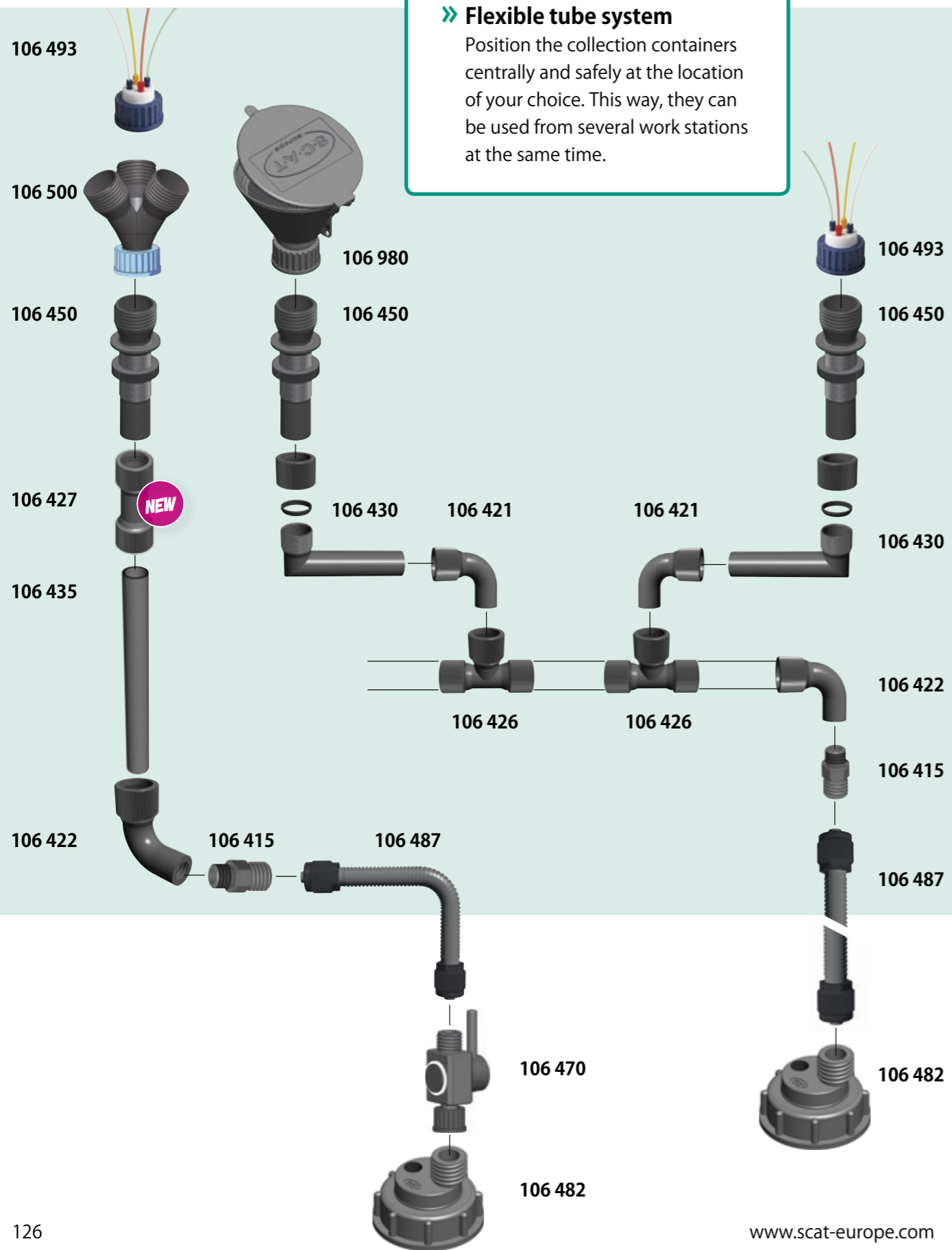
Safety funnel GL45 with hinged lid and new click-closure.
(Modification of the wall port is necessary.)

Hinged lid, sieve, ground connection PE-HD, electrically conductive, black with cable and clamp

Laboratory installation

» Flexible tube system

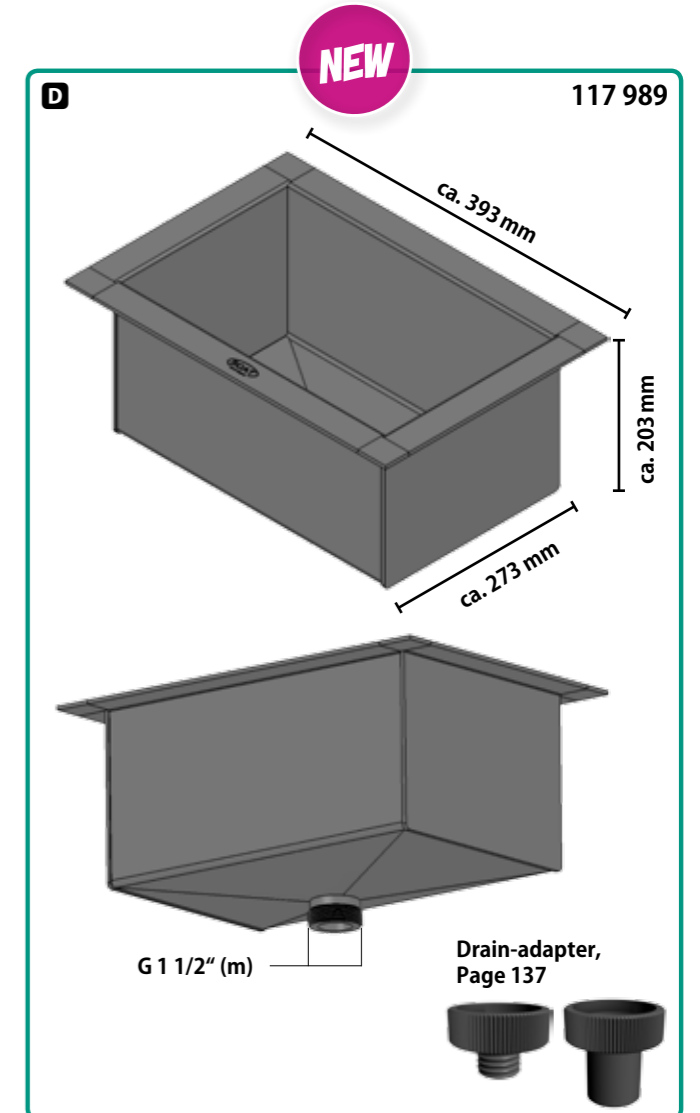
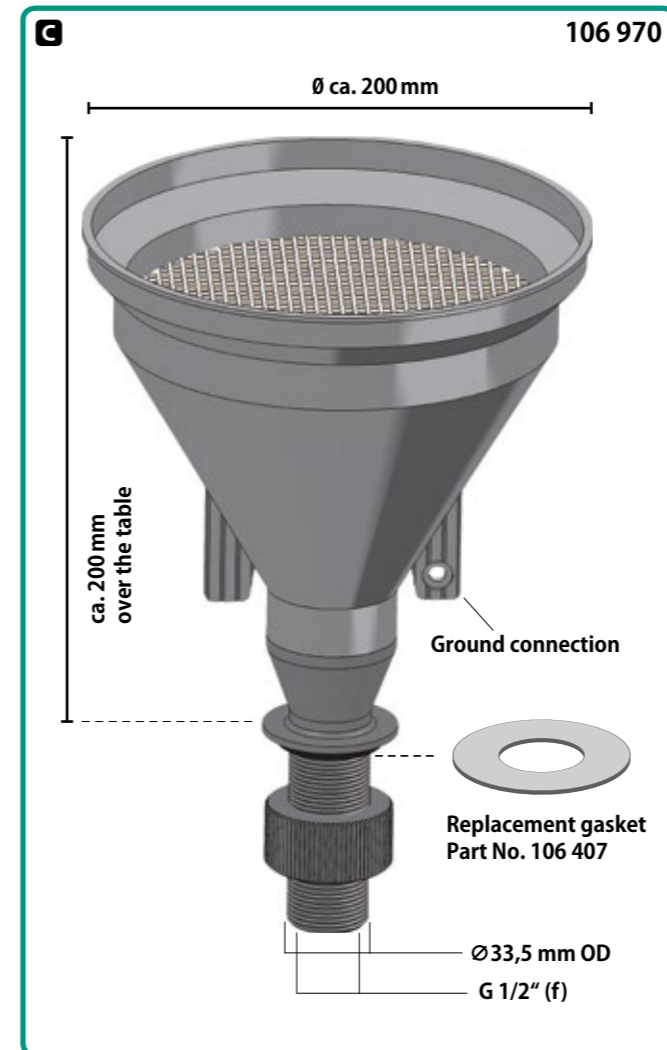
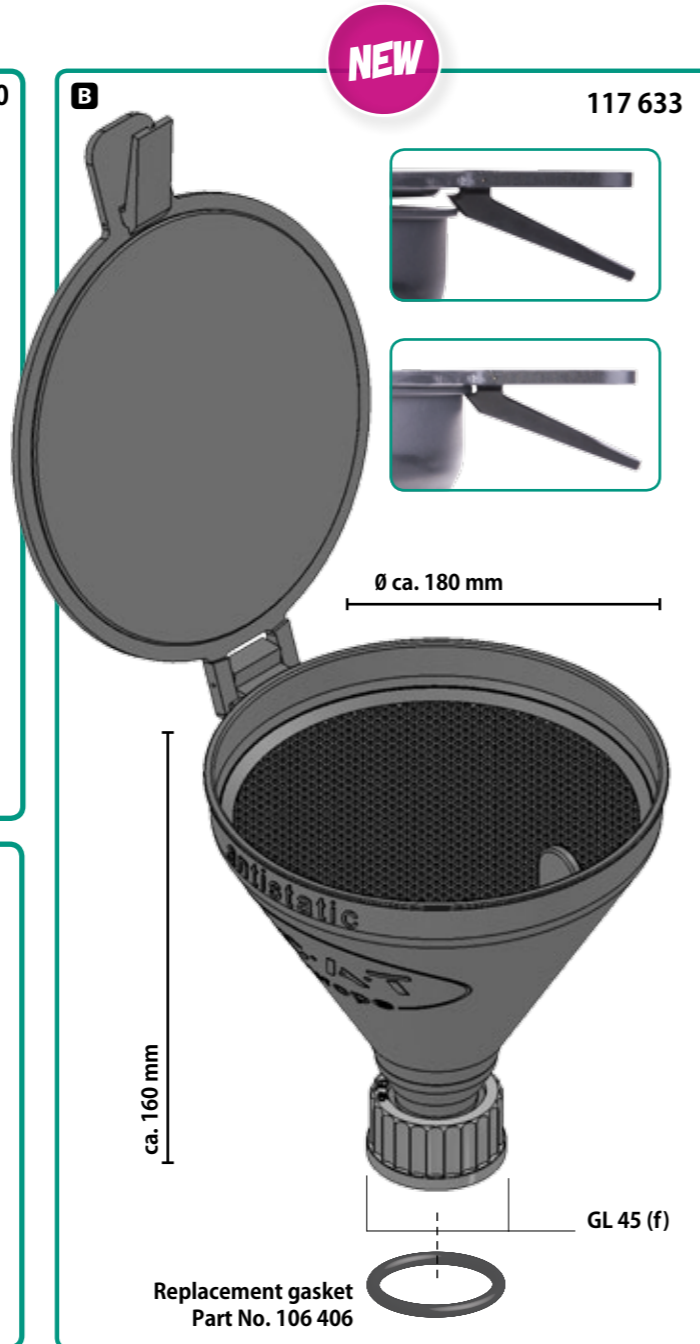
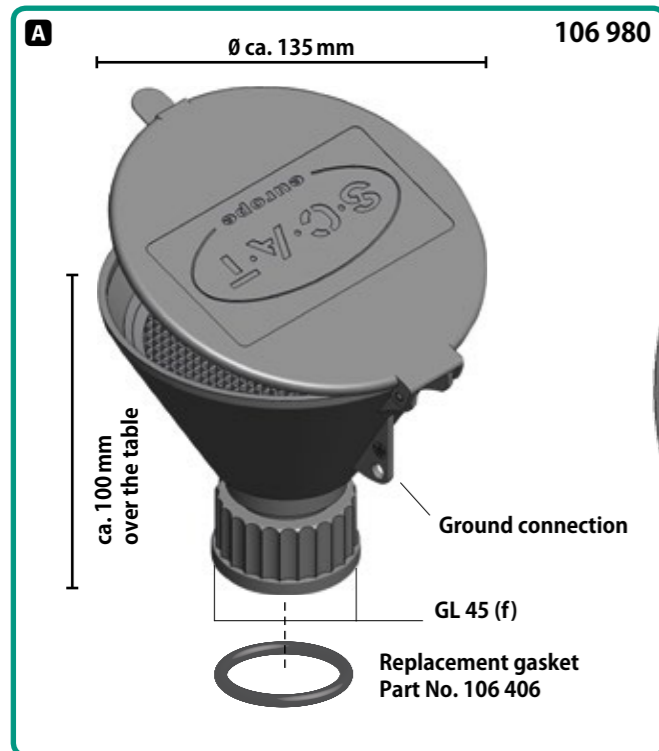
Position the collection containers centrally and safely at the location of your choice. This way, they can be used from several work stations at the same time.



» Saves space, even in the base cabinet!

With its compact, space-saving construction, the S.C.A.T. components are an optimum fit for the modern laboratory concept - wherever efficient use of available storage space is a factor.

Laboratory installation Safety funnels



» Hinged lid

» Sieve
For trapping stirrers or larger contaminant particles.

» Ground connection
With ground cable and clamp (included with scope of delivery).

» Ball valve
Closes automatically after filling.

» Sieve
For trapping stirrers or larger contaminant particles.

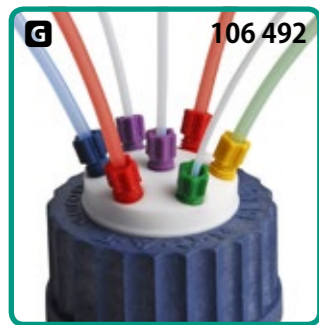
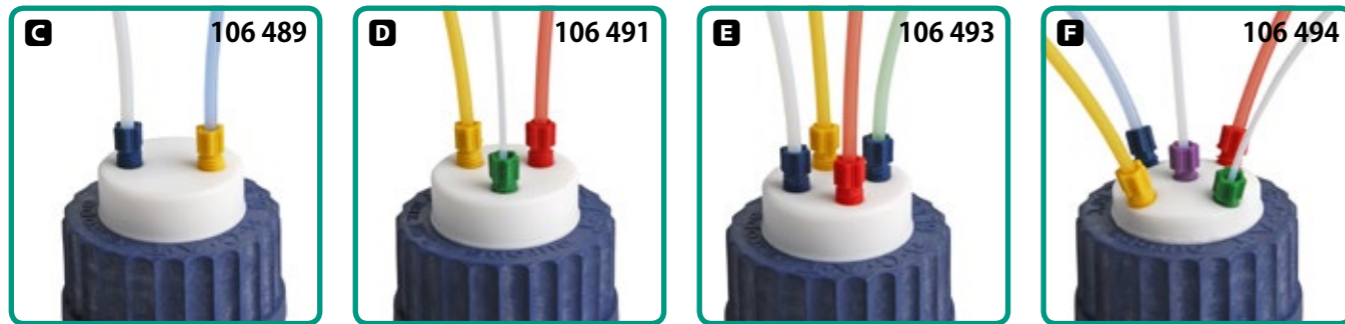
» Ground connection
With ground cable and clamp (included with scope of delivery).

» Hopper-bottom tank
For better handling with larger volume. Just place the container, let it drop down and rinse with water.

» Combinable with drain-adapter, Page 137
The hopper-bottom tank fits perfect to the laboratory installation system and is compatible with the flexible tube system.

Fig.	Part No.	Description	Accessories	Material
A	106 980	Safety funnel with hinged lid	Hinged lid, sieve, ground connection with cable and clamp	PE-HD, electrically conductive (black)
B	117 633 NEW	Safety funnel GL45 with hinged lid and new click-closure. (Modification of the wall port is necessary.)	Hinged lid, sieve, ground connection with cable and clamp	PE-HD, electrically conductive (black)
C	106 970	Safety funnel with ball valve	Ball valve, sieve, ground connection with cable and clamp	PE-HD, electrically conductive (black)
-	106 971 NEW	Safety funnel with ball valve, with Ø 32mm pipe connection (outer)	Ball valve, sieve, ground connection with cable and clamp	PE-HD, electrically conductive (black)
D	117 989 NEW	Hopper-bottom tank	with drain, Thread G 1 1/2" outer	PE-HD, electrically conductive (black)

Laboratory installation SafetyWasteCaps - Collector for HPLC waste



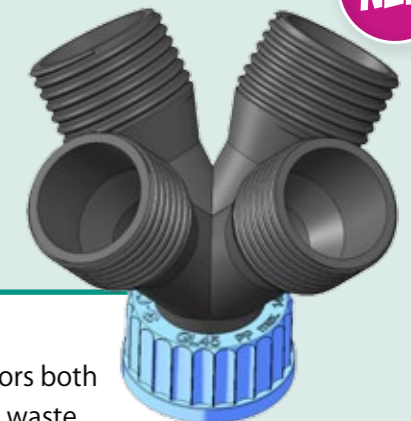
- » **No escape of harmful vapors!**
SafetyWasteCaps conduct the waste tubes of your HPLC system to the disposal system, directly and air-tight. Escape of harmful solvent vapors are effectively prevented.
- » **Ready for connection as delivered!**
Fittings for capillaries with 1.6/2.3/3.2 mm outer diameter are included with the scope of delivery.
- » **Resistant to chemicals**
All parts coming in contact with fluids are manufactured from pure PTFE - for optimum chemical resistance even against aggressive solvents and acids.



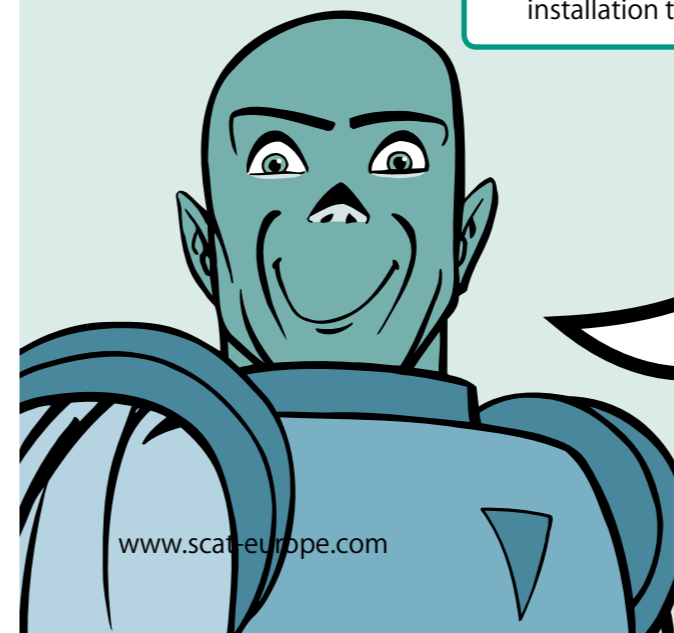
Fig.	Part No.	Description	Connectors	Fittings included for capillary diameter (outer)			Incl. stepped fitting, curved
				∅ 1,6 mm	∅ 2,3 mm	∅ 3,2 mm	
C	106 489	SafetyWasteCap II (for laboratory installation)	2	2x	2x	2x	
	106 497 NEW	SafetyWasteCap II (for laboratory installation)	3	2x	2x	2x	1
D	106 491	SafetyWasteCap III (for laboratory installation)	3	3x	3x	3x	
E	106 493	SafetyWasteCap IV (for laboratory installation)	4	4x	4x	4x	
	106 498 NEW	SafetyWasteCap IV (for laboratory installation)	5	4x	4x	4x	1
F	106 494	SafetyWasteCap V (for laboratory installation)	5	5x	5x	5x	
G	106 492	SafetyWasteCap VII (for laboratory installation)	7	7x	7x	7x	



NEW

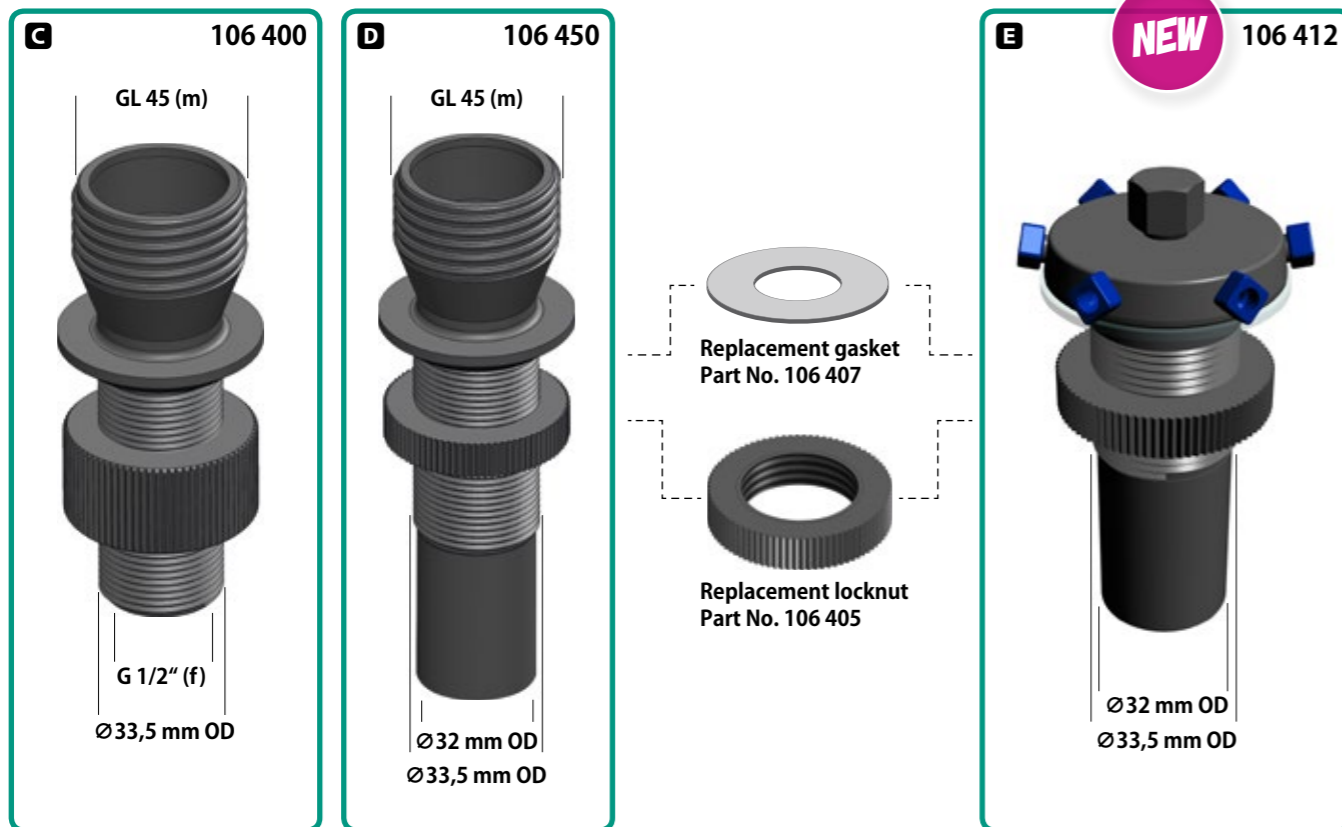
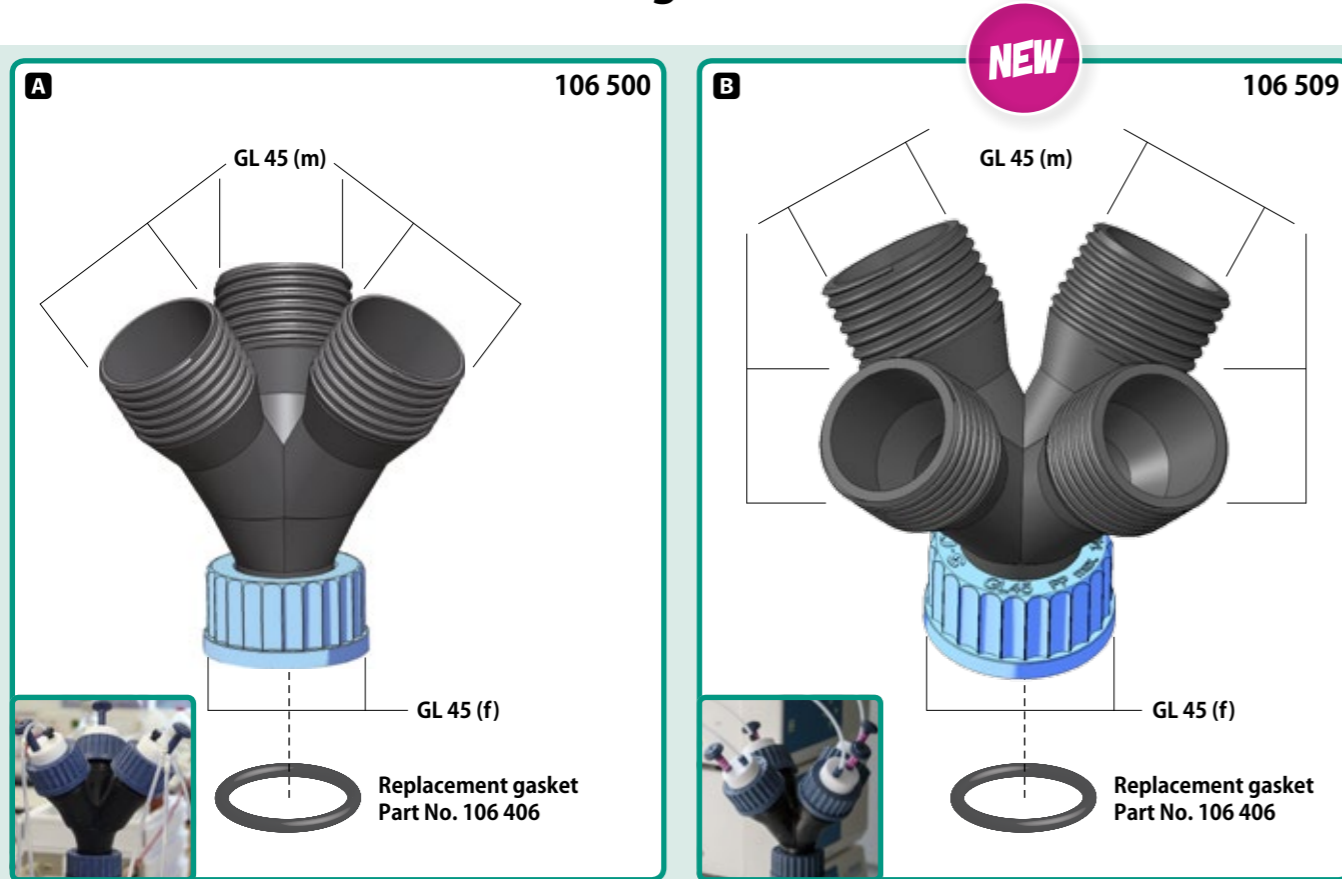


- » **Suitable for all purposes**
The useful 3-way and 4-way collectors both can be used as extraction as well as waste management connection to your HPLC systems. They fit to GL 45 bottles and the laboratory installation tube system.



**COLLECTORS?
TURN THE PAGE
:-)**

Laboratory installation Collectors and table mounting accessories



Laboratory installation Wall port

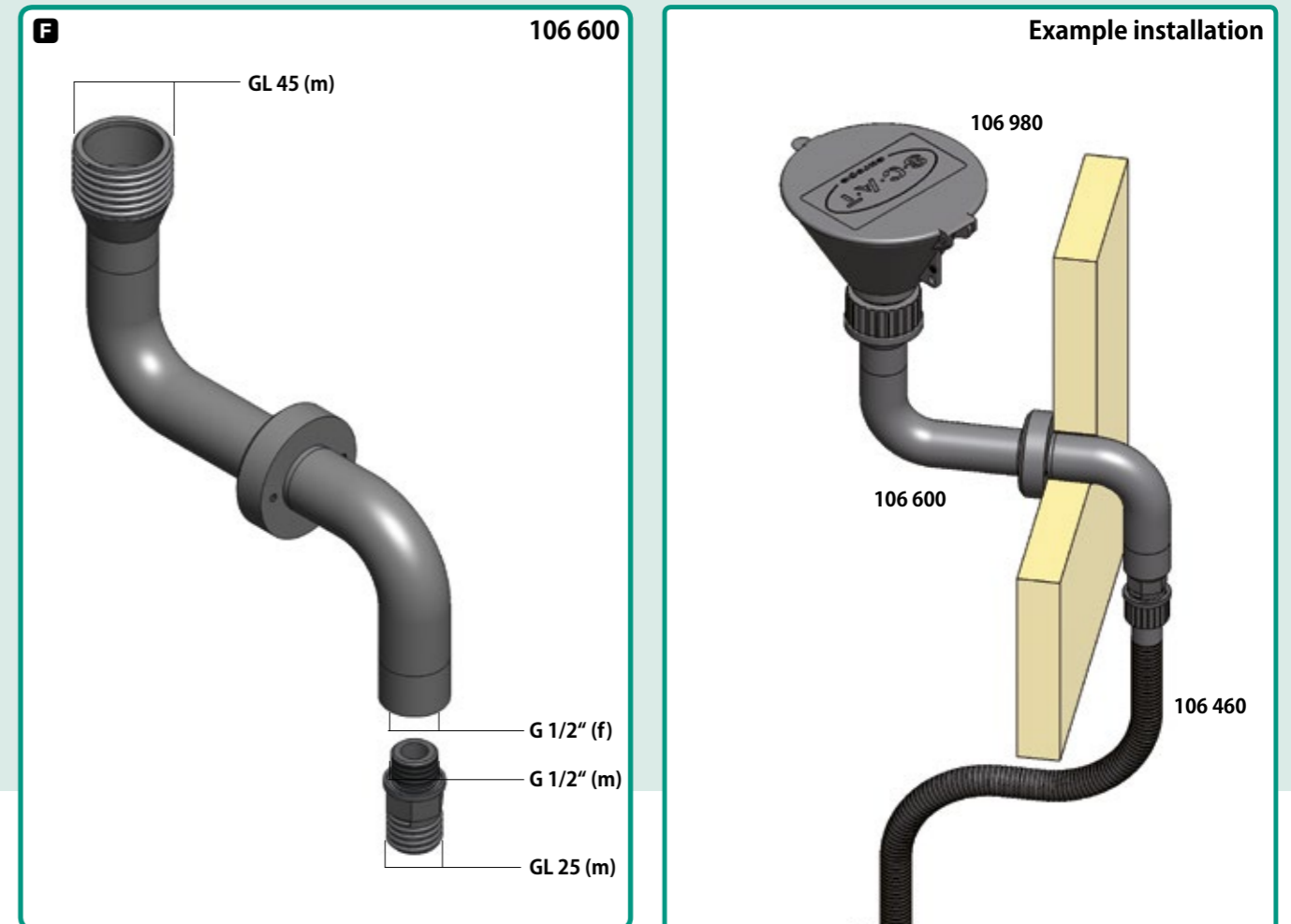
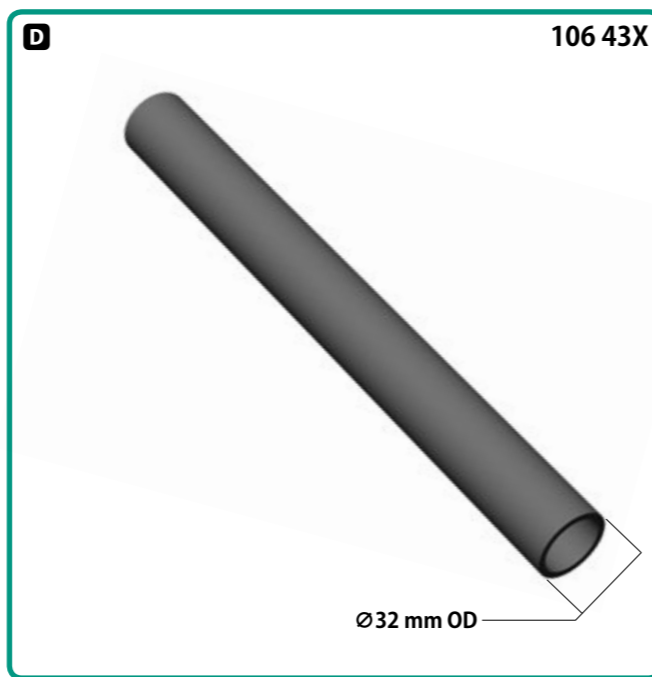
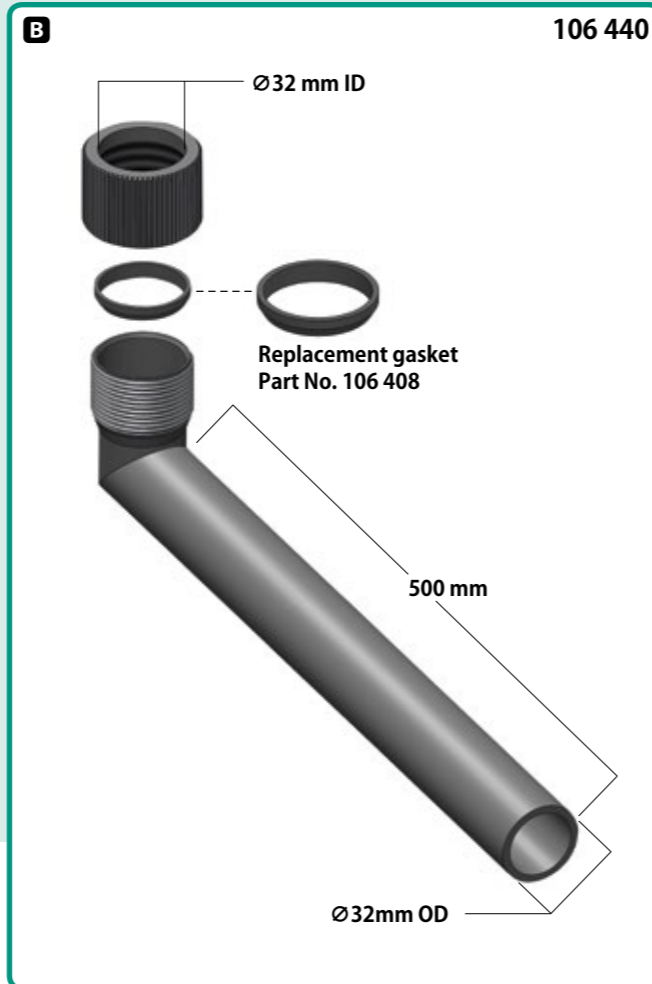
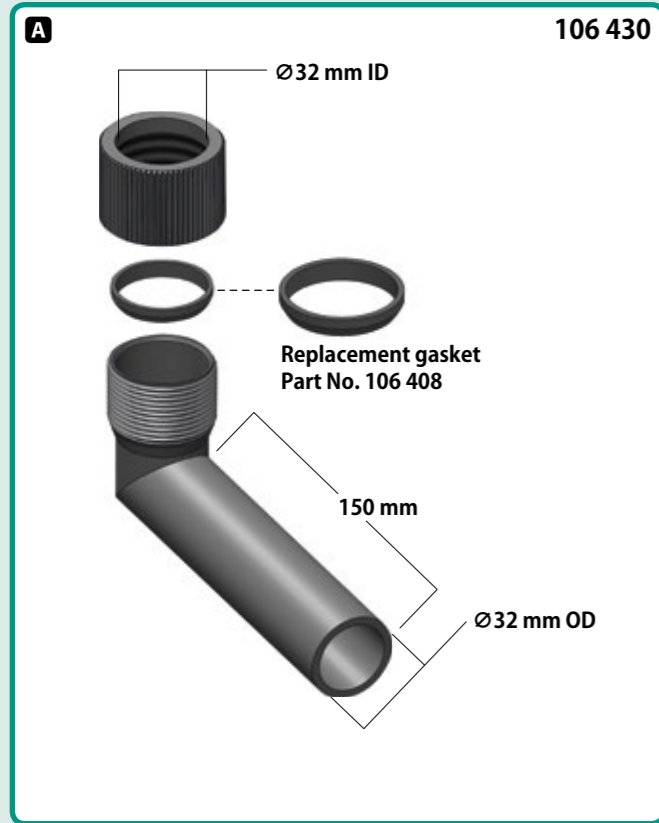


Fig.	Part No.	Description	Material	Fittings included for capillary diameter (outer) Ø 2,3 mm, Ø 3,2 mm	Incl. stepped fitting, curved Ø 6,4 - 9 mm
A	106 500	Collector (3-way) for HPLC connection	PE-HD, electrically conductive (black)		
B	106 509 NEW	Collector (4-way) for HPLC connection	PE-HD, electrically conductive (black)		
	106 550	Collector (2-way) for HPLC connection, with ground connection	PE-HD, electrically conductive (black)		
C	106 400	Table mounting accessory, with G 1/2" thread (internal)	PE-HD, electrically conductive (black)		
D	106 450	Table mounting accessory, with tube Ø 32 mm (outer)	PE-HD, electrically conductive (black)		
E	106 412 NEW	Table mounting accessory, with tube Ø 32 mm (outer)	PE-HD, electrically conductive (black)	6	1
F	106 600	Wall port	PE-HD, electrically conductive (black)		

Laboratory installation Tube system



Laboratory installation Tube system

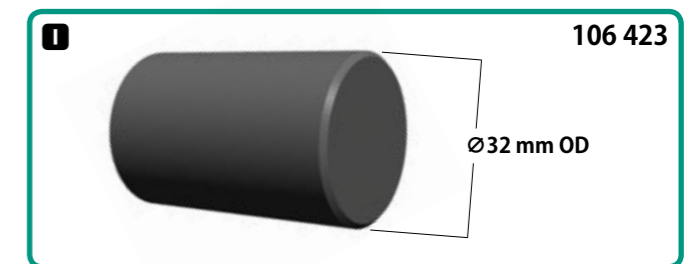
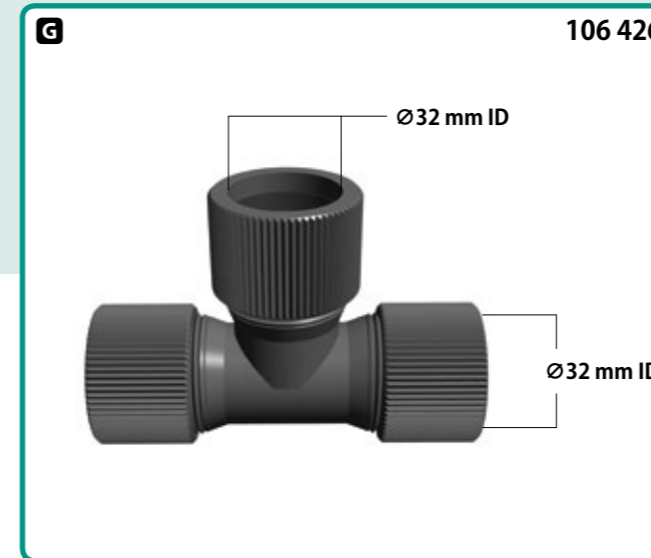
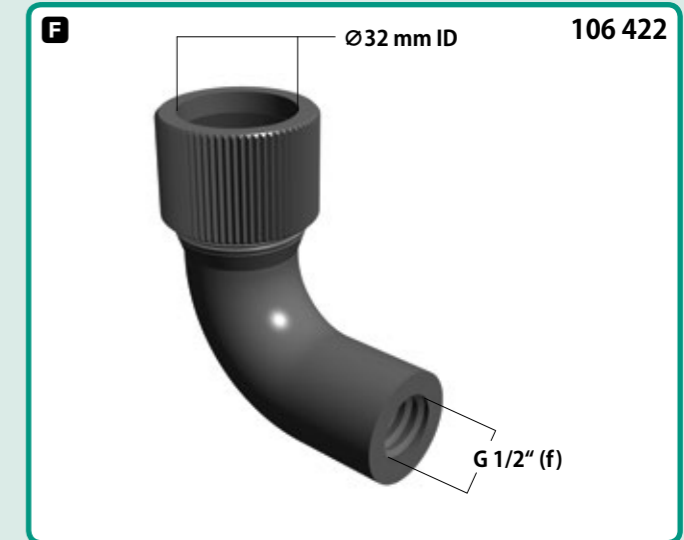
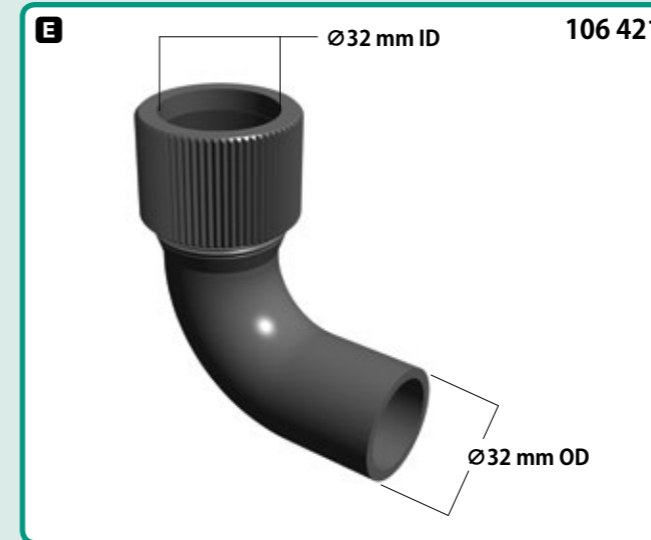
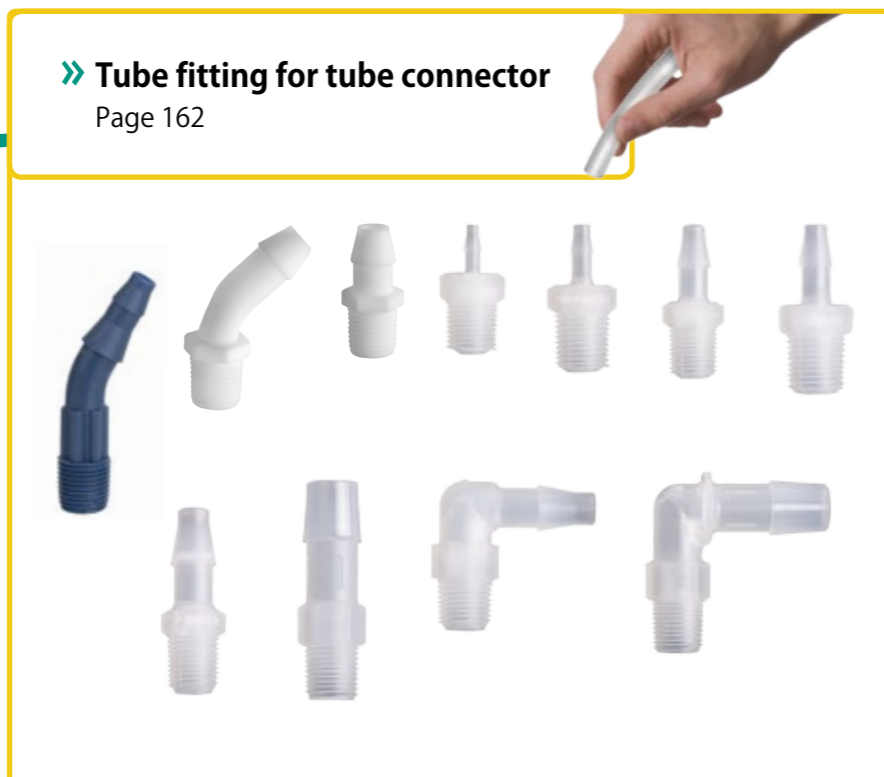
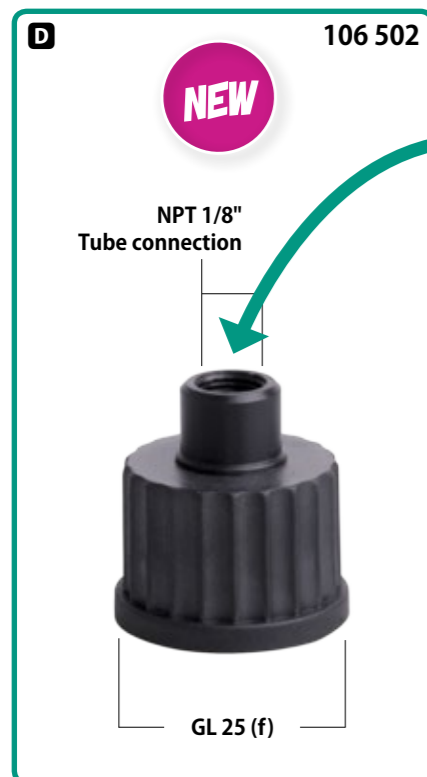
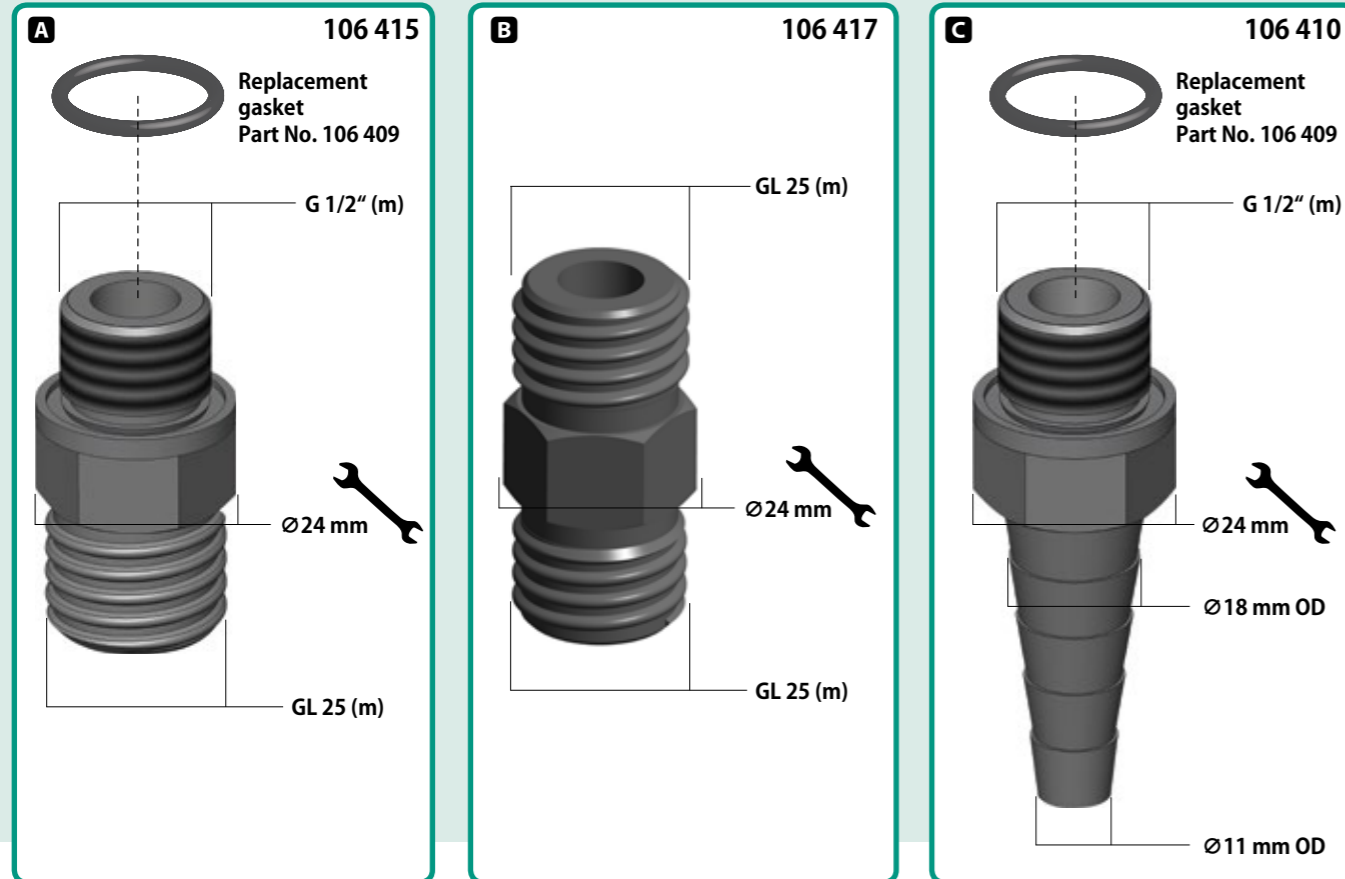


Fig.	Part No.	Description	Material
A	106 430	Connector tube, angled, Ø 32 mm (outer), length 150 mm	PE-HD, electrically conductive (black)
-	106 438 NEW	Connector tube, straight, Ø 32mm (outer), length 200mm	PE-HD, electrically conductive (black)
B	106 440	Connector tube, angled, Ø 32 mm (outer), length 500 mm	PE-HD, electrically conductive (black)
C	106 420	Elbow piece, angled, with G 1/2" thread (internal)	PE-HD, electrically conductive (black)
D	106 435	Connector tube, straight, 300 mm	PE-HD, electrically conductive (black)
	106 436	Connector tube, straight, 900 mm	PE-HD, electrically conductive (black)
	106 437	Connector tube, straight, 1200 mm	PE-HD, electrically conductive (black)
E	106 421	Curved element, with tube Ø 32 mm (outer)	PE-HD, electrically conductive (black)
F	106 422	Curved element, with G 1/2" thread (internal)	PE-HD, electrically conductive (black)
G	106 426	T-piece, for tube with Ø 32 mm (outer)	PE-HD, electrically conductive (black)
H	106 427 NEW	Coupler, for tube Ø 32mm (outer)	PE-HD, electrically conductive (black)
I	106 423	Blind plug, for connectors with Ø 32 mm (internal)	PE-HD, electrically conductive (black)

Laboratory installation Tube system



Laboratory installation Tube system

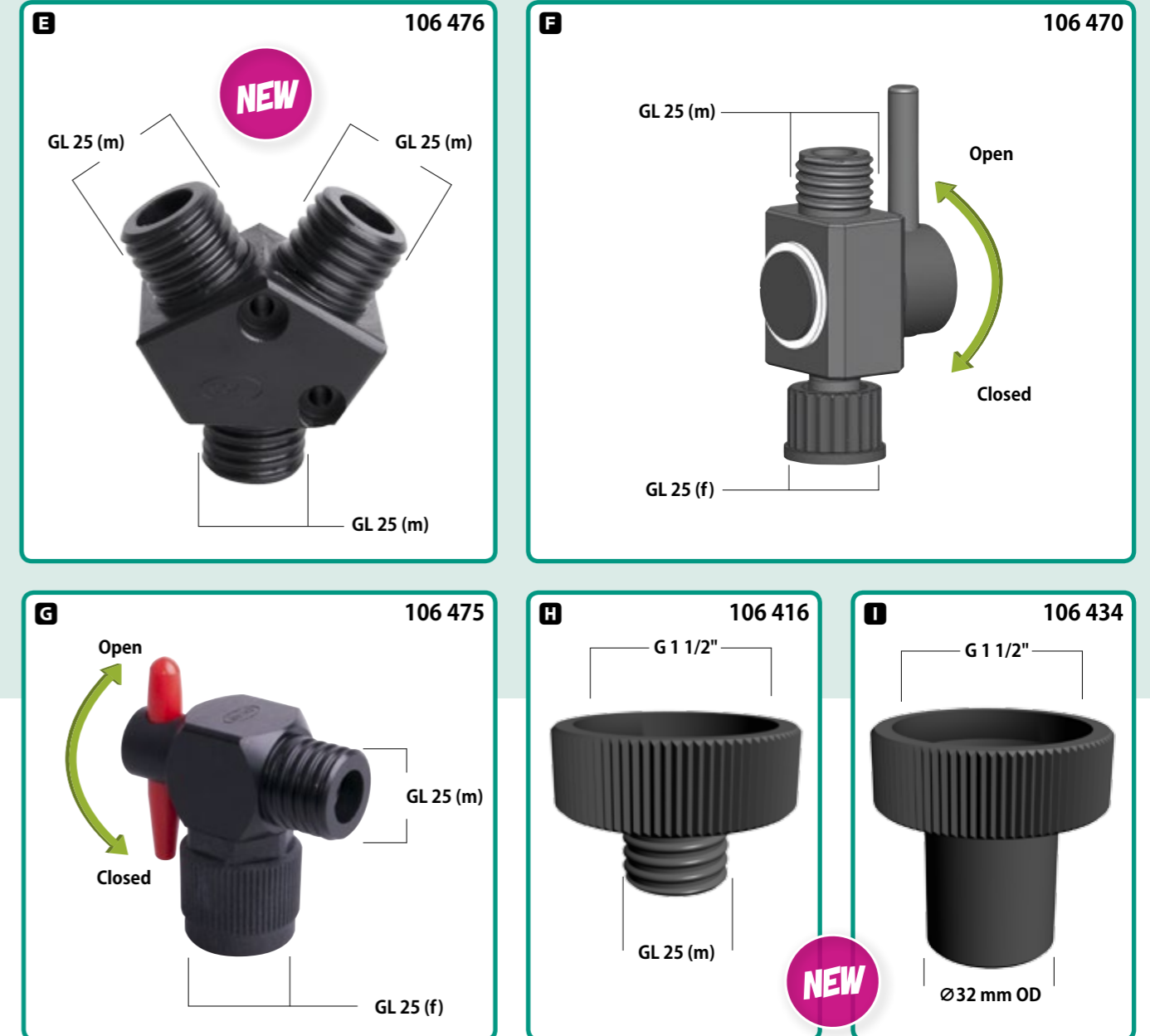


Fig.	Part No.	Description	Material
A	106 415	Adapter, thread G 1/2" (external) to GL 25 (external)	PE-HD, electrically conductive (black)
B	106 417	Adapter, thread G 25 (external) to GL 25 (external)	PE-HD, electrically conductive (black)
C	106 410	Adapter, thread G 1/2" (external) to tube with Ø 11-17 mm (inner)	PE-HD, electrically conductive (black)
D	106 502 NEW	Adapter, thread GL 25 (internal) to NPT 1/8" Tube connection	PE-HD, electrically conductive (black)
E	106 476 NEW	Splitter, 3x thread GL 25 (outer) with mounting option	PE-HD, electrically conductive (black)
F	106 470	Shut-off, thread GL 25 (external) to GL 25 (internal)	PE-HD, electrically conductive (black)
G	106 475	Shut-off, thread GL 25 (external) to GL 25 (internal), angled	PE-HD, electrically conductive (black)
H	106 416 NEW	Adapter drain - thread G 1 1/2" internal to GL 25 (external)	PE-HD, electrically conductive (black)
I	106 434 NEW	Adapter drain - thread G 1 1/2" internal to Ø 32mm tube (outer)	PE-HD, electrically conductive (black)



Exhaust filter: Page 141

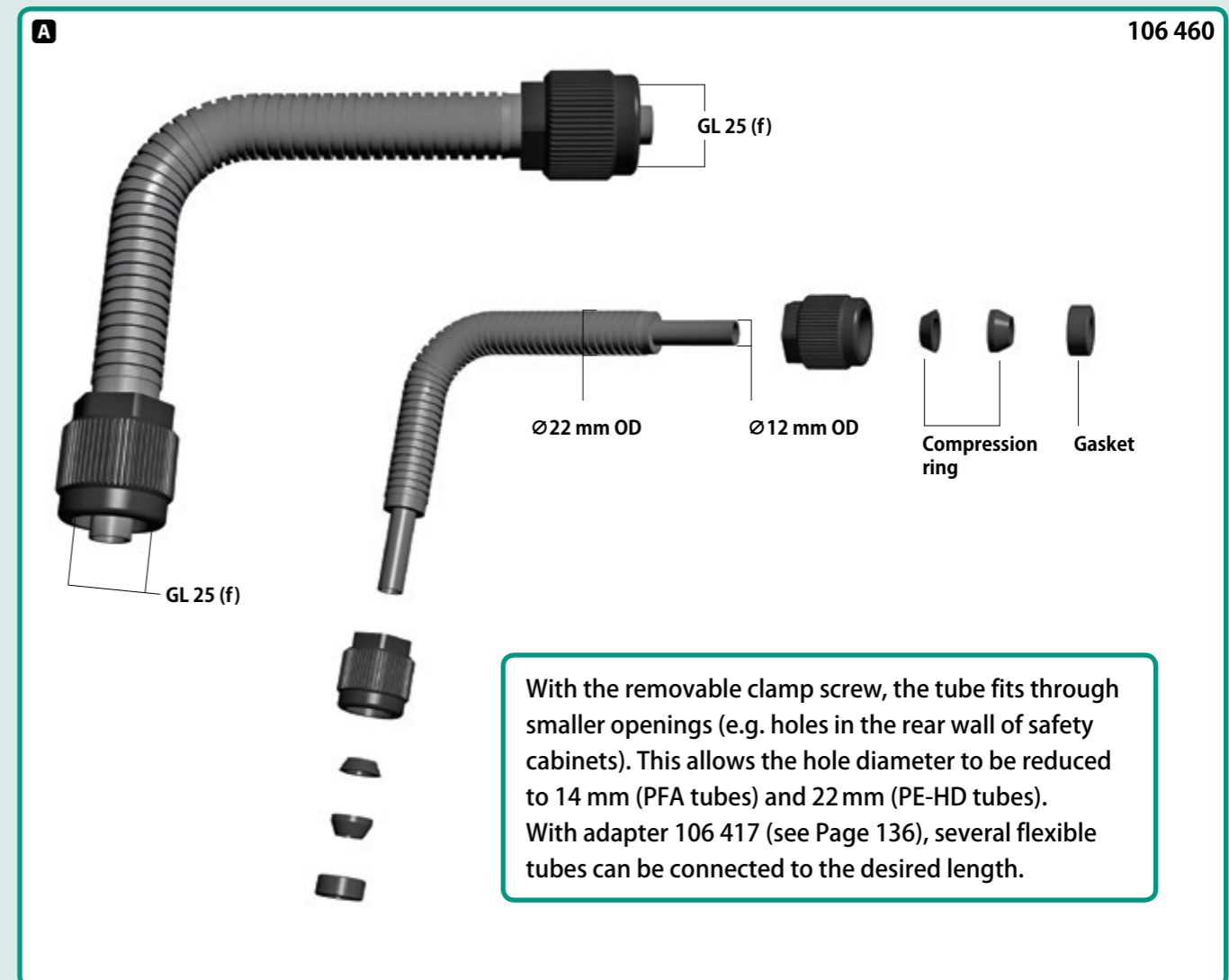
Flexible tube:
Page 139

SafetyWasteCaps:
Page 140

CONTAINER
FROM PAGE 144.



Laboratory installation Tube system



With the removable clamp screw, the tube fits through smaller openings (e.g. holes in the rear wall of safety cabinets). This allows the hole diameter to be reduced to 14 mm (PFA tubes) and 22 mm (PE-HD tubes). With adapter 106 417 (see Page 136), several flexible tubes can be connected to the desired length.

Fig.	Part No.	Description	Material
A	106 460	Flexible tube with clamp screw GL 25 (internal), length 600 mm, Ø 22 mm OD	PE-HD, electrically conductive (black)
-	106 467	Flexible tube with clamp screw GL 25 (internal), length 600 mm, Ø 14 mm OD	PFA, electrically conductive (black)
NEW	106 487	Flexible tube with clamp screw GL 25 (internal), length 800 mm, Ø 22 mm OD	PE-HD, electrically conductive (black)
NEW	106 469	Flexible tube with clamp screw GL 25 (internal), length 1200 mm, Ø 14 mm OD	PFA, electrically conductive (black)
-	106 466	Flexible tube with clamp screw GL 25 (internal), length 1500 mm, Ø 22 mm OD	PE-HD, electrically conductive (black)
-	106 468	Flexible tube with clamp screw GL 25 (internal), length 1500 mm, Ø 14 mm OD	PFA, electrically conductive (black)
NEW	106 474	Flexible tube with clamp screw GL 25 (internal), length 2500 mm, Ø 22 mm OD	PE-HD, electrically conductive (black)

Laboratory installation SafetyWasteCaps

A 106 482

Connector for exhaust filter

GL 25 (m)

B 106 480

GL 25 (m)

Floater ca. 91.5 mm

ATEX-compliant for use in explosion-endangered areas!

Description: II 2G Ex ia IIB T6 Gb

» **Fill level under control!**
Monitor critical fill levels automatically, even if the container is out of sight (e.g. in base cabinet). You will find transmitters to connect to these caps in chapter "Level control" starting from Page 106.

Fig.	Part No.	Description	For containers (thread size)	Accessories	Material
A	106 482	SafetyWasteCap	S 60 / 61	- Thread GL 25 (m) - Connector for exhaust filter	PE-HD, electrically conductive (black)
-	106 478	SafetyWasteCap	S 55	- Thread GL 25 (m) - Connector for exhaust filter - Electronic level control	PE-HD, electrically conductive (black)
B	106 480	SafetyWasteCap	S 60 / 61	- Thread GL 25 (m) - Connector for exhaust filter - Electronic level control	PE-HD, electrically conductive (black)
-	106 484	SafetyWasteCap	S 90	- Thread GL 25 (m) - Connector for exhaust filter - Electronic level control	PE-HD, electrically conductive (black)

Laboratory installation Exhaust filter & Ventilation set

C 107 615

filtered exhaust air

D 107 624

E 106 471 NEW

F 106 490

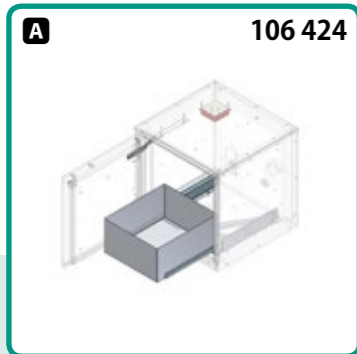
Fig.	Part No.	Filter size	Recommended for waste containers with a volume of...	Fill amount	Accessories	Service life
-	107 911	S (small)	Up to 5 liters	24 g	-	3 months
-	107 914	M (medium)	Up to 20 liters	48 g	-	6 months
C	107 615	L (large)	More than 20 liters	100 g	-	9 months
-	107 985	S (small)	Up to 5 liters	24 g	Splash protection	3 months
-	107 982	M (medium)	Up to 20 liters	48 g	Splash protection	6 months
-	107 986	L (large)	More than 20 liters	100 g	Splash protection	9 months
D	107 624	Angle piece 90° for exhaust filter				
E	106 471 NEW	Tube piece 10 cm, PFA, electrically conductive (black)				
F	106 490 NEW	Ventilation tube 150 cm for direct connection to the laboratory ventilation system PE-HD, electrically conductive				
-	160 123 NEW	Floater 139 mm, PE-HD, electrically conductive (black)				
-	108 147 NEW	Thread adapter S71 w to S60 m, PE-HD, electrically conductive (black)				

Laboratory installation

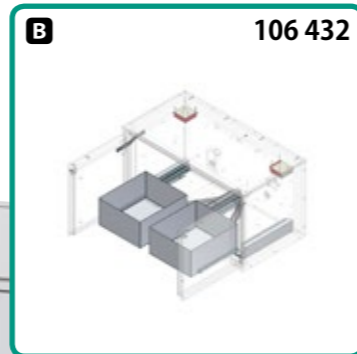
Safety storage cabinets

active storage of flammable liquids

NEW



106 424



106 432



- » **Push-to-open**
The wing doors open effortlessly by a kindly push to the front.
- » **Exhaust**
Integrated exhaust air monitoring unit as a standard
- » **Interior**
Fume extraction inside the cabinet during filling and transfer processes. Stopcock in non-drip design.
- » **Grounding**
Standard equipotential bonding saddles on the rear of the cabinet for connection with the earthing in accordance with BGR 132 and TRBS 2153 (prevention of ignition hazards). The interior fittings are conductively connected with the equipotential bonding saddles.

- » **Built-in safety!**
Safety storage cabinets for flammable liquids, equipped with S.C.A.T. technology. Canister, SafetyWasteCap, Tube and shut-off (see chart).
- » **Single and double cabinet**
Easy change of containers if the critical filling level has reached.
- » **Underbench cabinet Type 90**
Furnace tested (type test) DIN EN 14470-1. Fire resistance: 90 min.
- » **GS approval and CE conformity**
DIN EN 14727 (lab furniture) conformity.



Exhaust air monitoring



Fume extraction



Non-dripping stopcock and equipotential bonding



Automatically pull-out tray



» TÜV approved system solution



Fig. Part No. Safety storage cabinet and accessories

- A** 106 424 Safety storage cabinet for flammable liquids, pull-out drawers (33 liter volume), mobile plinth for underbench cabinet, 2x 10 l canister S60 PE-HD electrically conductive with optical level control, 1x SafetyWasteCap S60 prepared for connection to an electronic level control, corrugated tube and shut-off.
- B** 106 432 Safety storage cabinet for flammable liquids, pull-out drawers (2x 33 liter volume), mobile plinth for underbench cabinet, 4x 10 l canister S60 PE-HD electrically conductive with optical level control, 2x SafetyWasteCap S60 prepared for connection to an electronic level control, corrugated tube and shut-off.

Dimensions
W x H x D (mm)

outer: 590 x 600 x 570
inner: 470 x 500 x 450

outer: 1100 x 600 x 570
inner: 950 x 500 x 450

Fig. Part No. Safety storage cabinet Type 90 and accessories

- C** 106 570 Safety storage cabinet Type 90 for flammable liquids, automatically pull-out tray, ToeKick base, 2x 10 l canister S60 PE-HD electrically conductive with optical level control, 1x SafetyWasteCap S60 prepared for connection to an electronic level control, corrugated tube and stopcock, exhaust air monitoring.

Dimensions
W x H x D (mm)

outer: 600 x 685 x 595
inner: 503 x 480 x 463

CONTAINERS

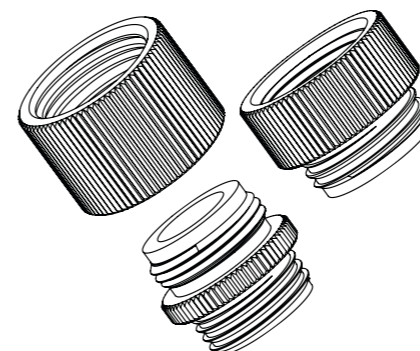
CANISTERS FOR ALL PURPOSES. SUITABLE FOR S.C.A.T. SAFETY SYSTEMS!

Containers Container thread sizes

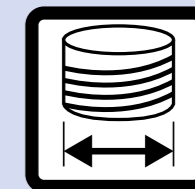
S.C.A.T. safety closures are available for a wide range of different container threads. On the following pages, you will find the suitable containers for every thread size. If you wish to use already available containers, we are providing you with an aid in determining thread size here. Note: All specified values are for orientation and may vary from manufacturers' specifications by 0.5 mm (due to production tolerances).



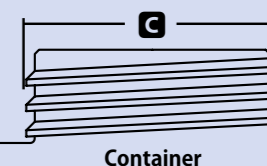
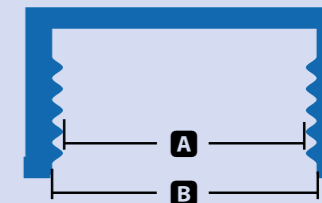
Thread	∅ A	∅ B	∅ C	Additional identifying features
GL 28	ca. 26 mm	ca. 27,5 mm	ca. 28 mm	
GL 32	ca. 29,5 mm	ca. 31,5 mm	ca. 31,5 mm	
GL 38	ca. 35,5 mm	ca. 37 mm	ca. 37,5 mm	For containers of the brands Wheaton® and NALGENE®
GL 40	ca. 38 mm	ca. 40 mm	ca. 40 mm	For containers of the brand MERCK®
GL 45	ca. 41,5 mm	ca. 45 mm	ca. 44,5 mm	
S 50	ca. 45,5 mm	ca. 51,5 mm	ca. 50 mm	For space-saving canisters
S 51	ca. 45,5 mm	ca. 50 mm	ca. 48 mm	
B 53	ca. 50,5 mm	ca. 54,5 mm	ca. 53 mm	For containers of the brand NALGENE®
S 55	ca. 50,5 mm	ca. 55 mm	ca. 53,5 mm	The number 51 is often in the cover
S 60 / 61	ca. 55,5 mm	ca. 61 mm	ca. 59 mm	The number 61 is often in the cover
B 63	ca. 58,5 mm	ca. 63 mm	ca. 62 mm	For containers of the brand NALGENE®
S 65	ca. 62 mm	ca. 65,5 mm	ca. 64,5 mm	For containers of the brand KAUTEX®
S 70 / 71	ca. 66 mm	ca. 71,5 mm	ca. 70 mm	The number 71 is often in the cover
GL 80	ca. 78 mm	ca. 83 mm	ca. 80 mm	
B 83	ca. 83 mm	ca. 90 mm	ca. 88 mm	For containers of the brand NALGENE®
S 90	ca. 85 mm	ca. 90,5 mm	ca. 88 mm	The number D90 is often in the cover
S 95	ca. 90 mm	ca. 96,5 mm	ca. 94 mm	



You will find thread adapters starting from page 170



Screw cap



Container



Containers Lab bottles



**BEST IF ORDERED
AT THE SAME TIME!**

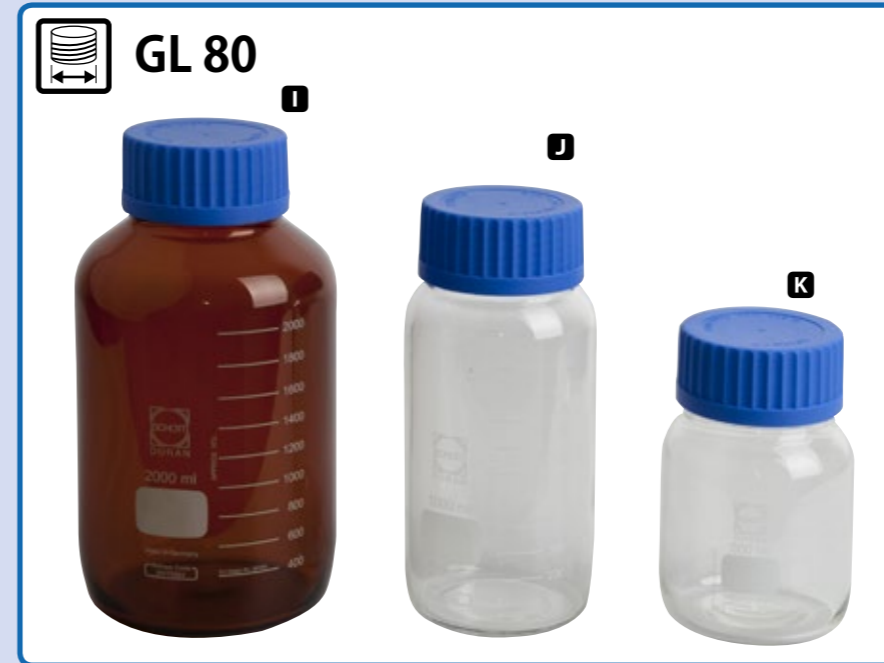


Fig.	Part No.	Description	Contents	Glass type	Form	Thread
-	501 126	DURAN® laboratory bottle	10.000 ml	Clear glass	round	GL 45
-	501 125	DURAN® laboratory bottle	5.000 ml	Clear glass	round	GL 45
A	501 118	DURAN® laboratory bottle	2.000 ml	Clear glass	round	GL 45
B	501 113	DURAN® laboratory bottle	1.000 ml	Clear glass	round	GL 45
-	501 116	DURAN® laboratory bottle	500 ml	Clear glass	round	GL 45
C	501 117	DURAN® laboratory bottle	250 ml	Clear glass	round	GL 45
-	101 998	DURAN® laboratory bottle with protective coating	5.000 ml	Clear glass	round	GL 45
-	101 997	DURAN® laboratory bottle with protective coating	2.000 ml	Clear glass	round	GL 45
-	101 996	DURAN® laboratory bottle with protective coating	1.000 ml	Clear glass	round	GL 45
-	101 995	DURAN® laboratory bottle with protective coating	500 ml	Clear glass	round	GL 45
-	101 994	DURAN® laboratory bottle with protective coating	250 ml	Clear glass	round	GL 45
D	501 110	DURAN® laboratory bottle	1.000 ml	Clear glass	square	GL 45
-	501 115	DURAN® laboratory bottle	500 ml	Clear glass	square	GL 45
E	501 112	DURAN® laboratory bottle	250 ml	Clear glass	square	GL 45
F	501 119	DURAN® laboratory bottle	1.000 ml	Brown glass	round	GL 45
G	501 120	DURAN® laboratory bottle	500 ml	Brown glass	round	GL 45
H	501 121	DURAN® laboratory bottle	250 ml	Brown glass	round	GL 45
I	501 158	DURAN® laboratory bottle with wide neck opening	2.000 ml	Brown glass	round	GL 80
-	501 157	DURAN® laboratory bottle with wide neck opening	1.000 ml	Brown glass	round	GL 80
-	501 156	DURAN® laboratory bottle with wide neck opening	500 ml	Brown glass	round	GL 80
-	501 152	DURAN® laboratory bottle with wide neck opening	2.000 ml	Clear glass	round	GL 80
J	501 151	DURAN® laboratory bottle with wide neck opening	1.000 ml	Clear glass	round	GL 80
K	501 150	DURAN® laboratory bottle with wide neck opening	500 ml	Clear glass	round	GL 80
L	501 122	DURAN® laboratory bottle with ground neck	1.000 ml	Clear glass	round	NS 29/32mm
-	501 127	DURAN® laboratory bottle for MiniCap GL28	100 ml	Brown glass	round	GL 28

Containers Canisters



BASE FOR SPACE-SAVING CANISTERS ON PAGE 174.



Canisters with UN approval are permitted for transport of hazardous goods on roads and plant premises.

NEW » Fluorinated canister against weight loss of content

Fluorination on both sides protect the canisters plastic walls from permeation of chemicals.

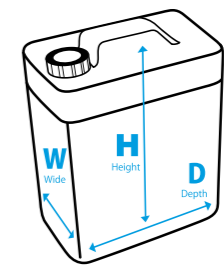


Fig.	Part No.	Description	Contents	Material	Thread	Dimensions W x H x D (mm)	UN approval
A	107 950	Canister	2.5 l	PE-HD	GL 45	115 x 210 x 150	•
B	107 951	Canister	5 l	PE-HD	GL 45	150 x 250 x 195	•
C	107 952	Canister	10 l	PE-HD	GL 45	190 x 305 x 230	•
D	107 998	Space-saving canister	5 l	PP	S 50	65 x 335 x 330	-
E	108 945	Space-saving canister with floater	5 l	PP	S 50	65 x 405 x 330	-
F	107 958	Canister	5 l	PE-HD	S 51	145 x 250 x 190	•
G	107 711	Round canister	2 l	PE-HD	B 53	119 x 260 x 119	-
H	107 957	Canister	5 l	PE-HD	S 55	160 x 230 x 185	•
-	107 933 NEW	Canister fluorinated	5 l	F-HDPE	S55	145 x 250 x 190	•
-	107 955	Canister	10 l	PE-HD	S 55	185 x 305 x 225	•

Containers Canister

S 60/61

» Canister with double closure
Re-filling during regular operation.

NEW

Integrated floater

PE-HD

B 63

H

S 65

I

J

Canisters with UN approval are permitted for transport of hazardous goods on roads and plant premises.

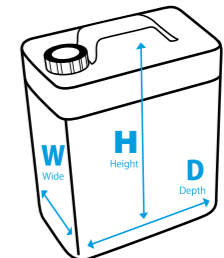


Fig.	Part No.	Description	Contents	Material	Thread	Dimensions W x H x D (mm)	UN approval
A	107 956	Canister	20 l	PE-HD	S 60 / 61	260 x 390 x 289	•
-	107 731	Canister	12 l	PE-HD	S 60 / 61	200 x 350 x 235	•
B	108 056	Canister with floater	20 l	PE-HD	S 60 / 61	260 x 455 x 285	-
-	107 959	Canister	30 l	PE-HD	S 60 / 61	290 x 400 x 380	•
C	107 953	Canister	10 l	PE-HD, electrically conductive	S 60 / 61	185 x 265 x 290	•
D	108 027	Canister	20 l	PE-HD, electrically conductive	S 60 / 61	185 x 500 x 290	•
E	108 042	Canister with floater	10 l	PE-HD, electrically conductive	S 60 / 61	185 x 265 x 290	-
F	108 043	Canister with floater	20 l	PE-HD, electrically conductive	S 60 / 61	185 x 500 x 290	-
G	108 115 NEW	Canister with double closure	30 l	PE-HD	S 60 / 61 + GL 45	300 x 450 x 400	-
H	107 709	Flat canister with drain valve	8 l	PP	B 63	375 x 165 x 305	-
I	107 722	Round canister	5 l	PE-HD	S 65	167 x 330 x 167	-
J	107 704	Round canister	10 l	PE-HD	S 65	205 x 430 x 205	-
-	107 720	Round canister	25 l	PE-HD	S 65	278 x 580 x 278	•
-	107 721	Round canister	60 l	PE-HD	S 65	350 x 825 x 350	•

Containers Canister



Canisters with UN approval are permitted for transport of hazardous goods on roads and plant premises.

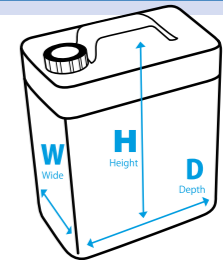
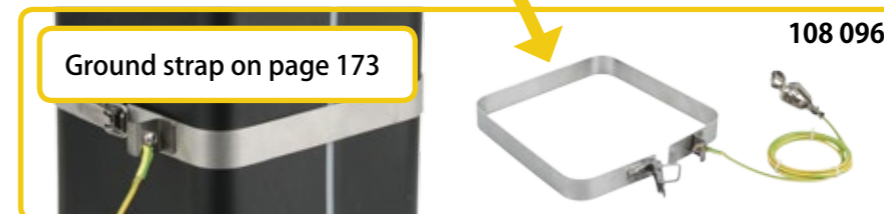


Fig.	Part No.	Description	Contents	Material	Thread	Dimensions W x H x D (mm)	UN approval
A	107 713	Flat canister	20 l	PE-HD	S 70/71	285 x 285 x 380	•
B	107 954	Canister	30 l	PE-HD, electrically conductive	S 70/71	260 x 425 x 370	•
C	107 710	Canister	60 l	PE-HD	S 70/71	330 x 635 x 370	•
D	107 940	Canister	60 l	PE-HD, electrically conductive	S 70/71	330 x 625 x 395	•
-	107 740	Canister with floater	60 l	PE-HD, electrically conductive	S 70/71	330 x 690 x 395	-
E	107 712	Round canister	4 l	PE-HD	B 83	155 x 338 x 155	-
F	107 706	Round canister with carrying handles	10 l	PP	B 83	250 x 390 x 250	-
-	107 730	Round canister with carrying handles (autoclavable)	50 l	PP	B 83	380 x 680 x 380	-
G	108 020	Canister	10 l	PE-HD	S 90	195 x 380 x 195	•
H	108 420	Canister with viewing strip	10 l	PE-HD, electrically conductive	S 90	195 x 380 x 195	•
I	107 707	Canister	5 l	PE-HD	S 95	170 x 310 x 170	•
	107 733	Canister	20 L	PE-HD	S 95	260 x 390 x 290	-



Containers Collecting trays



Fig.	Part No.	Description	Material	Dimensions, interior W x H x D (mm)	Dimensions, exterior W x H x D (mm)
A	117 983	Collecting tray	PE-HD	235 x 160 x 335	300 x 170 x 400
B	117 984	Collecting tray	PE-HD	290 x 200 x 385	340 x 210 x 465
C	108 981	Collecting tray	PE-HD, electrically conductive	200 x 200 x 300	225 x 215 x 325
D	117 986	Collecting tray with base insert	PE-HD, electrically conductive	295 x 200 x 415	365 x 240 x 490
E	117 985	Collecting tray with base insert	PE-HD, electrically conductive	285 x 95 x 385	355 x 135 x 445



ACCESSORIES

- » We have developed a lot of products, which you need to be able to work quickly, safely and economically.
- » All products are specially matched to the S.C.A.T. safety system.
- » Our fittings are very high quality and have been proven in practice.
- » We can deliver any item in stock within 24 hours.

Accessories Adapter for septum caps

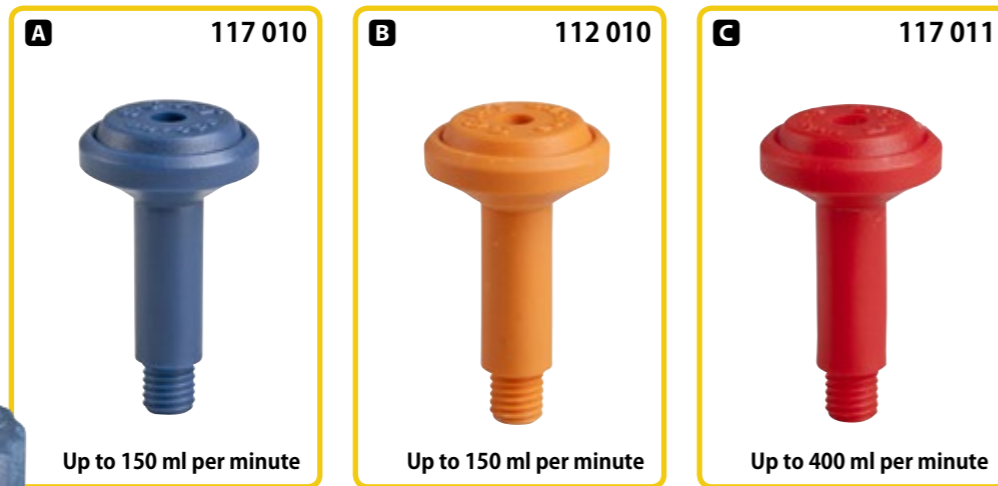
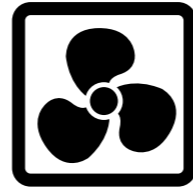
With this adapter, connecting each ND9 short thread cap of your sample bottles with the S.C.A.T. safety system is easy. This way you have access to the contents of your supply and waste receptacles even during ongoing operations, without evaporation or contamination.

- » Adding components to your solvent mixture is easy
- » Dispose of waste fluids directly from syringe



Fig.	Part No.	Description	Material	Unit
A	160 146	Adapter for septum caps with short thread ND9	PTFE	1

Accessories Air valves for SafetyCaps



The air valve blocks harmful vapors and protects your solvent from contamination. Because it absorbs dust and contaminant particles from the surrounding air, the valve should be replaced every 6 months in order to ensure flawless operation.

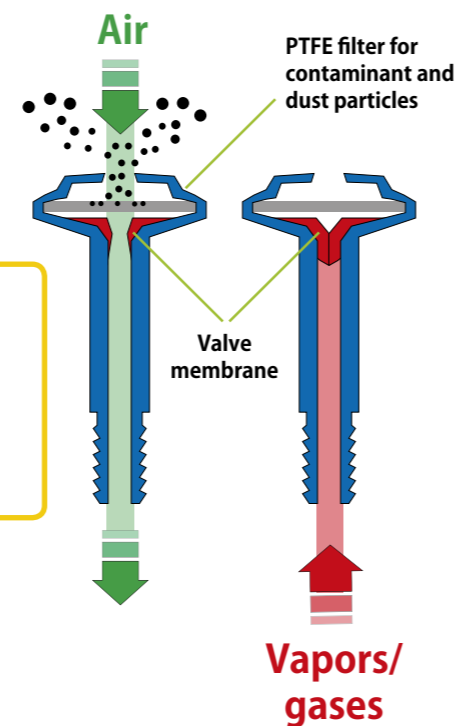
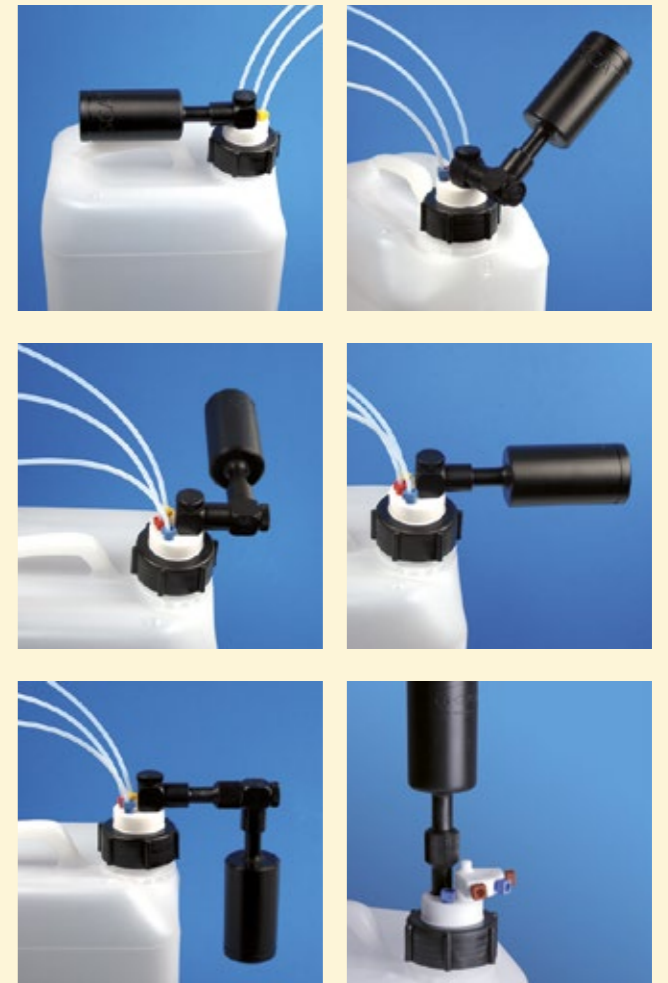
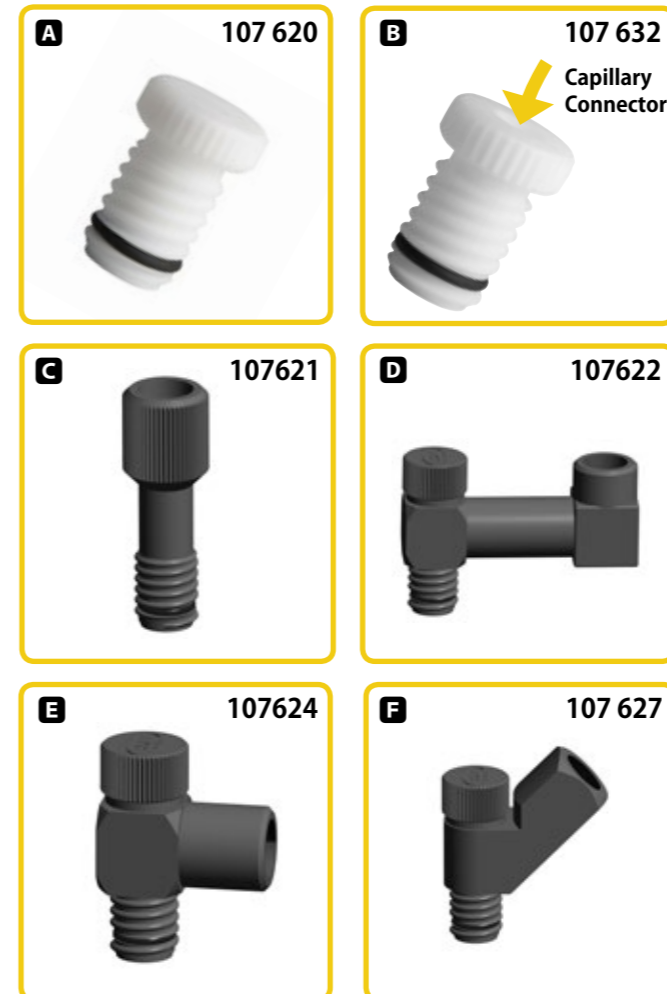


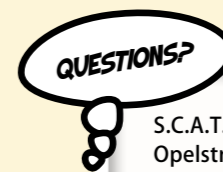
Fig.	Part No.	Description	Unit
A	117 010	Air valve for SafetyCaps (150 ml/min.)	1
A	197 010	Air valve for SafetyCaps (150 ml/min.)	10
A	197 050	Air valve for SafetyCaps (150 ml/min.)	50
B	112 010	Air valve for SafetyCaps, fire resistant (150 ml/min.)	1
B	112 110	Air valve for SafetyCaps, fire resistant (150 ml/min.)	10
C	117 011	Air valve for SafetyCaps, preparative (400 ml/min.)	1
C	197 011	Air valve for SafetyCaps, preparative (400 ml/min.)	10

Accessories Accessories for the exhaust filter connector



Space problem in the lab? Not an issue – attach the exhaust air filter to the waste containers in any position. Practical, space-saving and flexible. With the extension **C**, you can create more freedom of movement when attaching tubes. The adapters **C D E F** can be combined in any fashion (see examples).

Fig.	Part No.	Description	Unit
A	107 620	Blind plug for exhaust filter connector	1
B	107 632	Adapter for capillary connector to exhaust filter connector	1
C	107 621	Extension piece	1
D	107 622	Rigid offset adapter	1
E	107 624	90° adapter for angled connection	1
F	107 627	45° adapter for angled connection	1



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e-Mail: info@scat-europe.com
Web: www.scat-europe.com





Fig.	Part No.	Description	Tube size Ø OD	Material	Color	Unit
A	107 061	Fitting for capillary connector	1,6 mm	PFA	Green	5
-	107 048	Fitting for capillary connector	1,6 mm	PFA	Colorless	5
B	107 059	Fitting for capillary connector	2,3 mm	PFA	Violet	5
C	107 062	Fitting for capillary connector	2,3 mm	PFA	Grey	5
-	107 060	Fitting for capillary connector	3,2 mm	PFA	Black	5
D	107 063	Fitting for capillary connector	3,2 mm	PFA	Blue	5
E	107 064	Fitting for capillary connector	3,2 mm	PFA	Red	5
F	107 065	Fitting for capillary connector	3,2 mm	PFA	Yellow	5
G	107 066	Fitting for capillary connector	3,2 mm	PFA	Colorless	5
H	107 041	Fitting for capillary connector	1,6 mm	PTFE	White	10
I	107 042	Fitting for capillary connector	2,3 mm	PTFE	White	10
J	107 043	Fitting for capillary connector	3,2 mm	PTFE	White	10
K	160 501	Blind plug for capillary connector	1,6 / 2,3 / 3,2 mm	PFA	Colorless	10
L	160 134	Distributor, 3-way for capillary connector	2,3/3,2 mm	PTFE/PFA	White/Red	1
-	107 047	Fitting for preparative HPLC	4,0 mm	PTFE	White	1
M	107 045	Fitting for preparative HPLC	4,76 mm (3/16")	PTFE	White	1
N	160 503	Blind plug for preparative HPLC	4,76 mm (3/16")	PTFE	White	10
-	160 515	Blind plug for preparative HPLC	4,76 mm (3/16")	PTFE	White	5
-	107 046	Fitting for preparative HPLC	6,0 mm	PTFE	White	1
O	107 044	Fitting for preparative HPLC	6,35 mm (1/4")	PTFE	White	1

Fig.	Part No.	Description	For tube diameter	Material	Unit
P	117 816	Tube fitting, straight	6 - 8 mm ID	PP	1

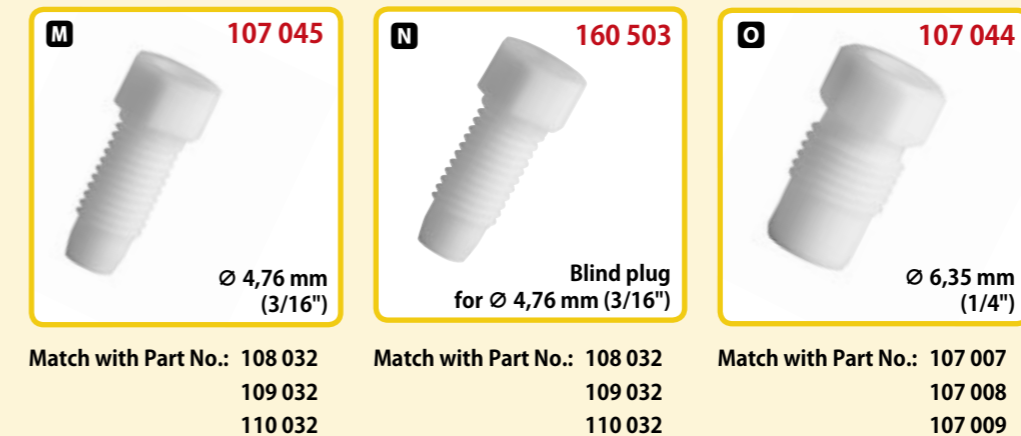


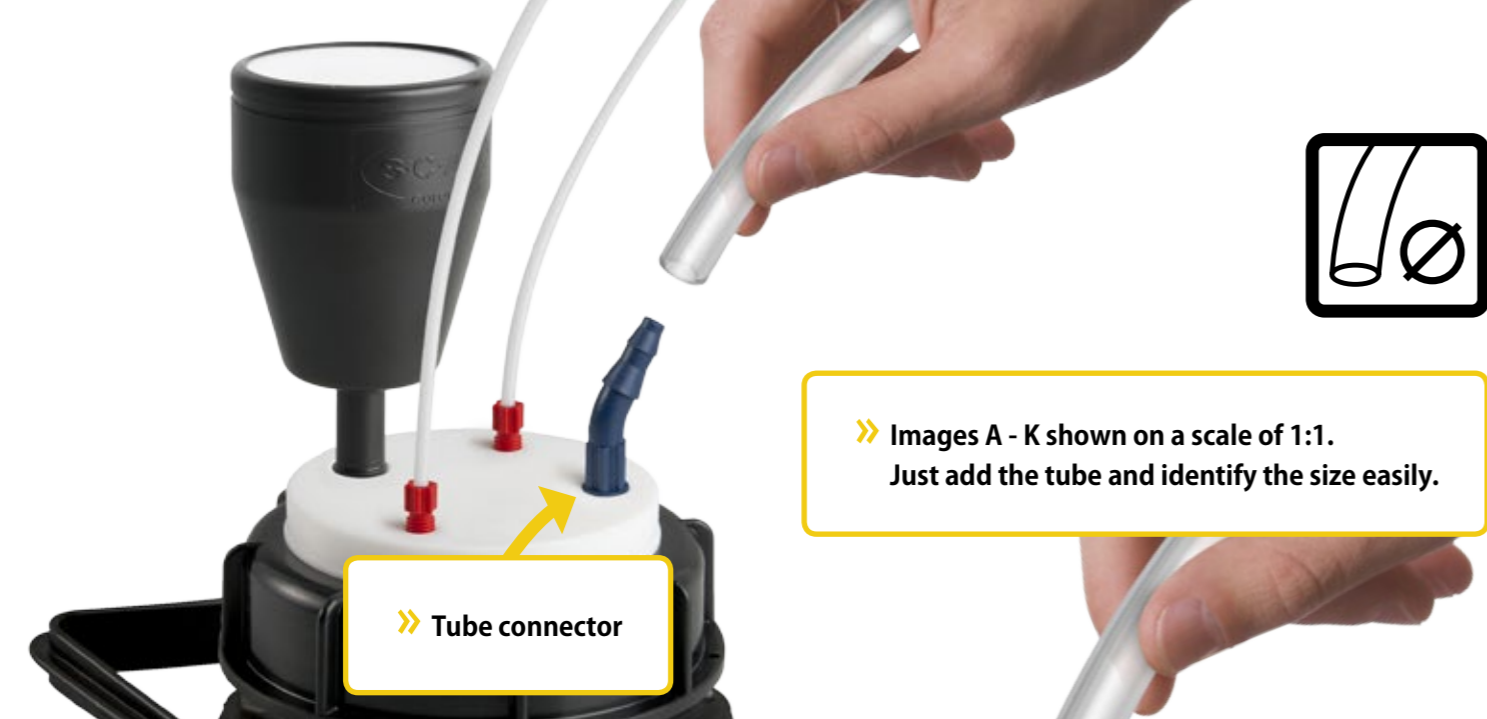
Accessories Accessories for the capillary connector



Accessories for the preparative HPLC (see page 10,11)

Please note: These fittings only match with SafetyCaps for the preparative HPLC. They are not capable for the standard capillary connector.





» Images A - K shown on a scale of 1:1.
Just add the tube and identify the size easily.

» Tube connector

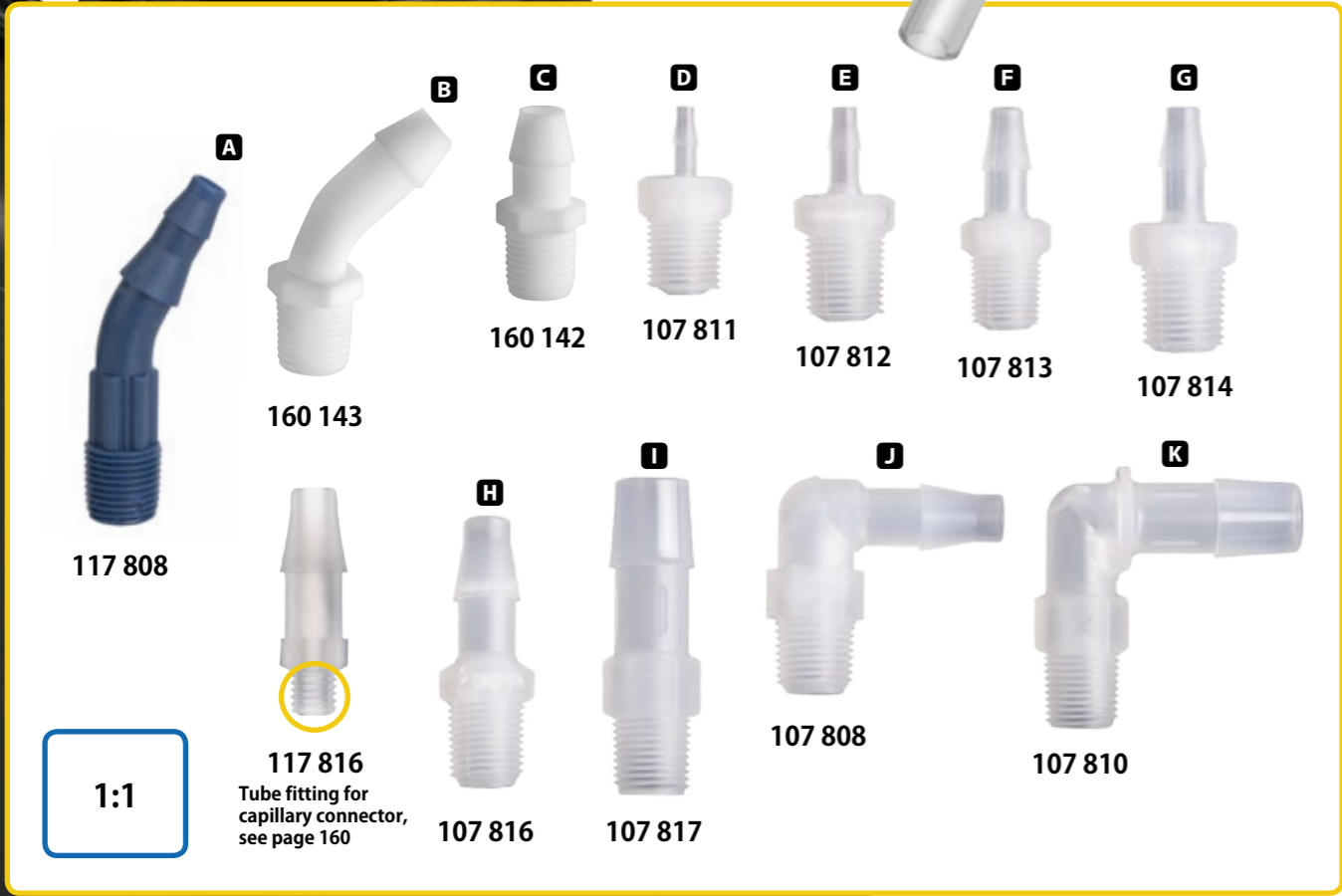


Fig.	Part No.	Description	For tube diameter	Material	Unit
A	117 808	Stepped fitting, curved	6,4 - 9 mm ID	PP	1
B	160 143	Tube fitting, curved	6,4 - 8 mm ID	PTFE	1
C	160 142	Tube fitting, straight	6,4 - 8 mm ID	PTFE	1
D	107 811	Tube fitting, straight	2 - 3 mm ID	PP	1
E	107 812	Tube fitting, straight	3 - 4 mm ID	PP	1
F	107 813	Tube fitting, straight	4 - 6 mm ID	PP	1
G	107 814	Tube fitting, straight	5 - 7 mm ID	PP	1
H	107 816	Tube fitting, straight	6 - 8 mm ID	PP	1
I	107 817	Tube fitting, straight	9,5 - 11 mm ID	PP	1
J	107 808	Tube fitting, angled	6,4 - 8 mm ID	PP	1
K	107 810	Tube fitting, angled	9,5 - 10 mm ID	PP	1

Accessories Accessories for the tube connector

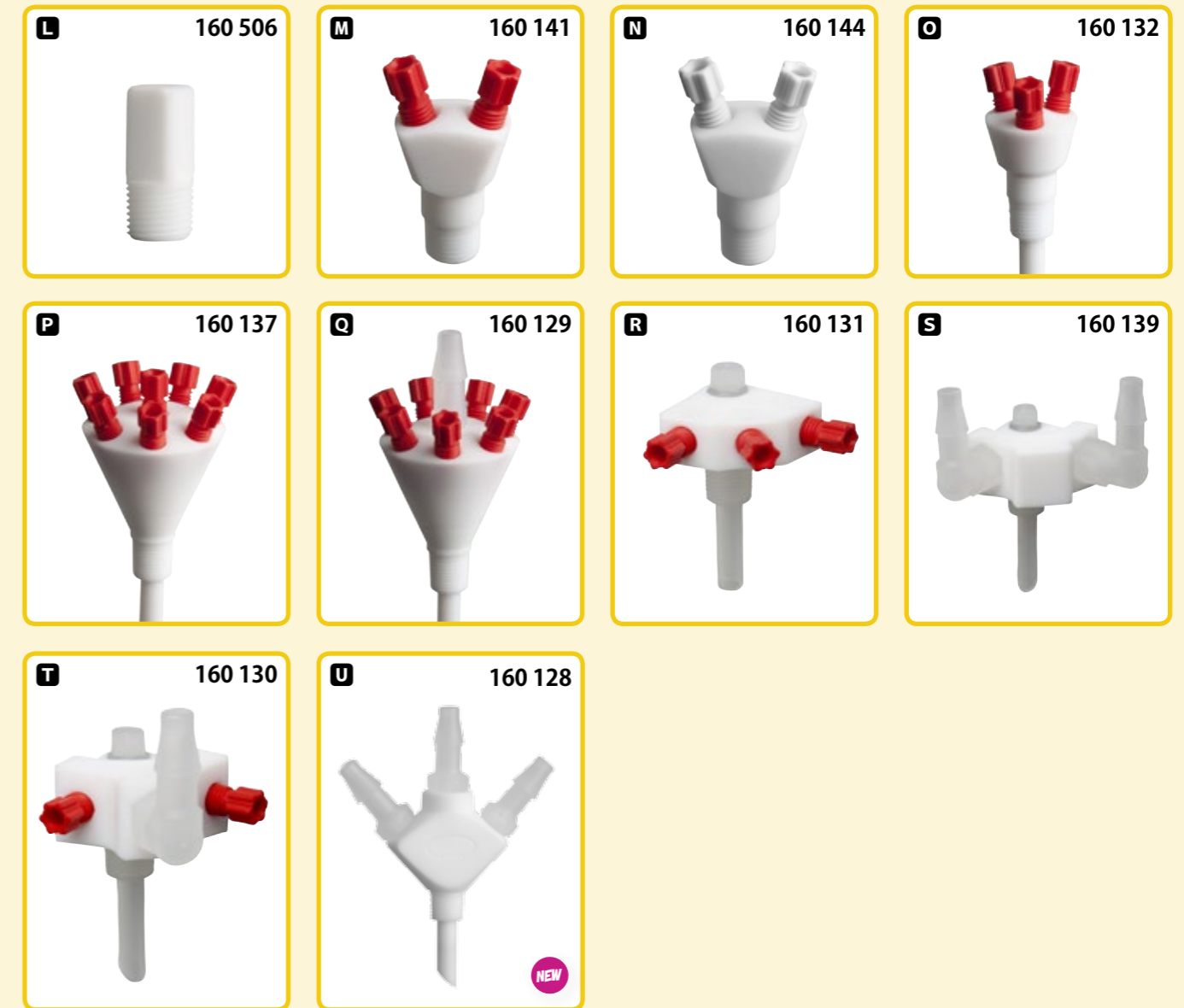


Fig.	Part No.	Description	For tube diameter	Material	Unit
L	160 506	Blind plug for tube connector	-	PTFE	1
M	160 141	2-in-1 collector	2,3 / 3,2 mm OD	PTFE / PFA	1
N	160 144	2-in-1 collector	2,3 / 3,2 mm OD	PTFE	1
O	160 132	3-in-1 collector	2,3 / 3,2 mm OD	PTFE / PFA	1
P	160 137	8-in-1 collector	2,3 / 3,2 mm OD	PTFE / PFA	1
Q	160 129	8-in-1 collector	2,3 / 3,2 mm OD (7x) 6,4 mm ID (1x)	PTFE / PFA / PP	1
R	160 131	3-in-1 collector, angled	2,3 / 3,2 mm OD	PTFE / PFA / PP	1
S	160 139	2-in-1 collector, angled	6,4 mm ID	PTFE / PP	1
T	160 130	3-in-1 collector, angled	2,3 / 3,2 mm OD (2x) 6,4 mm ID (1x)	PTFE / PFA / PP	1
U	160 128 NEW	3-in-1 collector, straight	6,4 mm ID (3x)	PTFE / PP	1

Accessories Special adapter

NEW

» 3-way adapter for T-piece
VWR-Hitachi Chromaster HPLC system

A 199 010



» Locks the open T-piece gastight and
avoids the leakage of harmful vapors.

Fig.	Part No.	Description
A	199 010 NEW	3-way adapter for T-piece VWR-Hitachi Chromaster HPLC system

Accessories Adapters for special containers

S.C.A.T. waste systems now also fit your
containers of the JUSTRITE® brand.
You can also use the adapters listed
here to connect to CPC® coupling systems.

» Proven S.C.A.T. safety for
JUSTRITE® containers

» Suitable adapters
for CPC® couplings



B 107 617



A 107 628






C 107 610



D 107 639

NEW

Fig.	Part No.	Description	 Capillary connector 3,2 / 2,3mm OD	 Tube connector 6,4mm ID	 Connector for exhaust filter	Material	Unit
A	107 628	4-way collector for CPC connector	3x	1x	-	PTFE / PFA / PP	1
B	107 617	S.C.A.T. adapter Exhaust filter to CPC connector	-	-	1x	PE-HD	1
C	107 610	S.C.A.T. adapter Exhaust filter to JUSTRITE® canister	-	-	1x	PE-HD	1
D	107 639 NEW	3-way collector GL 14	-	-	3x	PTFE	1

Accessories Tube connectors

» Images A - L shown on a scale of 1:1.
Just add the tube and identify the size easily.

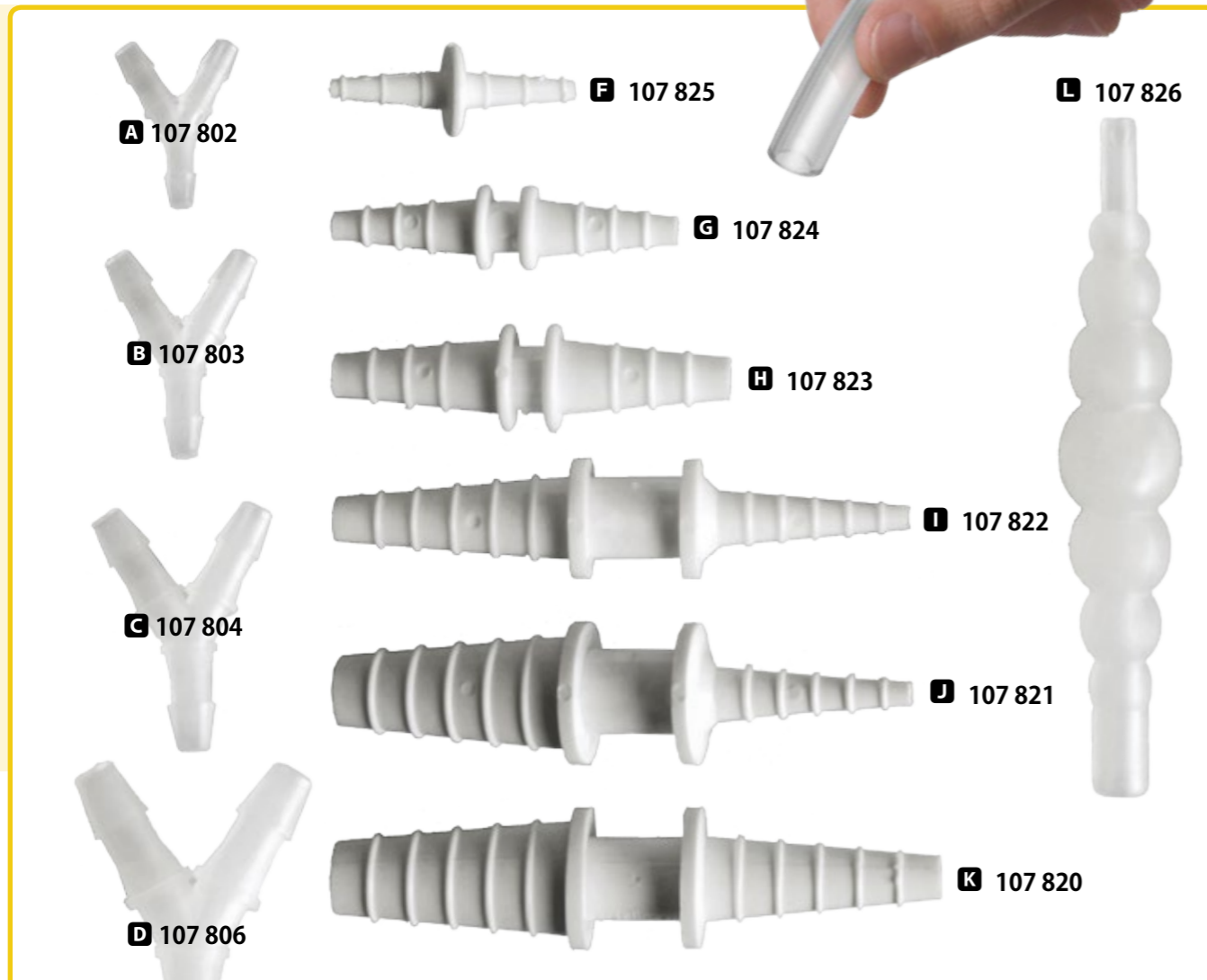


Fig.	Part No.	Description	Diameter	Material	Unit
-	107 801	Y-connector	3 mm	PP	1
A	107 802	Y-connector	4 mm	PP	1
B	107 803	Y-connector	5 mm	PP	1
C	107 804	Y-connector	6 mm	PP	1
D	107 806	Y-connector	9 mm	PP	1
E	107 807	Y-connector	11 mm	PP	1
F	107 825	Conical connector	3 - 5 mm	PP	1
G	107 824	Conical connector	4 - 8 mm	PP	1
H	107 823	Conical connector	7 - 10 mm	PP	1
I	107 822	Conical connector	4 - 8 mm	PP	1
J	107 821	Conical connector	4 - 8 mm	PP	1
K	107 820	Conical connector	8 - 12 mm	PP	1
L	107 826	Connector, spherical	5 - 16 mm	PP	1

1:1

Accessories SafeLock connectors

» With one „Click“!

The quick closures allow safe and quick connection of tubing and make bottle changes even easier.

The bottles are rapidly disconnected with a single "click" and can be refilled at a safe location.

Thanks to the integrated valve function, the closed safety system is maintained even when a tube is disconnected.

The practical SafeLock connectors can be used for all S.C.A.T. safety systems.

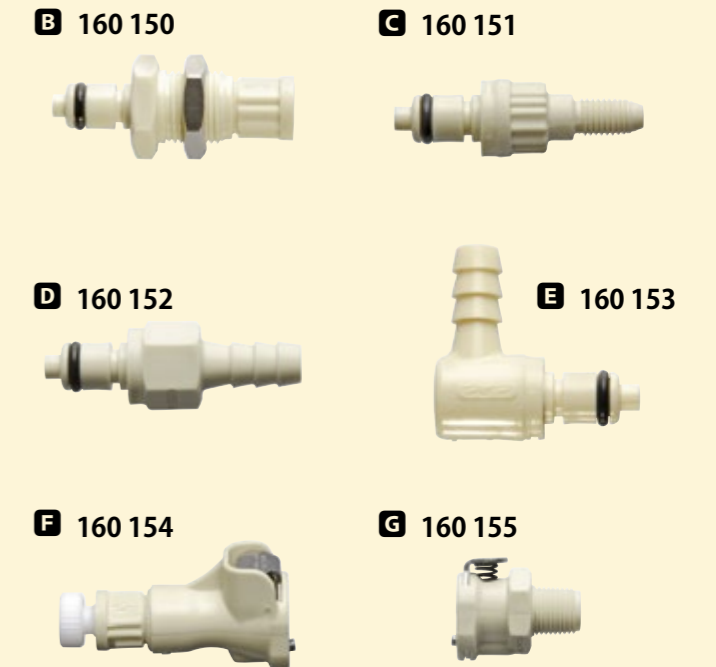


Fig.	Part No.	Description	Tube diameter	Material	Unit
A	160 135	Valve coupling unit set, incl. 2x 1.5 m capillary	3.2 mm OD, corresponds to 160150 plus 160154	PP	1
-	160 136	Valve coupling unit set for tube connector	6.4 mm ID, corresponds to 160155 plus 160152	PP	1
B	160 150	Valve coupling unit (m), incl. 1x 1.5 m capillary	3.2 mm OD, can be used with 160154	PP	1
C	160 151	Valve coupling unit (m) for tube	3.2 mm OD for screwing into standard connector, can be used with 160154	PP	1
D	160 152	Valve coupling unit (m), straight, for tube	6.4 mm ID, can be used with 160155	PP	1
E	160 153	Valve coupling unit (m), curved, for tube	6.4 mm ID, can be used with 160155	PP	1
F	160 154	Valve coupling unit (f), incl. 1x 1.5 m capillary	3.2 mm OD, can be used with 160150 and 160151	PP	1
G	160 155	Valve coupling unit (f) for screwing into tube connector	Can be used with 160152 and 160153	PP	1

Accessories Tools

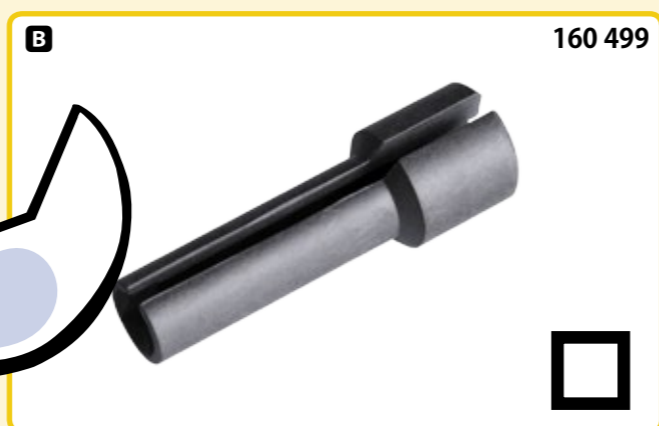
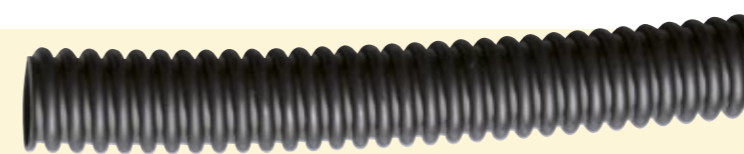


Fig.	Part No.	Description	Form	Material	Color
A	160 500	Installation wrench, hexagonal (for PFA fittings)		Aluminum	Aluminum
B	160 499	Installation wrench, square (for PP fittings, e.g. older versions of SafetyCaps)		PP	Black
C	900 103	CleanCut capillary cutter including replacement blade	-	PP, stainless steel	Blue

Accessories Tubes and capillaries



A 108 015



B 108 018



C 108 017



D 108 016



E 461 056



F 461 055



G 461 054



H 461 053



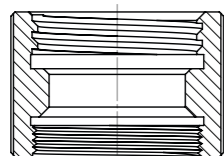
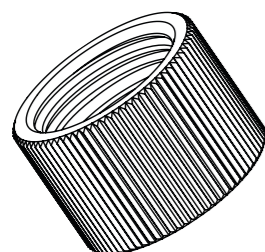
I 300 021

Fig.	Part No.	Description	Diameter	Length
A	108 015	Conductive plastic tube, flexible (spiral)	9 mm ID, 13 mm OD	1 m
-	108 019	Conductive plastic tube, smooth	10 mm ID, 12 mm OD	1 m
B	108 018	Conductive plastic tube, smooth	8 mm ID, 10 mm OD	1 m
C	108 017	Conductive plastic tube, smooth	6 mm ID, 8 mm OD	1 m
D	108 016	Conductive plastic tube, smooth	4 mm ID, 6 mm OD	1 m

Fig.	Part No.	Description	Unit
E	461 056	Corrugated tube, PP, for leak connection of various HPLC systems, Ø ID = 6.5 mm	1 m
F	461 055	Capillary PTFE, Ø OD = 3.2 mm, Ø ID = 1.6 mm	3 m
G	461 054	Capillary PTFE, Ø OD = 2.3 mm, Ø ID = 1.7 mm	3 m
H	461 053	Capillary PTFE, Ø OD = 1.6 mm, Ø ID = 1.0 mm	3 m
I	300 021	Suction filter HPLC solvent filter PP, for Ø 1/8" (Ø 3.2 mm OD)	5 each
-	300 022	Suction filter HPLC solvent filter PFA/PTFE, for Ø 1/8" (Ø 3.2 mm OD)	5 each

Accessories Thread adapters

Type A Internal thread (f)

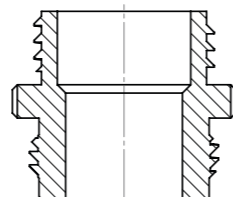


Type	Part No.	Thread 1	Thread 2	Material	Color
A	107 024	S 55 (f)	R 2" fine (f)	PE	Green
A	107 082	S 60/61 (f)	2" Tri-Sure (f)	PE-HD-el	Black
A	107 023	S 60/61 (f)	R 2" fine (f)	PE	Yellow
A	108 444	63 mm ASTM (f)	R 2" fine (f)	PE	White
A	107 025	S 70/71 (f)	R 2" fine (f)	PE	Brown

Type B

Type	Part No.	Thread 1	Thread 2	Material	Color
B	107 014	GL 45 (m)	R 2" BSP (m)	PP	Colorless
B	107 016	GL 45 (m)	R 2" BSP (m)	PTFE	White
B	107 015	GL 45 (m)	2" Tri-Sure (m)	PP	Colorless
B	107 017	GL 45 (m)	2" Tri-Sure (m)	PTFE	White
B	108 022	S 60/61 (m)	2" BSP (m)	PE	Black
B	108 029	S 60/61 (m)	2" Tri-Sure (m)	PP	Colorless
B	107 087	S 60/61 (m)	63 mm ASTM (m)	PP	Colorless
B	107 098	S 70/71 (m)	S 70/71 (m)	PTFE	White

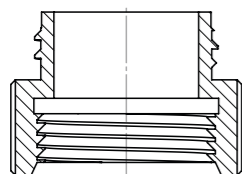
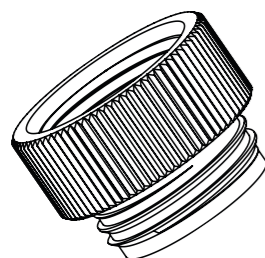
Type B External thread (m)



Type C

Type	Part No.	Thread 1	Thread 2	Material	Color
C	107 996	GL 32 (f)	GL 45 (m)	PP	Colorless
C	107 993	GL 32 (f)	GL 45 (m)	PTFE	White
C	107 995	GL 38 (f)	GL 45 (m)	PP	Colorless
C	107 992	GL 38 (f)	GL 45 (m)	PTFE	White
C	107 994	S40 / GL 40 (f)	GL 45 (m)	PP	Colorless
C	107 991	S40 / GL 40 (f)	GL 45 (m)	PTFE	White
C	107 093	S 51 (f)	GL 45 (m)	PP	Colorless
C	107 099	S 55 (f)	GL 45 (m)	PP	Colorless
C	107 090	S 60/61 (f)	GL 45 (m)	PP	Colorless
C	107 079	S 70/71 (f)	GL 45 (m)	PP	Colorless
C	117 030	GPI 38-23 (f)	GL 45 (m)	PTFE	White
C	107 028	R 1/2" (f)	GL 45 (m)	PP	Colorless
C	107 080	S 47 x 4 (f)	S 51 (m)	PP	Colorless
C	107 092	S 55 (f)	S 51 (m)	PP	Colorless

Type C Internal/external thread (f/m)



Accessories Thread adapters

...WE'LL MAKE IT FIT!

IF IT DOESN'T FIT...

» The angled-adapter for canisters

Just place your laboratory bottles on the thief and let them drip down.



NEW



108 058



Type	Part No.	Thread 1	Thread 2	Material	Color
C	107 086	S 60/61 (f)	S 51 (m)	PP	Colorless
C	107 078	S40 / GL 40 (f)	S 55 (m)	PP	Colorless
C	117 091	S40 / GL 40 (f)	S 55 (m)	PTFE	White
C	107 084	S 50 (f)	S 55 (m)	PP	Colorless
C	107 095	S 51 (f)	S 55 (m)	PP	Colorless
C	117 095	S 51 (f)	S 55 (m)	PTFE	White
C	107 094	GL 45 (f)	S 55 (m)	PP	Colorless
C	117 094	GL 45 (f)	S 55 (m)	PTFE	White
C	107 089	S 60/61 (f)	S 55 (m)	PP	Colorless
C	107 076	Sakura Tissue Tek (f)	S 55 (m)	PP	Colorless
C	108 058 NEW	S 60/61 (f)	S 60/61 (m) angled	PE-HD-el	Black
C	108 145 NEW	S 50 (f)	S 60/61 (m)	PE-HD-el	Black
C	107 097	S 51 (f)	S 60/61 (m)	PP	Colorless
C	108 146 NEW	S 51 (f)	S 60/61 (m)	PE-HD-el	Black
C	107 096	S 55 (f)	S 60/61 (m)	PP	Colorless
C	108 021	2" BSP (f)	S 60/61 (m)	PE	Grey
C	107 091	B 63 (f)	S 60/61 (m)	PP	Colorless
C	107 074	S 65 (f)	S 60/61 (m)	PP	Colorless
C	107 026	R 3" Schütz coarse (f)	S 60/61 (m)	PE	Grey
C	107 027	R 3" Werit fine (f)	S 60/61 (m)	PE	Colorless
C	107 088	63 mm ASTM (f)	S 65 (m)	PP	Colorless
C	108 147 NEW	S 71 (f)	S 60/61 (m)	PE-HD-el	Black
C	107 083	Mason thread 70 (f)	S 70/71 (m)	PP	Colorless
C	107 018	S 100 / BB 70 (f)/VIR	S 90 (m)	PE-HD	Colorless
C	107 085	GL 45 (f)	R 1 1/2" (m)	PP	Colorless
C	107 021	R 2" fine (f)	2" Mauser coarse (m)	PE	Blue
C	107 022	R 2" fine (f)	2" Tri-Sure coarse (m)	PE	Orange

Accessories Ground cables

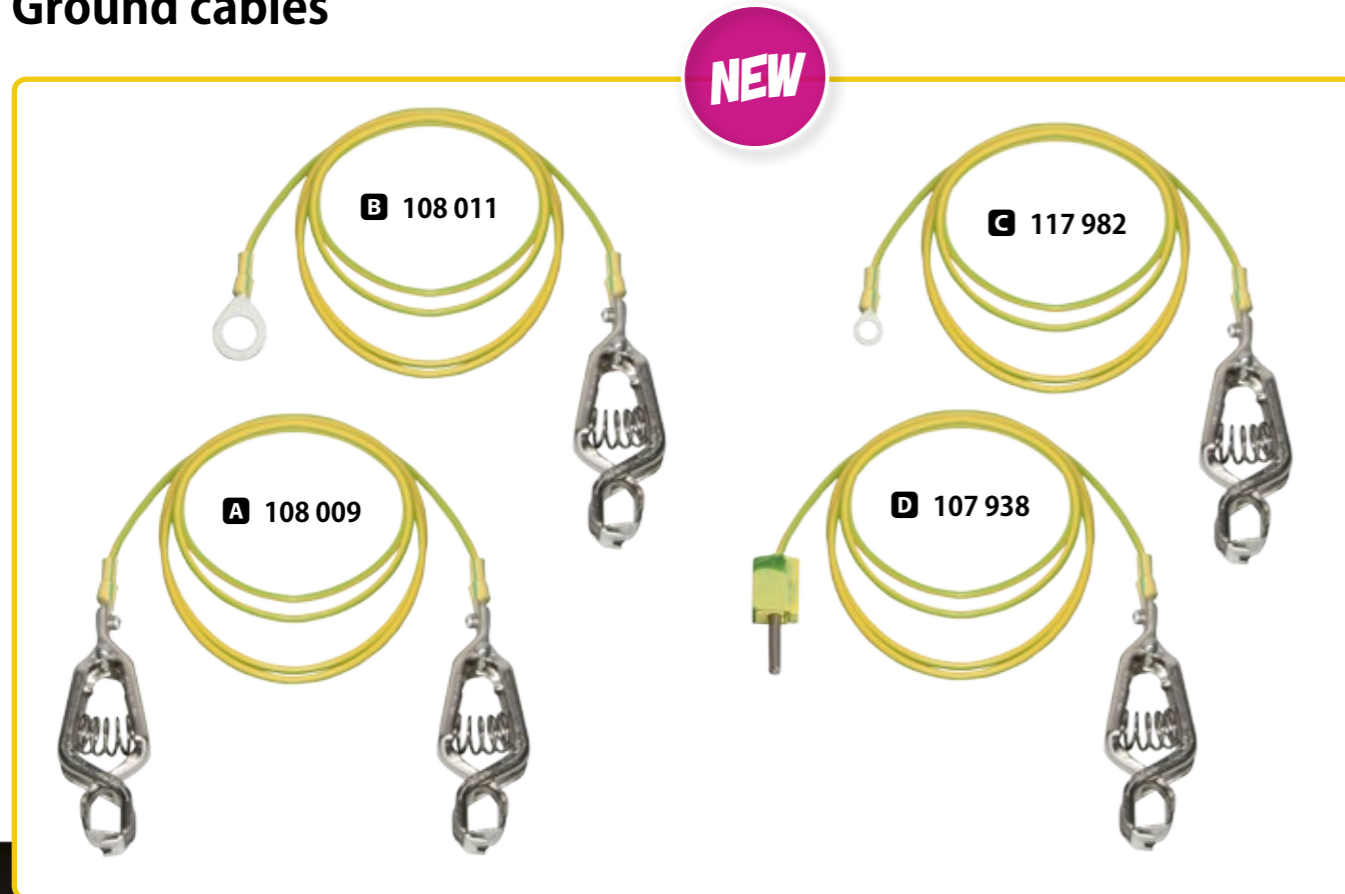


Fig.	Part No.	Description	Included	Length
A	108 009 NEW	Ground cable	2 clamps	1,5m
	108 012 NEW	Ground cable	2 clamps	2,0m
B	108 011 NEW	Ground cable	1 clamp, 1 connection ring (Ø 10 mm)	1,5m
	108 014 NEW	Ground cable	1 clamp, 1 connection ring (Ø 10 mm)	2,0m
C	117 982 NEW	Ground cable	1 clamp, 1 connection ring (Ø 5 mm)	1,5m
D	107 938 NEW	Ground cable	1 clamp, 1 plug for SafetyWasteCap ground connection	1,5m
	107 939 NEW	Ground cable	1 clamp, 1 plug for SafetyWasteCap ground connection	2m

Accessories Anti-static equipment

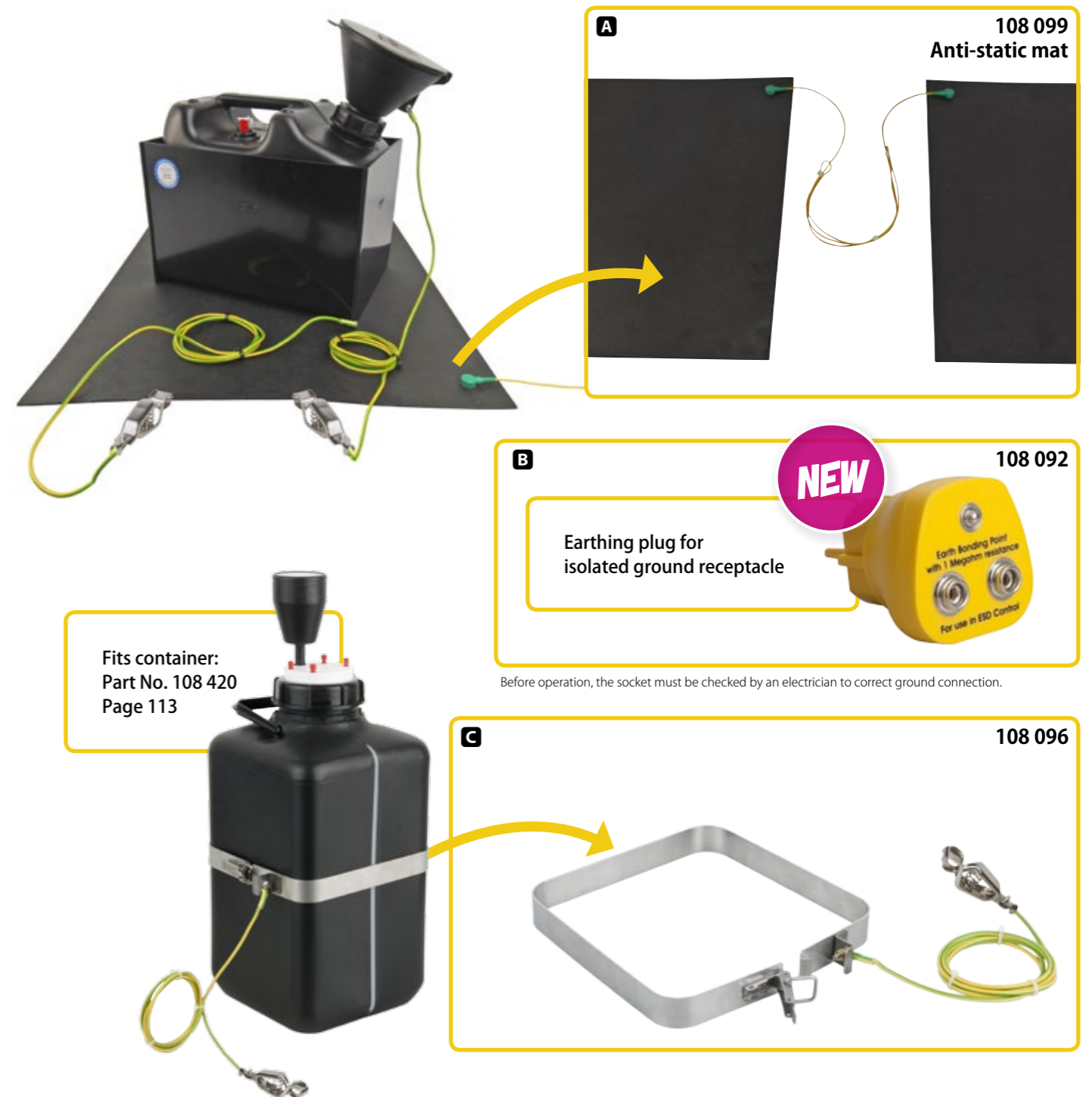


Fig.	Part No.	Description	Unit
A	108 099	Anti-static mat, conductive. With ground cable (press stud connector). Several mats can be connected to each other! Dimensions: 610 x 1220 mm	1
B	108 092 NEW	Earthing plug for isolated ground receptacle, 1x press stud connector, 2x 10 mm connector.	1
C	108 096	Ground strap for canisters with S90 thread, incl. ground cable with clamp. Material: Stainless steel	1

Accessories

Base for space-saving canister - stainless steel!



» Saves space!

Ideal where laboratory space is limited, e.g. next to the HPLC system or in narrow intermediate rooms.

» Steady standing!

Reliable base for the space-saving canister; for increased stability even when full.

» Neat!

Any number of space-saving canisters with different fittings can be arranged next to each other in a series.



Fig.	Part No.	Description	Dimensions W x H x D (mm)	Volume	Material	Thread	Unit
A	199 050	Base for 2 space-saving canisters	145 x 130 x 200	-	Stainless steel	-	1
B	107 998	Space-saving canister	65 x 335 x 330	5 liters	PP	S 50	1
C	108 945	Space-saving canister with floater	65 x 405 x 330	5 liters	PP	S 50	1

Accessories

Spouts



Fig.	Part No.	Description	Thread
A	610 499	Flexible spout, with safety vent	S55
-	610 501	Flexible spout, with safety vent	S60/61
-	610 503	Flexible spout, with safety vent	S70/71
B	610 500	Rigid spout, with safety vent	S55
C	610 502	Rigid spout	S60/61
D	610 504	Rigid spout, electrically conductive	S60/61

D 610 504

» For simple and safe pouring of fluids from containers

» Suitable for S.C.A.T. safety containers



Accessories Foldable Canisters with UN-Y Approval

» Space saving storage

The Politainer can ideally be stored space-saving prior to filling and it is stackable when filled. The Politainers unfolds automatically during filling – the integrated handle ensures a safe transport and emptying free of danger.

» Saves space and money

Through the small volume in its original condition you save shipping costs. The carton can be used several times and that increases cost effectiveness. The combi-packaging uses 50%–75% less material than rigid container and is therefore environmentally friendly. When using the strong covering box the Politainer is UN-Y approved.

Part No.	Description	Volume	Dimensions (W x H x D)	Thread
107330	Politainer	5l	178 x 178 x 178 mm	GL38
107331	Politainer	10l	228 x 228 x 228 mm	GL38
107332	Politainer	10l (without handle)	228 x 228 x 228 mm	S60
107333	Politainer	20l	285 x 285 x 285 mm	S60
107334	Box*	for Politainer 5l	189 x 186 x 190 mm	–
107335	Box*	for Politainer 10l	236 x 236 x 236 mm	–
107336	Box*	for Politainer 20l	290 x 290 x 306 mm	–

* with UN-Y-approval for dangerous goods of the packing group II and III

Accessories

Part No.	Description
107338	Thread adapter, PTFE, GL38 (w, short) on GL45 (m) for Politainer, GL38, foldable
107339	Thread adapter, PP, GL38 (w, short) on GL45 (m) for Politainer, GL38, foldable

LIMITLESS POSSIBILITIES



**HAS THE
RIGHT SOLUTION!**

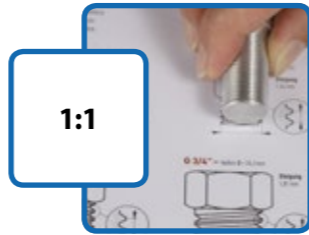
QUESTIONS?

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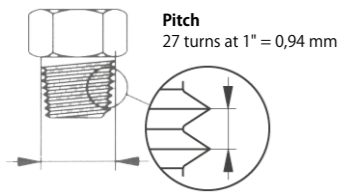
Tel: +49 - (0) 6105 - 30 55 86 - 0
Fax: +49 - (0) 6105 - 30 55 86 - 99
e-Mail: info@scat-europe.com
Web: www.scat-europe.com

Thread Types Determination

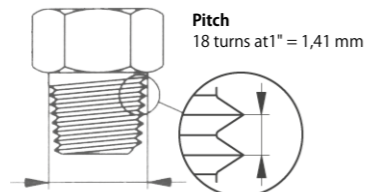


NPT (National Pipe Thread) tapered, american pipe thread
 Easy recognisable by its tapered outer and inner diameter which is selfsealing. Therefore, NPT threads are also known as "sealing thread" or "tightly threaded connection".

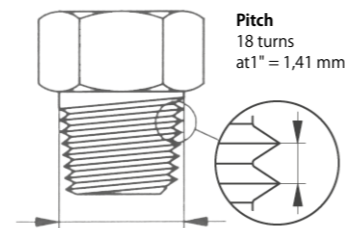
NPT 1/8" – outer-Ø = 9,9 mm



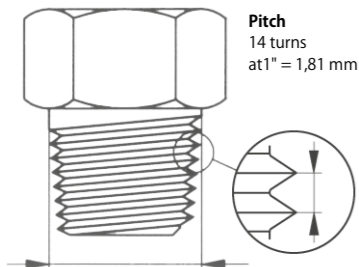
NPT 1/4" – outer-Ø = 13,2 mm



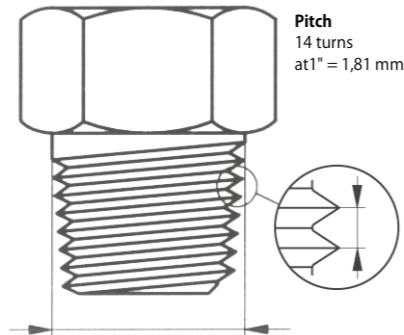
NPT 3/8" – outer-Ø = 16,6 mm



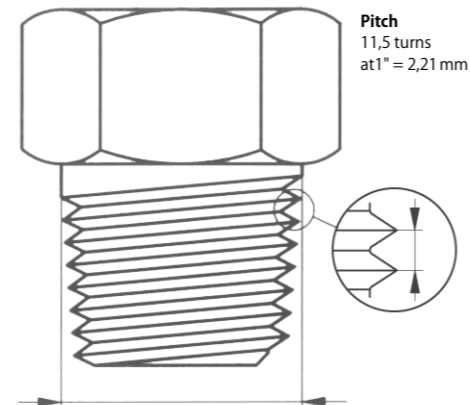
NPT 1/2" – outer-Ø = 20,6 mm



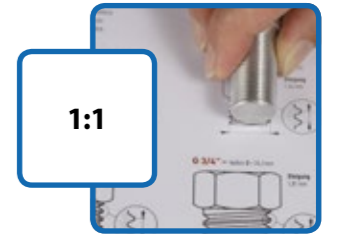
NPT 3/4" – outer-Ø = 26 mm



NPT 1" – outer-Ø = 32,5 mm

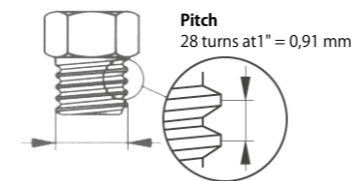


Thread Types Determination

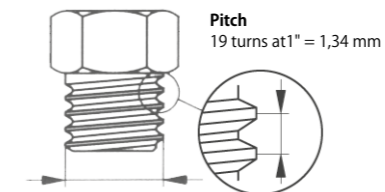


G or R (Whitworth thread) and BSP (British Standard Pipe)
 Cylindrical threads which are mainly used in countries with imperial system. The size of e.g. R 3/4" does not stand for a diameter. Thus the corresponding size has to be determined according to charts.

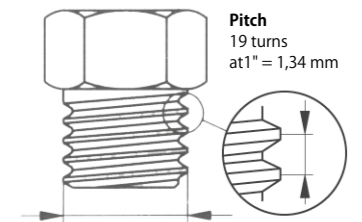
G 1/8" – outer-Ø = 9,6 mm



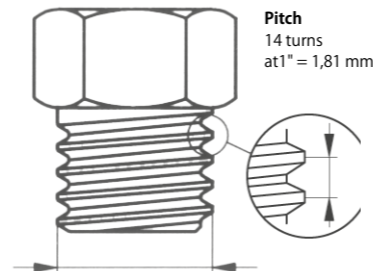
G 1/4" – outer-Ø = 13 mm



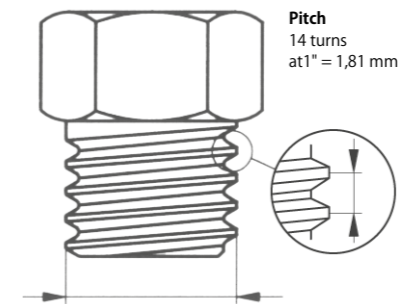
G 3/8" – outer-Ø = 16,5 mm



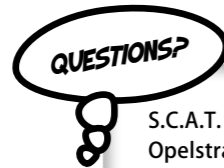
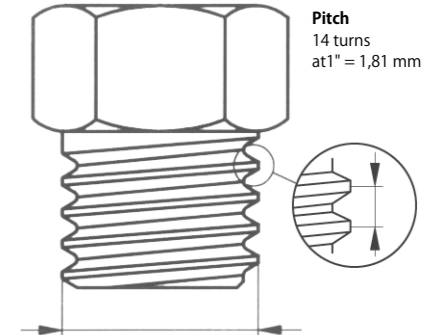
G 1/2" – outer-Ø = 20,8 mm



G 5/8" – outer-Ø = 22,8 mm



G 3/4" – outer-Ø = 26,3 mm



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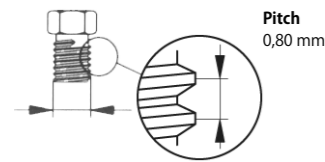
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Thread Types Determination

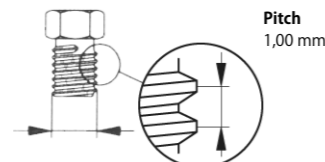
M (metric ISO-thread) – standard in Europe

Cylindrical inner and outer diameter which is precise in millimetres. The extremely fine taper of this thread allows the best possible force transmission. Metric threads are designated by a capital M plus an indication of their nominal outer diameter, for instance M 10. A taper deviating from the standard is marked with an appendix like for instance M 10 x 0.75.

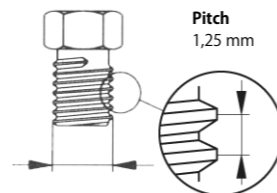
M5 – outer-Ø = 5 mm



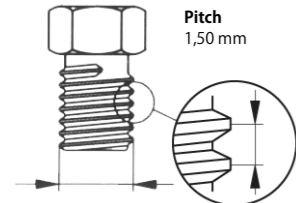
M6 – outer-Ø = 6 mm



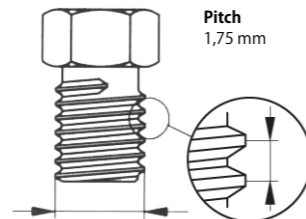
M8 – outer-Ø = 8 mm



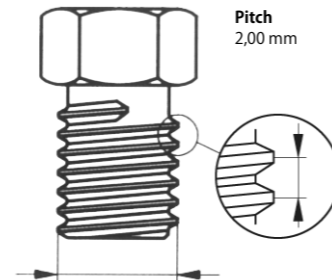
M10 – outer-Ø = 10 mm



M12 – outer-Ø = 12 mm



M16 – outer-Ø = 16 mm



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Thread Types Determination

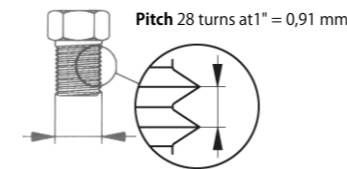
UNF 1/4"-28G

It has its origin in the USA. Mainly used in chromatography/HPLC applications. Most common sizes are UNF 1/4"-28G and UNF 10-32G. The digits 28 G and 32 G stand for the number of thread pitches at a length of one inch (25.4 mm).

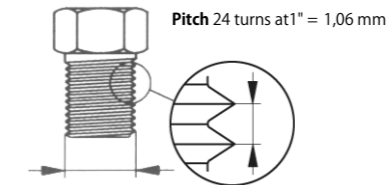
UNF 1/4"-28G versus M6

Without exception all of our HPLC fittings come with the most common HPLC thread UNF 1/4"-28G. In addition, fittings and distributors with the very similar thread M 6 are used. These threads can only be distinguished by exact determination of their outer diameter or by using a test mandrel (it is possible to screw in a tube end fitting in the counterpart of the other thread for at least 2-3 rotations). The UNF 1/4" thread has an outer diameter of 6.35 mm, the M 6 thread has precisely 6 mm (work tolerances are possible). We recommend to use only the UNF 1/4"-28G thread to avoid confusion and double inventory.

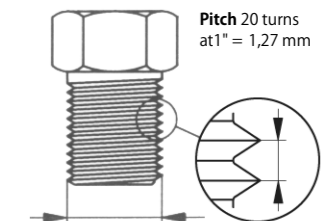
UNF 1/4"-28G – outer-Ø = 6,2 mm



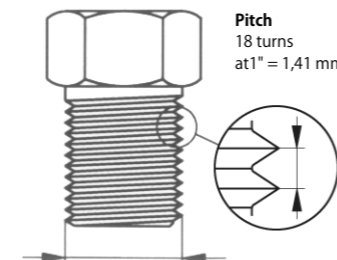
UNF 3/8"-28G – outer-Ø = 9,4 mm



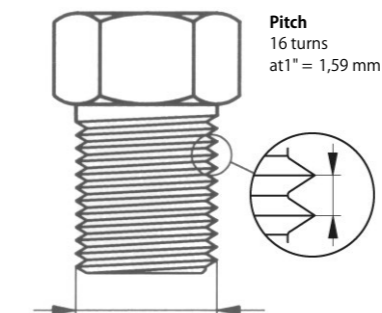
UNF 1/2"-28G – outer-Ø = 12,6 mm



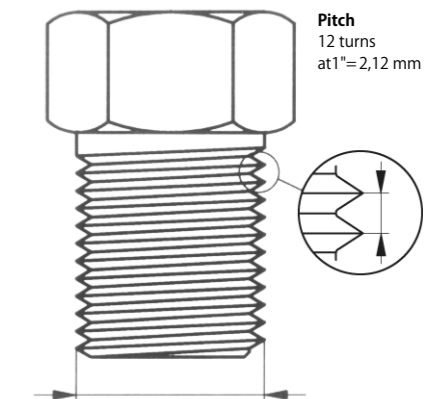
UNF 5/8"-18G – outer-Ø = 15,7 mm



UNF 3/4"-16G – outer-Ø = 18,9 mm



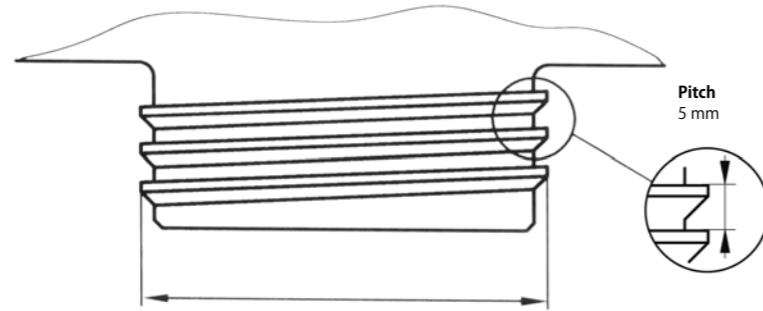
UNF 1"-12G – outer-Ø = 25,2 mm



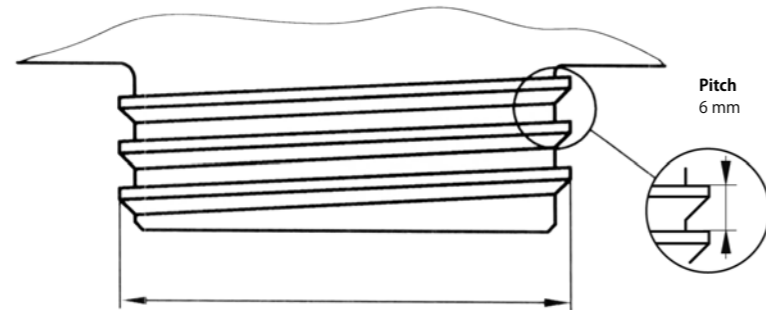
Thread Types Canisters

1:1

S 55 – outer-Ø = 53,5 mm



S 60 – outer-Ø = 59,5 mm



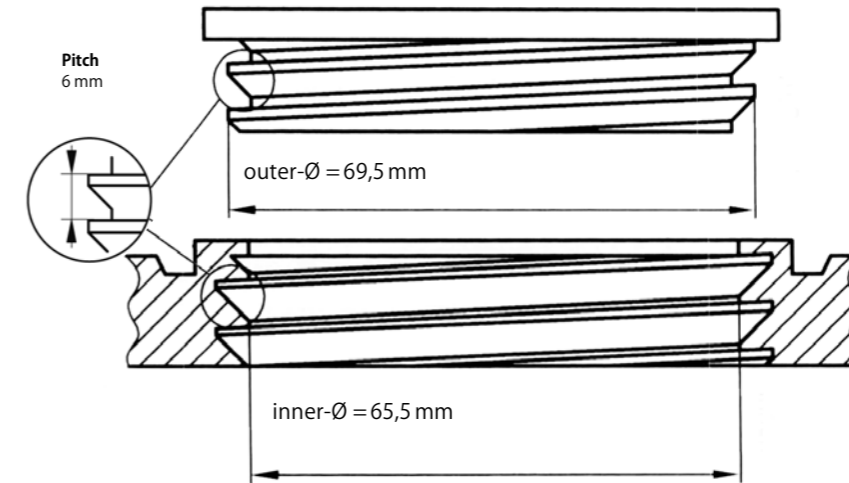
WASTE SYSTEMS

All thread types for canisters are listed in the chapter of **WASTE SYSTEMS**

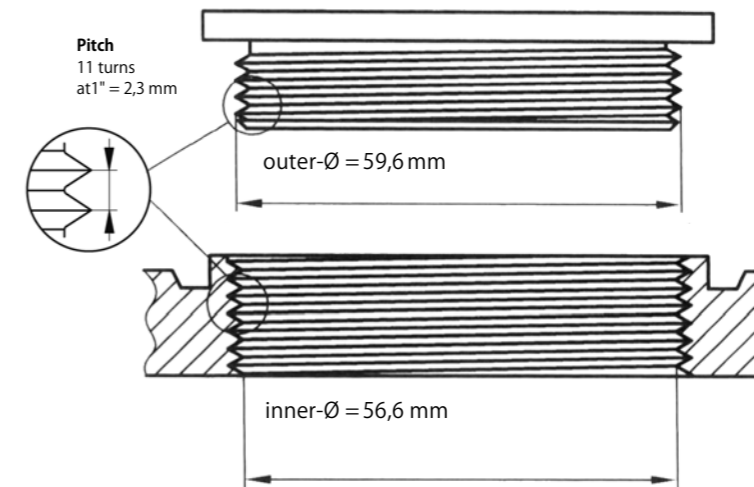
Thread Types Barrels

1:1

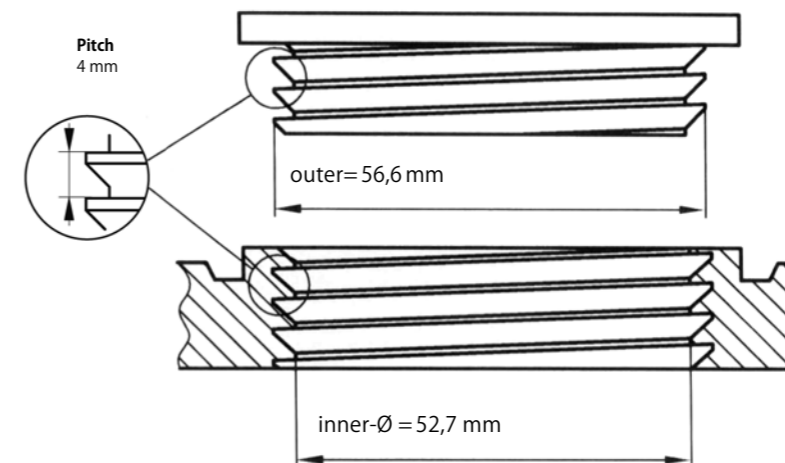
BCS 70 x 6 MAUSER 2"®



G2"/ R 2"/ BSP 2"



BCS 56 x 4 Tri Sure2"®



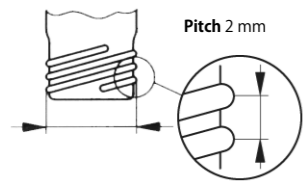
Thread Types Glas threads

1:1

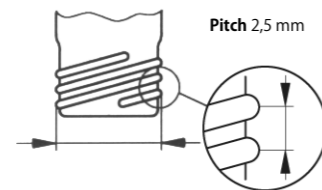
GL-threads

GL threads are round threads, i.e. there are only round and no sharp ends at the flanks of the screw thread. Due to its simple shape and the round ends of the flanks, this thread can easily be formed on glass pipes. The extremely high pitch and the large flanks give this thread an important carrying power.

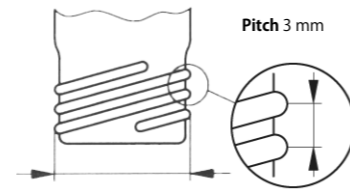
GL 12 – outer-Ø = 12 mm



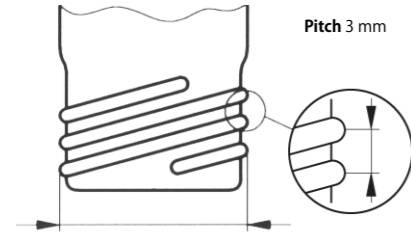
GL 14 – outer-Ø = 14 mm



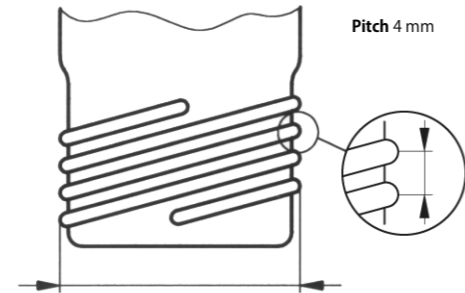
GL 18 – outer-Ø = 18 mm



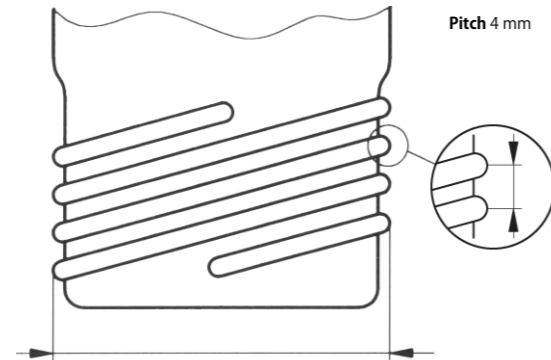
GL 25 – outer-Ø = 25 mm



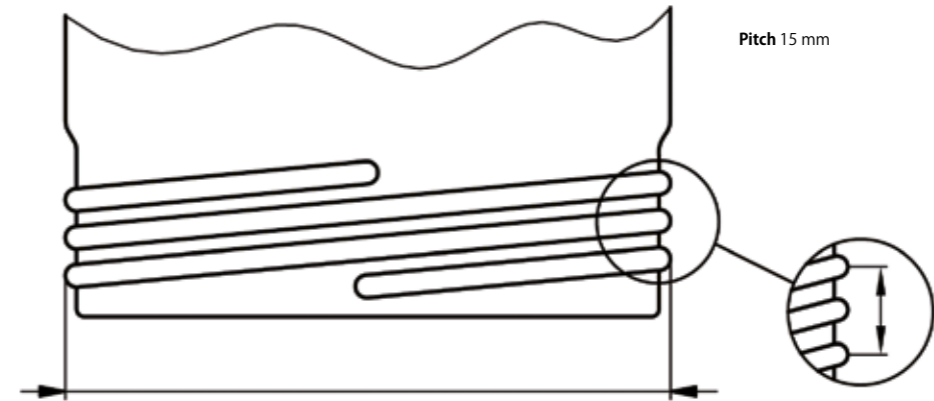
GL 32 – outer-Ø = 32 mm



GL 45 – outer-Ø = 45 mm



GLS 80 – outer-Ø = 80 mm



Conversions

Inches in Millimeters

Inch Fractional notation "	Inch Decimal notation "	Millimeters Decimal notation mm
1/16	0.062	1,57
1/8	0.125	3,18
3/16	0.188	4,78
1/4	0.250	6,35
5/16	0.313	7,95
3/8	0.375	9,53
7/16	0.438	11,13
1/2	0.500	12,70
9/16	0.563	14,30
5/8	0.625	15,88
11/16	0.688	17,48
3/4	0.750	19,05
13/16	0.813	20,65
7/8	0.875	22,23
15/16	0.938	23,83
1	1	25,40
2	2	50,80
3	3	76,20
4	4	101,60
5	5	127,00
6	6	152,40
7	7	177,80
10	10	254,00

Millimeters to Inches

Millimeters mm	Decimal Inches in "
1,0	0.039
1,8	0.071
2,0	0.079
3,0	0.118
3,2	0.126
4,0	0.157
4,3	0.169
4,6	0.181
5,0	0.197
6,0	0.236
7,0	0.276
8,0	0.315
9,0	0.354
10,0	0.394
20,0	0.787
30,0	1.181
40,0	1.575
50,0	1.969
60,0	2.362
70,0	2.756
80,0	3.150
90,0	3.543
100,0	3.937

1:1

NOTICED!

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Terms and Conditions of the S.C.A.T. Europe GmbH

§ 1 General

- 1.1 The following provisions apply to all initial, ongoing and future business relationships between us and our clients who are contractors/traders within the meaning of § 14 of the German Civil Code (Bürgerliches Gesetzbuch). Our Terms and Conditions of Supply, Performance and Payment apply exclusively and by placing orders with us our customers declare that they are in agreement with these conditions; this applies equally for future business if these conditions are expressly referred to or if they are not referred to but are sent to the customer in connection with an order that we are acknowledging. If the order is placed at variance with our Terms and Conditions of Supply, Performance and Payment, our Terms and Conditions of Supply, Performance and Payment apply even if we do not object to such alternative conditions. Terms and conditions which are at variance with our standard Terms and Conditions of Supply, Performance and Payment apply only if we have expressly acknowledged such alternative conditions in writing. Amendments of and additions to these Terms and Conditions of Business must be made in writing. The customer can only invoke collateral agreements prior to and at the conclusion of the contract if such agreements are confirmed in writing without delay. These provisions do not apply if our customer is a consumer within the meaning of § 13 of the German Civil Code. The language of our contractual dealings is German.
- 1.2 The customer's General Terms and Conditions of Business are excluded unless we have expressly recognized them.
- 1.3 Our offers are subject to final confirmation; we reserve the right to make technical changes to our products. Files that are important for conducting business may be stored by us on data processing equipment.
- 1.4 Supply contracts and all other agreements (including collateral agreements) as well as statements made by our representatives are only binding in law on us if confirmed in writing. Business correspondence printed on data processing equipment (e.g. order confirmations, invoices, credit notes, extracts from accounts, payment reminders) is binding in law without a signature.
- 1.5 We draw our customers' attention to the fact that we process and transmit their personal data (exclusively for business purposes) with the aid of electronic data processing equipment in accordance with the requirements of the German Federal Data Protection Act (Bundesdatenschutzgesetz).

§ 2 Agreement on prices

- 2.1 Our prices exclude any Value Added Tax which may be imposed by law and are ex works. In case of orders for which no prices are agreed, our prices valid on the day of delivery apply and are expressed in Euros (EUR) unless indicated otherwise.
- 2.2 If changes to the prices should occur up to the day of delivery, we reserve the right to amend our prices accordingly. However, this only applies to delivery periods longer than 4 months and price changes not exceeding 10%. If the price change is greater, a new price agreement must be concluded. If such an agreement should not be concluded, we have the right to withdraw from the contract in writing within 14 days.
- 2.3 Confirmed prices only apply when the quantities confirmed are accepted by the customer.
- 2.4 Packing, transport, freight and insurance costs are charged to the customer. A surcharge of € 20.00 net will be invoiced on orders with value under €250.00 net.

§ 3 Payment

- 3.1 The purchase price and/or agreed compensation for work including all costs are due for payment without reduction on receipt of invoice. Our invoices must be paid within 30 days without deductions. Payments are not deemed to have been received until the day on which we have access to the funds.

- 3.2 Payments must be made including VAT and without deduction of any prompt payment discounts or other deductions unless any other terms of payment are expressly agreed in writing.
- 3.3 Bills of payment are only accepted by express agreement and – also in the case of checks – only as an undertaking to pay and subject to our acceptance of them on a case by case basis. Discounting and other fees must be born by the customer and are due for payment immediately.
- 3.4 All payments are credited first to interest and costs and thereafter to our oldest receivables, irrespective of the customer's directions.
- 3.5 If payments are late, we will invoice interests on such payments at the level allowed by law. The assertion of additional claims for compensation is not allowed.
- 3.6 If payment should be late, checks and bills of exchange dishonored, payments suspended, the filing of proceedings for the arrangement of debt, failure to abide by the terms of payment or if circumstances arise likely to reduce the customer's creditworthiness, all our receivables – including in the event if a payment moratorium – are due for immediate payment. We are also entitled to perform services and make deliveries which are still outstanding only against the payment of cash or to withdraw from the contract after setting a reasonable grace period and to require compensation in lieu of performance.
- 3.7 Claims arising from the contractual arrangement may only be assigned by the customer with our express consent. Off-setting or retention are only permitted in respect of uncontested counterclaims which have been judged to be final and absolute. We are entitled to refuse the exercise of the right of retention in the form of a provision of a bond or a surety (Bürgschaft).

§ 4 Retention of title

- 4.1 All our deliveries are made with retention of title (goods subject to retention of title). Title does not pass to the customer until he has paid all his liabilities owed to us (including those arising from incidental claims) arising from our supplies and services. If we are trading with the customer on open account, the goods subject to retention of title are deemed to be collateral for our account balance including when payment is made against liabilities which have been specifically excluded.
- 4.2 If goods we have supplied should be mixed with or connected to other objects, the customer will assign to us (joint) title on the item arising therefrom in the ratio of the value of our goods subject to retention of title to the invoice value of the other goods used. If the customer should prejudice our rights set out above, he is obliged to pay us compensation. Dismantling and other costs are for the customer's account.
- 4.3 The customer may only sell the goods we delivered in the normal course of business and in such a case may only sell or use them (e.g. as part of a contract for work and services or a contract for work done and materials supplied) if his customer has not excluded the reassignment of the receivable arising from the resale or re-use of the goods. The customer is obliged to ensure that his customer delivers any retention of the right to consent to the assignment to us in the required form. The customer is nor allowed to pledge by way of security or hypothecate the goods to which title is reserved.
- 4.4 The customer must inform us immediately of any attachment, even if such attachment is imminent or any other prejudice to the right of ownership in writing and to third parties and to us. In the case of attachments, a copy of the return of execution must be sent to us.
- 4.5 If a customer should default on payment, we are entitled to demand return of the goods subject to right of retention of title and to procure direct possession of such goods for us or via authorized persons, irrespective of where the goods are located. The customer is obliged to return to us the goods to

which title is reserved and is also obliged to provide us with the information necessary for us to assert our rights and to surrender documents for this purpose. The request for the goods is not deemed to be withdrawal from the contract. The same applies for the withdrawal of goods subject to retention.

- 4.6 In order to act as collateral for our claims (including future claims) arising from the business relationship, the customer hereby assigns to us all the receivables (including those on open account) with all ancillary rights which arise to him through the resale and other use of the goods subject to retention of title (e.g. combination, processing, installation in a building).
- 4.7 If the sale or other use of our goods subject to retention of title – in whatever state – should be made in conjunction with the sale or other use of objects to which third party rights are attached and/or in conjunction with the performance of services by third parties, the assignment of future claims is limited to the invoiced value of our invoices.
- 4.8 The customer is entitled to collect receivables which have been assigned to us. In the event of payment default, suspension of payments, the application for or opening of insolvency or out of court composition proceedings or other deterioration of the customer's assets, we may revoke this authorization to collect receivables. If so required, the customer must inform us of the receivables which have been assigned and of the parties owing such receivables, and provide us with all information necessary for the collection of these receivables, to surrender to us the associated documents and inform the debtor of the assignment. We are also entitled to inform the customer's debtors of the assignment and require the debtors to pay us.
- 4.9 If the realizable value of the collateral to which we have been entitled in accordance with the above provisions should exceed the value of our receivables by more than 10%, we are obliged to release the excess collateral at our option if so required by the customer.

§ 5 Supplies and service

- 5.1 Partial deliveries are only permitted to a reasonable extent. We may invoice partial payments to a reasonable degree. We reserve the right to correct orders so that they comply with packaging units. The order is deemed to be completed if plus or minus 10% of the quantity is delivered.
- 5.2 The delivery route, delivery method, packaging and other protection for deliveries are at our option. Transport risks are borne by the customer in all cases. We are entitled, but not obliged, to insure deliveries in the name and for the account of the customer.
- 5.3 The customer must arrange for any damage and/or loss to be recorded in writing by the carrier immediately on receipt of the goods and claims asserted.
- 5.4 Shipments that are returned to us will only be accepted insofar as the fact that they are being reported to us in advance, in which case the following conditions must be fulfilled:
- The identification that the customer receives when reporting a return shipment to us must be stated on the return documents and
 - All such shipments must be reported in our incoming goods department by means of the freight papers on which this identification number is noted.
- 5.5 The following rules apply to return shipments excepting those for return of defective delivered goods (Sect. 5.4):
- The goods were delivered at most 4 weeks before in case of deliveries within Germany, at most 6 weeks before in the case of deliveries to European customers and at most 8 weeks before in the case of deliveries to overseas customers.
 - The regulations of Section 5.4 apply to reporting, labeling and acceptance of return shipments.
 - Only return goods that are undamaged, unopened and have no additional writing or labels on them – so that these goods can be resold by us – will be accepted.

- d) The return delivery takes place at the expense and risk of the customer.
- e) In addition, a processing fee of 20% of the goods' value will be charged to the customer, whereby this charge shall be at least 30.00 Euros per return shipment. All delivery dates are ex works.

§ 6 Passage of risk and placement of performance

- 6.1 We bear the risk up until the time when the goods are handed over to the mail service or to the carrier or the company charged with organizing the transportation.
- 6.2 The customer also bears the risk before hand-over if he delays the hand-over.
- 6.3 The place of performance for delivery and payment is our company seat in Mörfelden.

§ 7 Time limits

- 7.1 If the customer should be in breach of his obligations of cooperation (e.g. by failure to call off the goods in time and refusal to accept them), we are entitled, at the end of a grace period which has elapsed without performance being made, to take the necessary steps ourselves and to deliver the goods or to withdraw from that part of the supply contract where performance has not been made. Our right to require compensation for breach of duty and compensation in lieu of performance is unaffected hereby. In the case of call-off orders, the customer must take the whole quantity within 12 months.
- 7.2 In the case of goods which we supply but do not manufacture ourselves, supply is subject to timely and correct deliveries to ourselves unless we are responsible for late, incorrect or short delivery.
- 7.3 Force majeure events extend the delivery time commensurably and entitle us to withdraw from the contract in whole or in part. Strikes, lockouts, disruptions of operations or other unanticipated circumstances for which we are not responsible and which materially impede delivery or render delivery impossible are of equal ranking with force majeure. This also applies if the above-mentioned circumstances occur during a delivery delay or at a supplier.
- 7.4 If the time period or an agreed date is exceeded, the customer has the right to require us to state within two weeks whether we are withdrawing from the contract or wish to deliver within a reasonable grace period. If we fail to provide a statement, the customer may withdraw from the contract in so far as performance is without interest to him.

§ 8 Liability for defects

- 8.1 The goods supplied are free from material defects if they comply with the product description or, in so far as no product description is available, comply with the relevant state of the art. We reserve the right to make changes in design and/or workmanship which do not prejudice the fitness for use or value of the goods which are to be supplied; such changes do not justify a complaint for defects. If defects do not prejudice the fitness for use or the value of the goods which are supplied or only prejudice such fitness and value to an immaterial extent, there are no grounds for claims due to defects.
- 8.2 Guarantees relating to the character and durability of the goods which are supplied are only deemed to have been accepted to the extent that we have expressly recognized the guarantee in writing as such. Guarantees which our suppliers have made in written guarantees, in relevant publicity or other product documentation, are not made by us. They obligate only the supplier who made this acceptance of guarantee.
- 8.3 Defects must be noted without delay and are excluded if they are not received by us within 2 weeks of the receipt of delivery. Defects which cannot be ascertained within this period even after the most careful examination must be reported to us without delay and not later than 2 weeks after discovery. We are not responsible for damage due to breakage of

glass during transportation caused after the transfer of risk. Breakages with a value of up to and including € 20.00 will not be replaced.

- 8.4 If the goods which were delivered should exhibit defects or if they fail to comply with a warranted property, we will, at our option, either rectify the defect free of charge or replace the goods by defect-free goods (subsequent performance). The customer must allow us, or a person authorized by us, the time and opportunity for such actions. If this does not occur or if modifications or repairs are undertaken to the object which is the subject of the complaint, we are released from liability for the defect.
- 8.5 If subsequent performance should fail or if subsequent performance is not made within a reasonable grace period imposed on us by the customer, the customer may require a reduction in price or withdraw from the contract. The purchaser cannot require reimbursement for his expenses incurred to no effect.
- 8.6 Claims by the customer for expenditure necessary for the purpose of subsequent performance (Clause 8.4) or reversal after withdrawal from the contract (Clause 8.5), especially transportation, shipping, labor and material costs are excluded in so far as the expenditure arose because the goods were installed in a location difficult to access. The same applies mutis mutandis if the goods which were delivered were installed in a location outside the Federal Republic of Germany.
- 8.7 Damage which occurs through incorrect or defective installation, commissioning, handling, operation or maintenance or through the use of unsuitable apparatus or apparatus other than the specified apparatus do not give rise to any grounds for claims for defects.
- 8.8 The time limits specified by law for the assertion of claims for defects applies. The time period commences on the day of our delivery. In the event of loss of life, bodily injury or impairment of health and in the event of gross or intentional neglect of duty on our part and in the event of fraudulent concealment of a defect or if properties have been warranted, the normal statutory prescription periods apply.
- 8.9 For the remainder, Clause 9 applies for claims for compensation. Additional claims by customers for defects are excluded.

§ 9 Compensation

- 9.1 We accept liability for compensation and reimbursement of expenditure incurred to no effect (§ 284 of the German Civil Code) for reason of breach of contract or non-contractual obligations (e.g. for reason of default or tortious acts) only in the case of intent or gross negligence; in the case of culpable loss of life, bodily injury, fraudulent concealment of a defect or acceptance of a warranty as to properties or under the German Product Liability Act (Produkthaftungsgesetz) we only accept liability for personal loss or for damage to property in the case of objects used for private purposes.
- 9.2 In addition we accept liability for breach of material contractual obligations also in the event of ordinary negligence. However, in this case our liability is limited to damage which could have been reasonably foreseen at the time of conclusion of the contract and which is typical under the contract.
- 9.3 In the case of loss caused by delay and in the event of ordinary negligence, we only accept liability amounting to 5% of the purchase price agreed with us.
- 9.4 The purchaser has to notify us immediately in writing about potential consequences of delay.
- 9.5 The provision above does not cause any change of the burden of proof in the detriment of the customer.

§ 10 Intellectual property rights, confidentiality

- 10.1 We retain ownership and all intellectual property rights of our designs, samples, drawings, technical documentation, cost estimates even if the customer has accepted the costs thereof. The customer may

only use the designs etc. in a manner agreed with us. He may not manufacture the goods without our written consent or cause the goods to be manufactured by a third party.

- 10.2 In so far as we supply goods in accordance with designs specified by the customer, the customer warrants to us that intellectual property rights and other third party rights are not breached by their manufacture and supply. He must compensate us for all losses resulting from such infringements.
- 10.3 The customer must retain confidentiality vis-à-vis third parties in respect of all information not in the public domain which was obtained as a result of this business relationship.
- 10.4 Drawings, pictures, sketches and weights are approximate/conditionally authoritative, save as confirmed expressly and bindingly. The customer guarantees that the documents do not infringe the third party rights of third persons. He has to indemnify us and hold us harmless for any loss damage or costs, including reasonable attorneys' fees, resulting from any third party claim, action or demand.

§ 11 Records

Documents, drawings and pictures supplied by us must not be made available to any third party or reproduced or used for any purpose outside this contract.

§ 12 Provision in respect of electronic business transactions

- If we use a tele or media service within the meaning of § 312e of the German Civil Code for the purpose of the conclusion of a contract for the supply of goods or the performance of services, the customer waives
- provision and demonstration of a system which the customer can use to recognize and correct entry errors before the order is transmitted, and
 - provision of information in respect to
 - the languages in which the contract can be concluded,
 - the steps to be carried out for the contract to be concluded and
 - storage of the contract text after conclusion of the contracts so that it is accessible by the customer.

§ 13 Final provisions

- 13.1 The place of jurisdiction and performance is Mörfelden in so far as the customer is a merchant. However, we are also at liberty to take legal action before the court competent for the customer's legal domicile.
- 13.2 If a provision of these General Terms and Conditions of Business or in other agreements between the customer and ourselves should become invalid, the validity of all other provisions or agreements is unaffected thereby. If a provision of these contractual terms and conditions is invalid, after taking into account the other provisions this provision is to be replaced by a valid provision which comes closest to the economic purpose of the invalid provision.
- 13.3 This contract is governed exclusively by the law of the Federal Republic of Germany. International law, including international conventions on the cross-border sale of goods, is excluded.



Safety instructions

Guarantee/safety of our products

A rigorous quality control ensures that you will receive high quality products without defects from us. If a product should nonetheless prove to be defective, as a matter of course you will receive a cost-free replacement. Because technically demanding components are dealt with, we can offer no guarantee for articles which are technically altered or damaged by the user.

Because it is the responsibility of the user to examine the technical suitability of the desired article, the same applies for specially manufactured articles which are produced according to customer specifications. We accept no liability for events or accidents emerging from improper handling or technical modification of our products by the user.

Safety and health

Pay particularly close attention to the hazard symbols (incl. hazard statements) and safety data sheets (SDS) in your operation and on the packaging of your chemicals. Whenever handling materials designated as hazardous, always use the prescribed personal protective equipment (PPE)!

Chemical compatibility

Due to the wide variety and the different compositions of solvents and substances available on the market, we can assume no guarantee for chemical compatibility. The materials with the best resistance according to the most up-to-date knowledge have been selected for S.C.A.T. products with particular consideration of the requirements for working with aggressive fluids. You may obtain information regarding compatibility with specific substances from the manufacturer of your chemicals or other expert sources.

A continuously updated table about: "Plastics - Chemical resistance to chemicals" is ready for you to download at www.scats-europe.com.

NEW

We would be pleased to offer you consultation during selection of suitable products for your application. The responsibility for the selection of the chemicals used lies with the end user. S.C.A.T. Europe offers no guarantee for the results and assumes no obligation or liability concerning the use of these products as regards their chemical compatibility, or abrasive effects.

Grounding and anti-static

Our products for safe grounding of containers and receptacles are specified for connection to installations with no current or voltage. These and the connection to electrically powered installations or electrically conductive components must only be carried out by qualified personnel! Please also observe the internal safety regulations of your company.

GHS 01
Exploding bomb



GHS 02
Flame



GHS 03
Flame over circle



GHS 04
Gas cylinder



GHS 05
Corrosion



GHS 06
Skull and crossbones



GHS 07
Exclamation mark



GHS 08
Health hazard



GHS 09
Environment




Technical support

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are available through your specialist dealer



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