

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



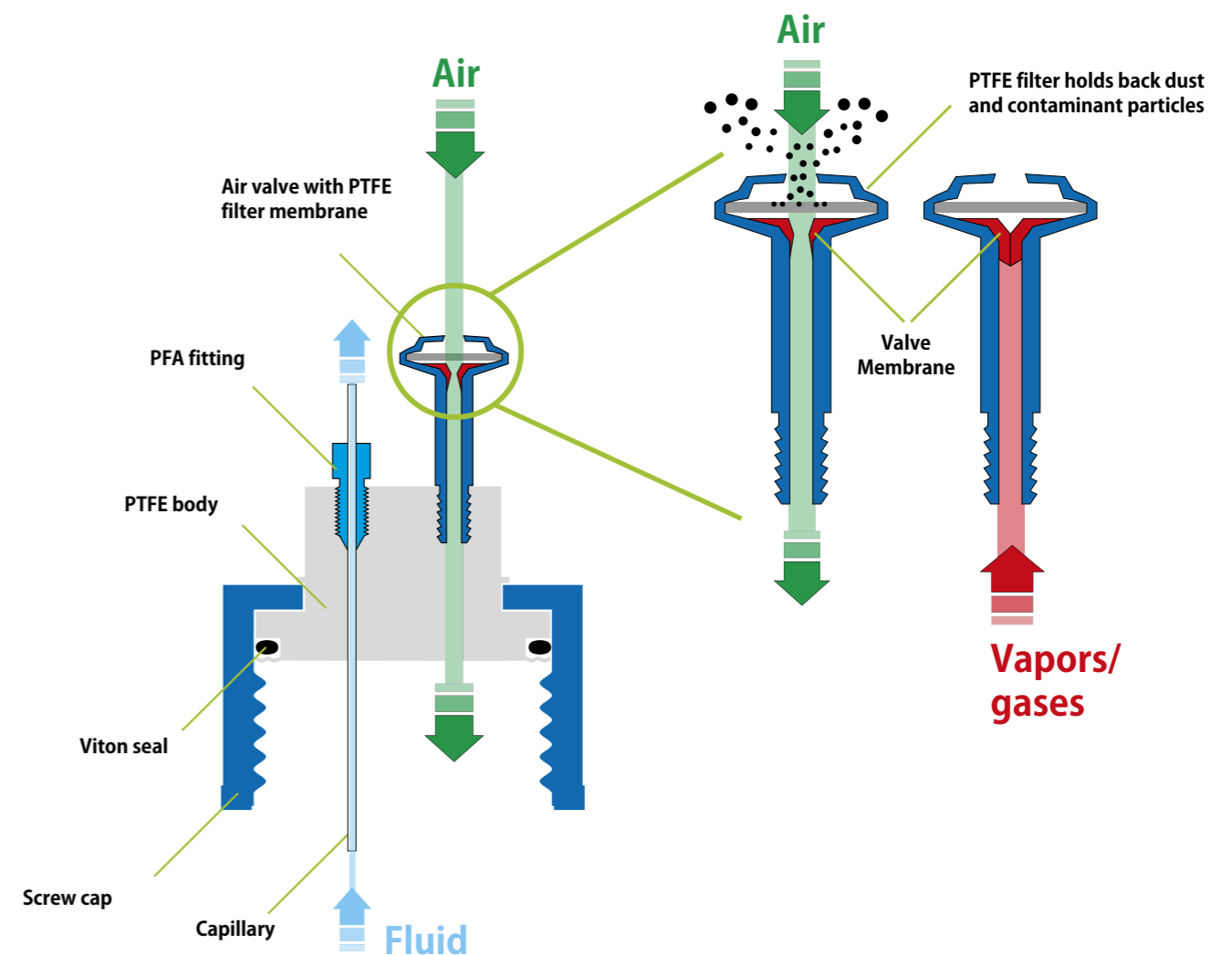
Tel: +49 - (0) 6105 - 30 55 86 - 0
Fax: +49 - (0) 6105 - 30 55 86 - 99
e-Mail: info@scat-europe.com
Web: www.scat-europe.com

EXTRACTION SYSTEMS

SafetyCaps – The technology



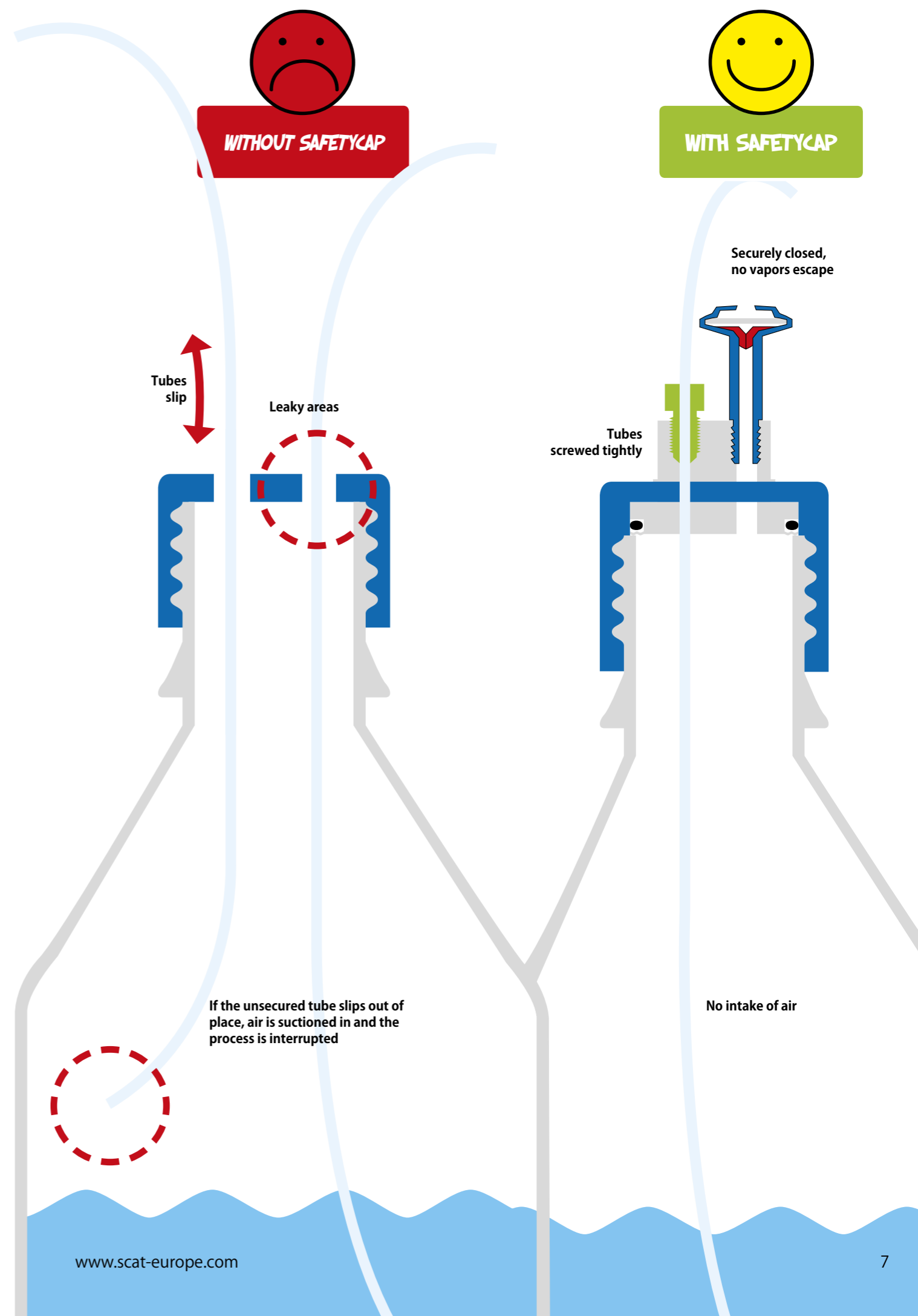
The new, improved air valve combines valve and filter functions. As usual, ventilation occurs during removal; harmful solvent vapors are blocked. At the same time, the valve membrane absorbs dust and contaminant particles from the incoming air. The valve also fits your existing S.C.A.T SafetyCaps without 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.


31 cm



50 cm



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?

S.C.A.T. Europe GmbH
Opelstraße 3
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

www.scat-europe.com

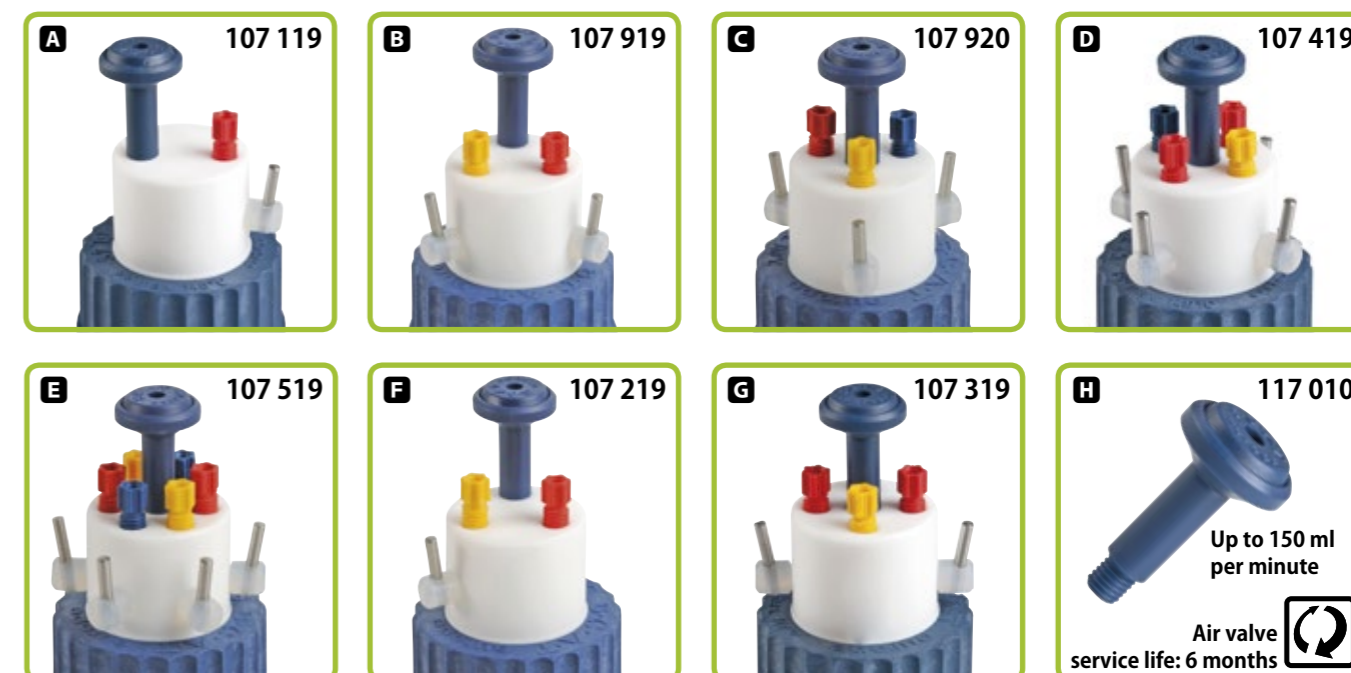


Fig.	Part No.	Description	Thread size	Connector Ø 3.2 mm OD	of which with shut-off
A	107 119	SafetyCap I with shut-off	GL 45	1x	1x
B	107 919	SafetyCap II with shut-off	GL 45	2x	2x
C	107 920	SafetyCap III with shut-off	GL 45	3x	3x
D	107 419	SafetyCap IV with shut-off	GL 45	4x	4x
E	107 519	SafetyCap VI 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	-	-

www.scat-europe.com

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!**



SafetyCaps Special sizes

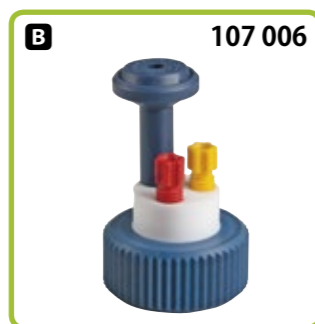


Fig.	Part No.	Description	Thread size	Connector Ø3.2mm OD	of which with shut-off
A	107 005	SafetyCap I (GL 28)	GL 28	1x	-
B	107 006	SafetyCap II (GL 28)	GL 28	2x	-
-	107 512 NEW	SafetyCap III (GL 38)	GL 38	3x	-
C	107 100	SafetyCap I (S 40)	S 40 / GL 40	1x	-
D	107 101	SafetyCap II (S 40)	S 40 / GL 40	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?

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

S·C·A·T
europe

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

I 107 035





» For bottles with 29/32 mm standard ground neck

» Simple loosening & opening with the locknut

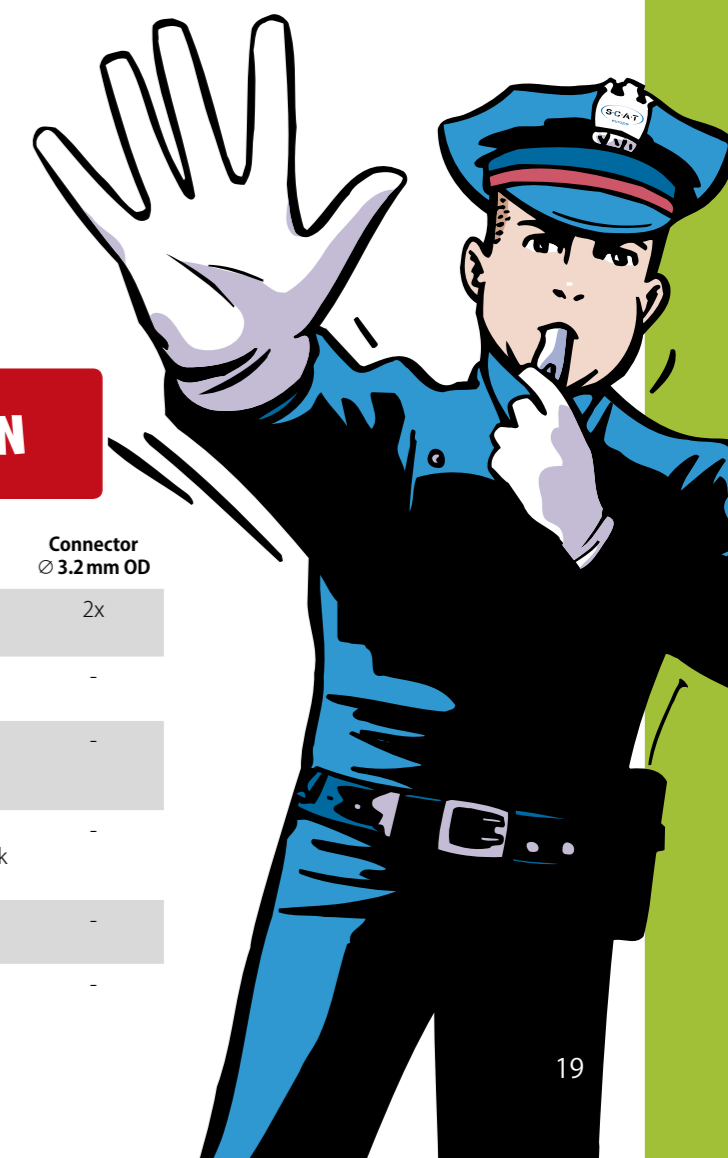
Everybody is familiar with stuck ground neck stoppers: Dried fluids and sticky substances build up on the ground glass; the stopper will not budge. S.C.A.T. closures with locknut allow the stopper to be easily loosened and removed, even after long usage.

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	-





SafetyCaps HPLC sets with bottle



SCOPE OF DELIVERY

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

- » 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

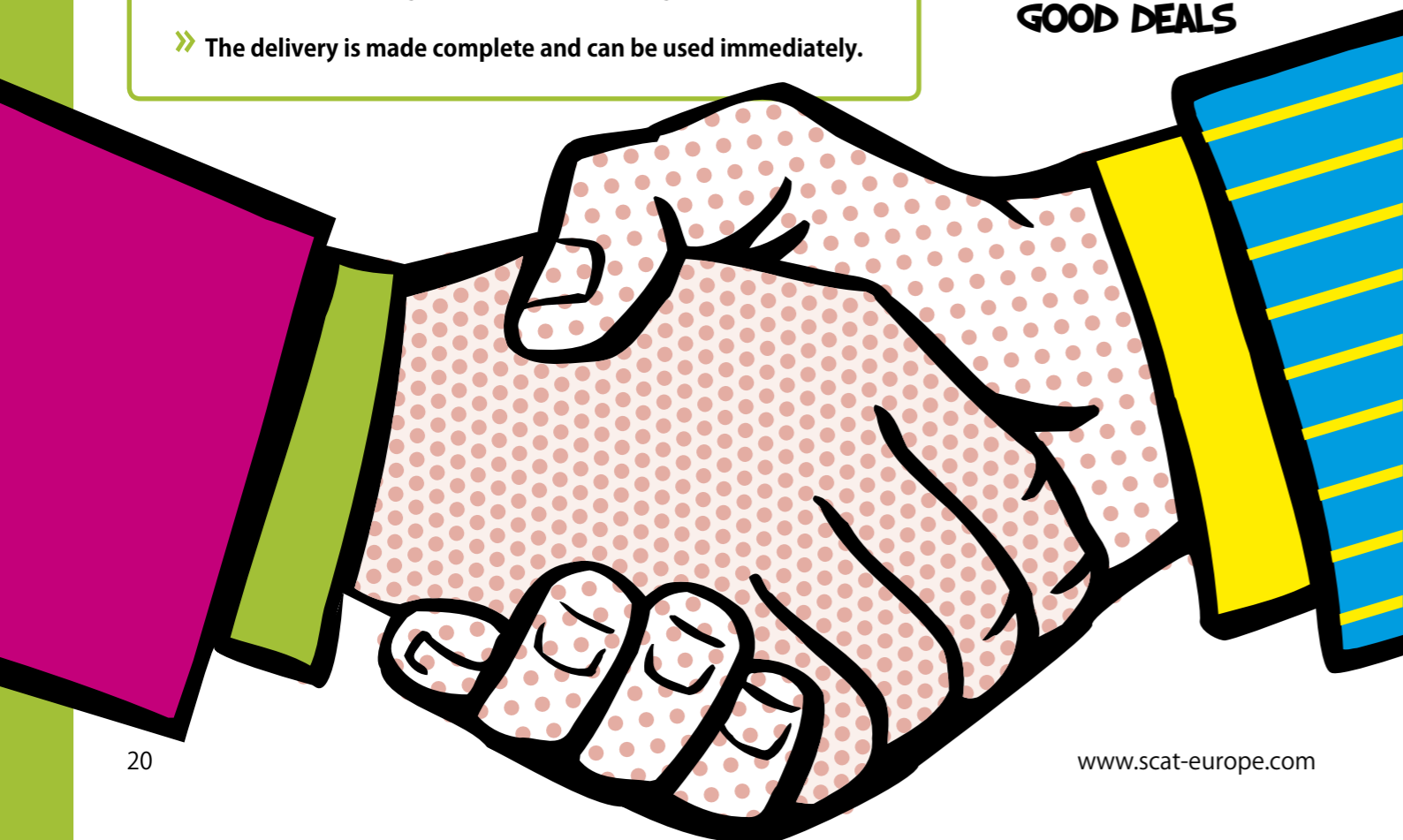


Fig.	Part No.	Description	Connections incl. 1.5 m capillary Ø 3.2 mm OD	Suction filter PTFE	Bottle	Form	Volume
A	107 300	SafetySet HPLC	1x	1x	DURAN® clear glass	Round	1 liter
B	107 303	SafetySet HPLC	2x	2x	DURAN® clear glass	Round	1 liter
C	107 304	SafetySet HPLC	3x	3x	DURAN® clear glass	Round	1 liter
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.

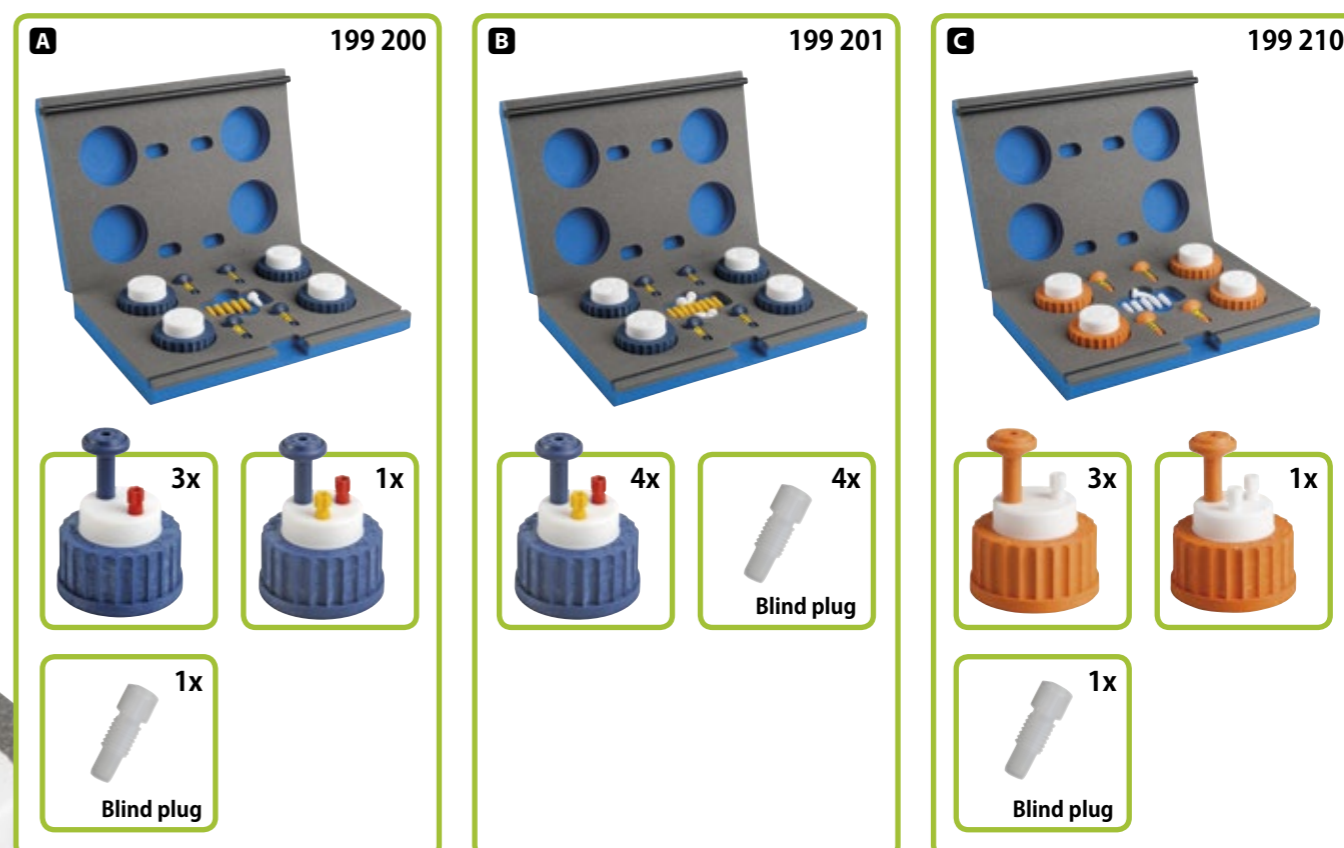
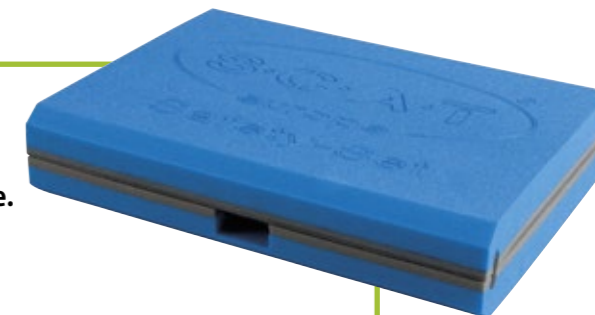
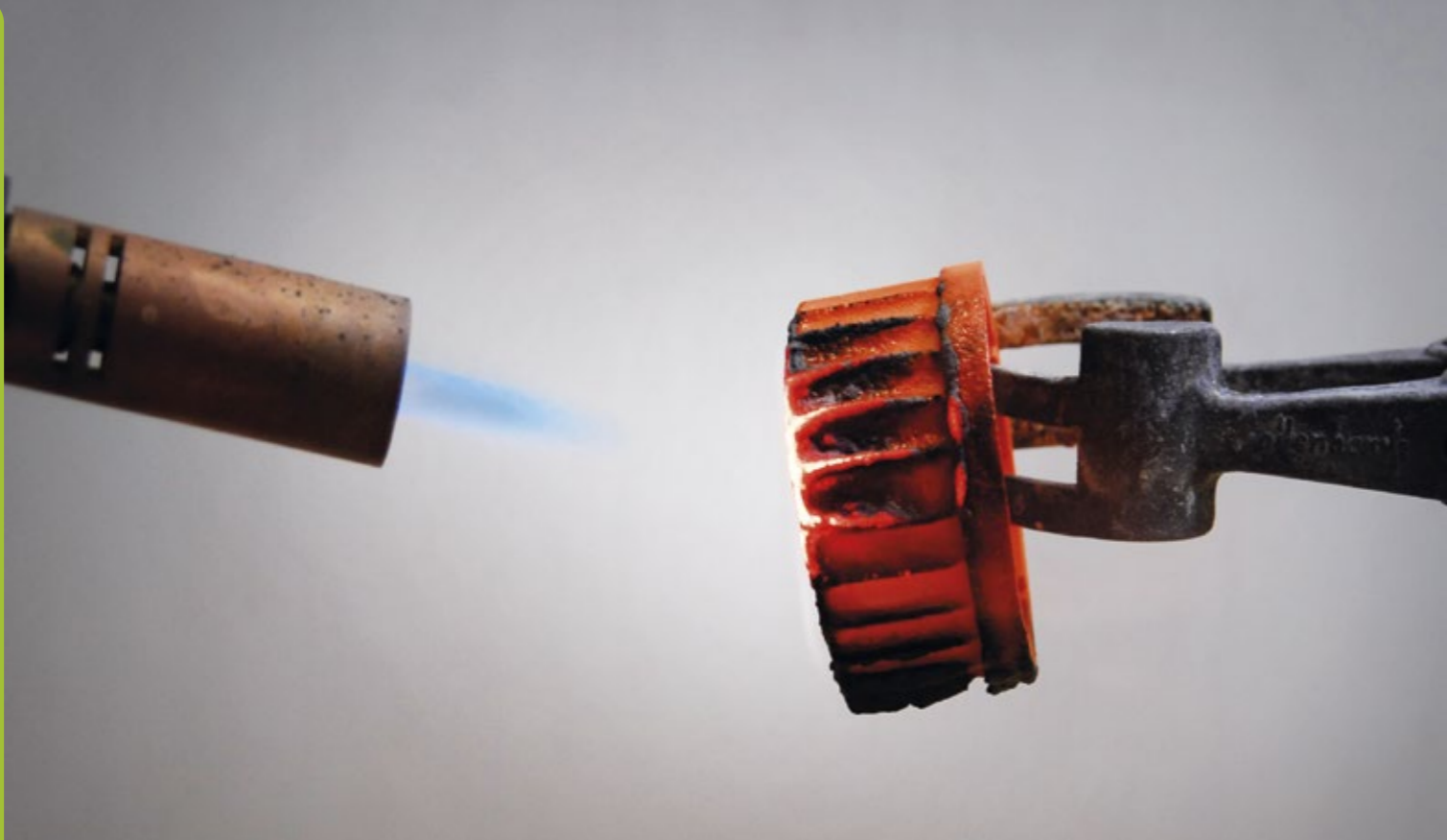


Fig.	Part No.	Description	Inhalt
A	199 200	HPLC SafetySet 1	3x SafetyCap I (107 019) 1x SafetyCap II (107 909) 1x blind plug (160 501)
B	199 201	HPLC SafetySet 2	4x SafetyCap II (107 909) 4x blind plug (160 501)
C	199 210	HPLC SafetySet 3 (fire resistant)	3x SafetyCap I fire resistant (112 019) 1x SafetyCap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

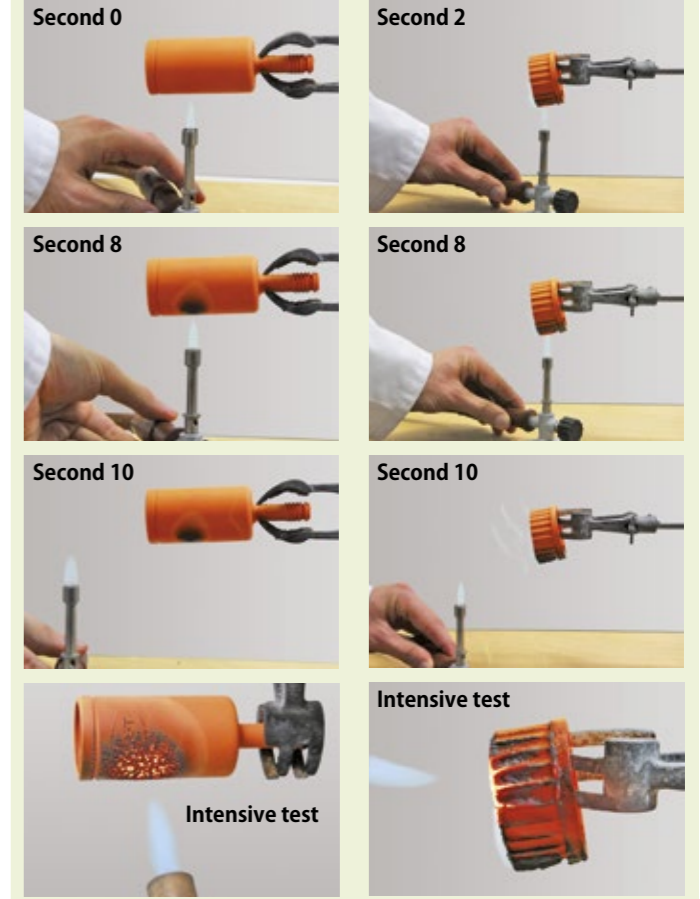
The decisive criteria was flame persistence time between removal of the burner and extinguishing of the sample. To attain the ranking V0, the cotton must not be ignited and the flame persistence duration for each exposure to flame must be less than 10 seconds.

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

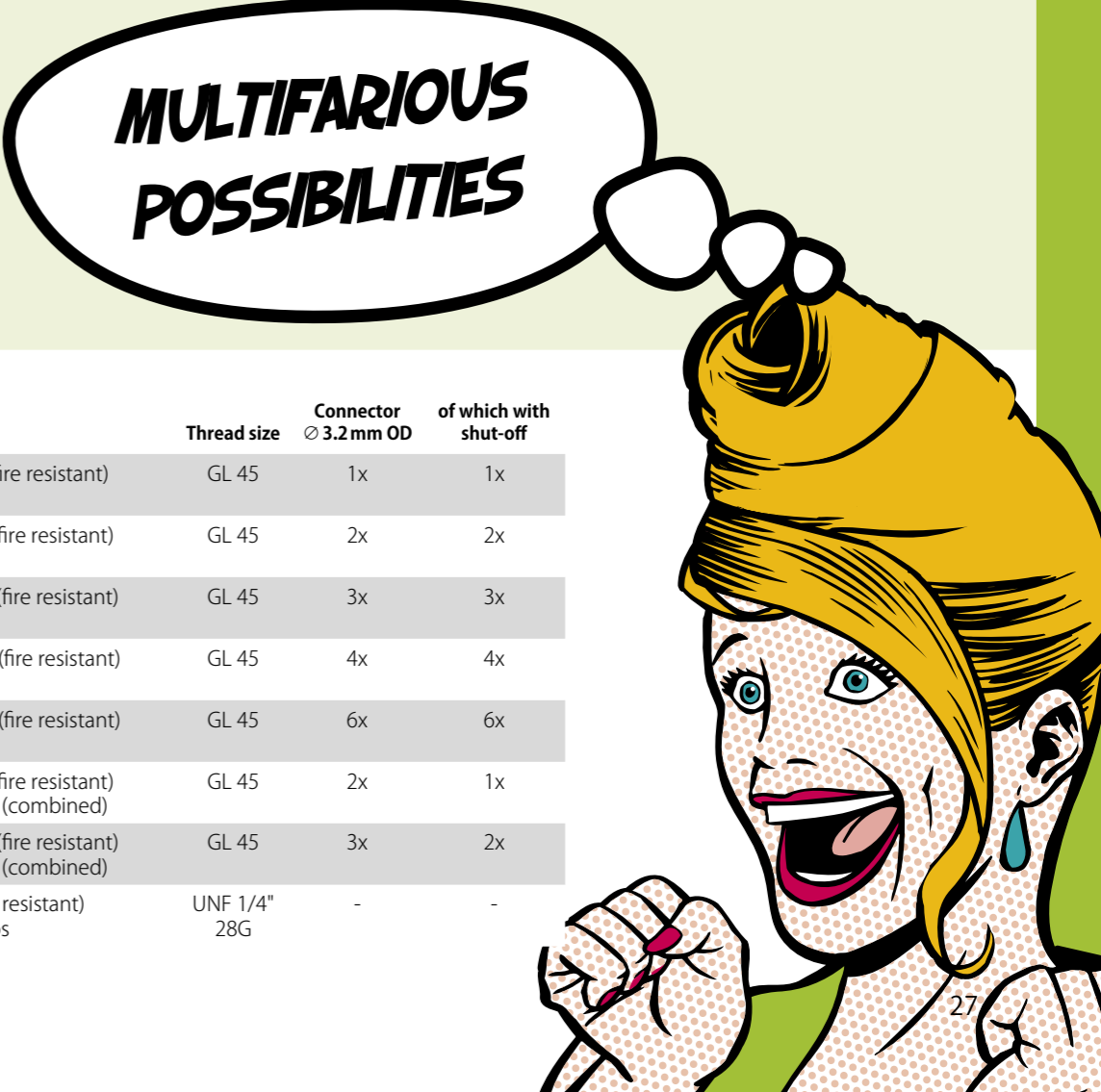
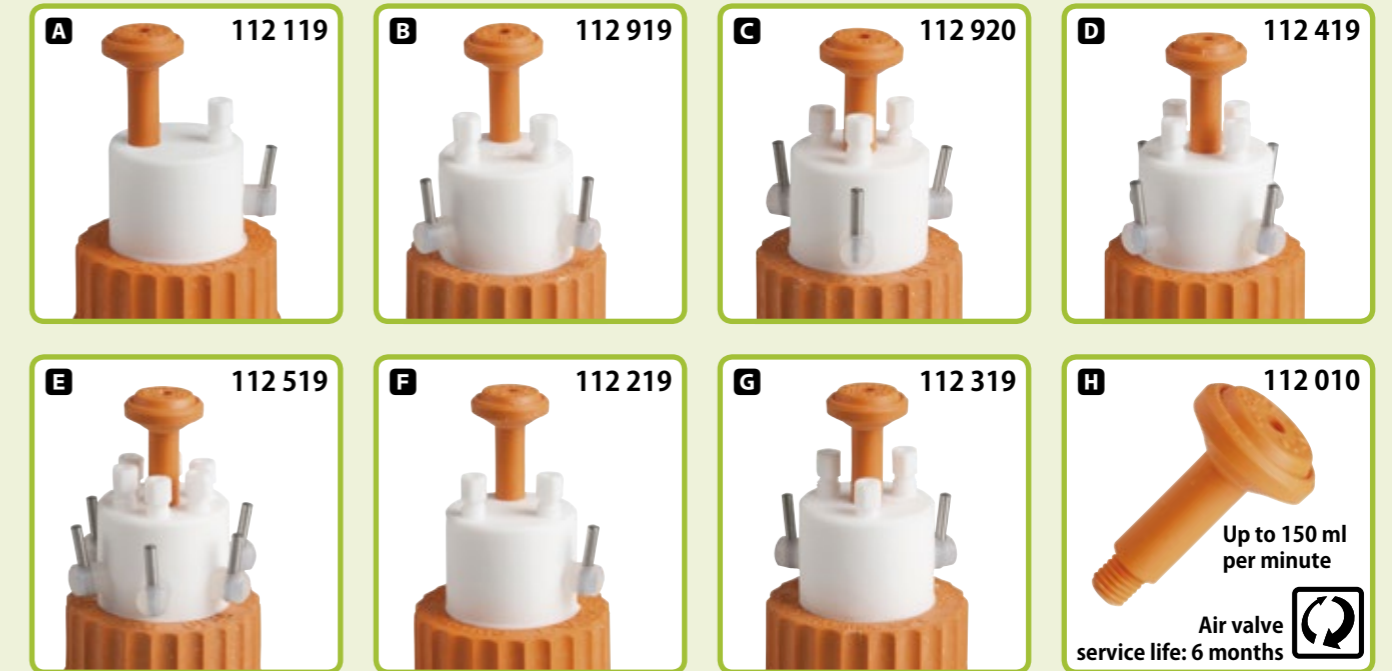


Fig.	Part No.	Description	Thread size	Connectors ∅ 3.2 mm OD (1/8")	Connectors ∅ 4.76 mm OD (3/16")	Connectors ∅ 6.35 mm OD (1/4")
A	112 019	SafetyCap I (fire resistant)	GL 45	1x	-	-
B	112 909	SafetyCap II (fire resistant)	GL 45	2x	-	-
C	112 910	SafetyCap III (fire resistant)	GL 45	3x	-	-
D	112 410	SafetyCap 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	-	-