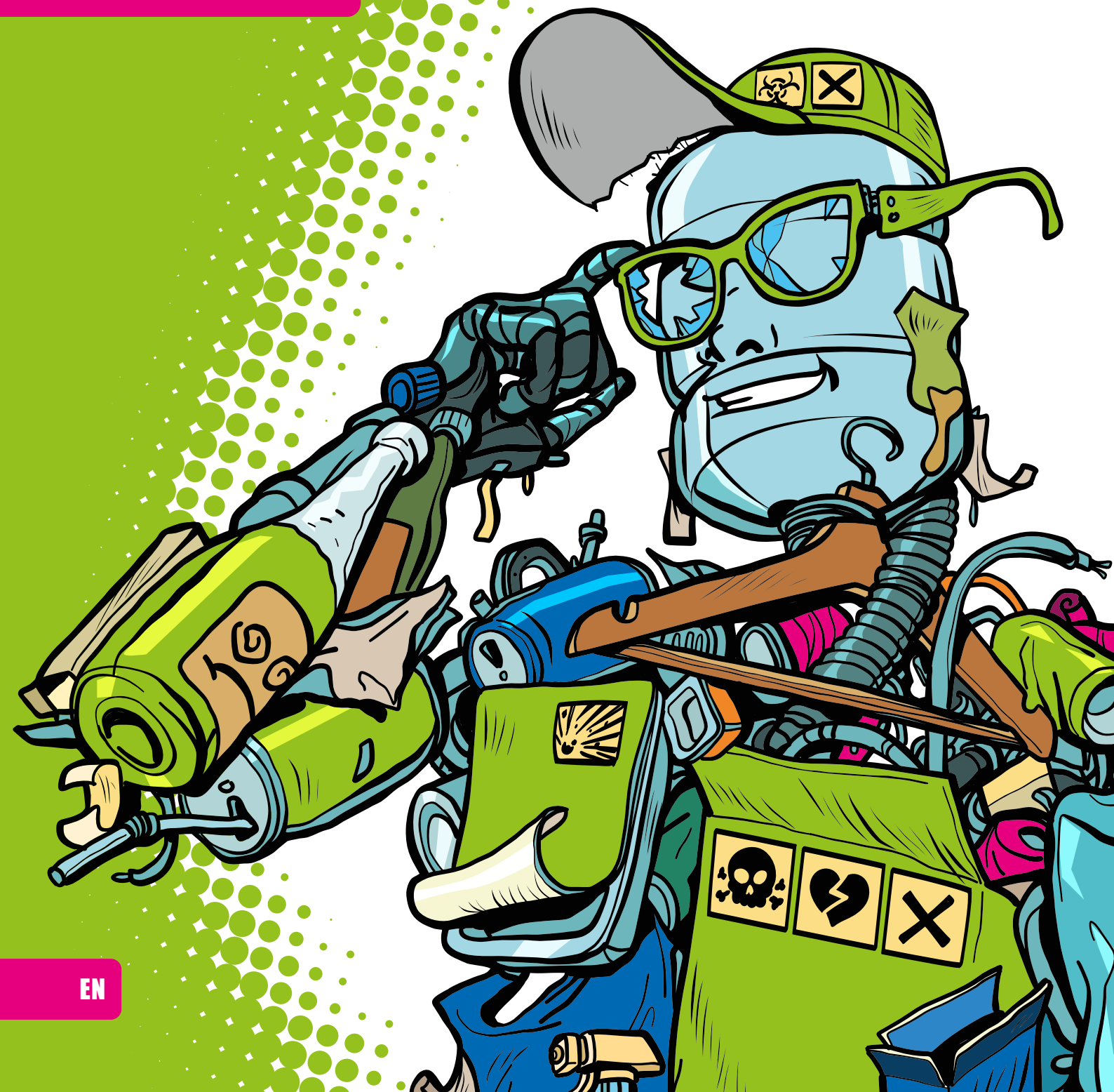
S·C·A·T
SYMLiNE

The Waste Management System

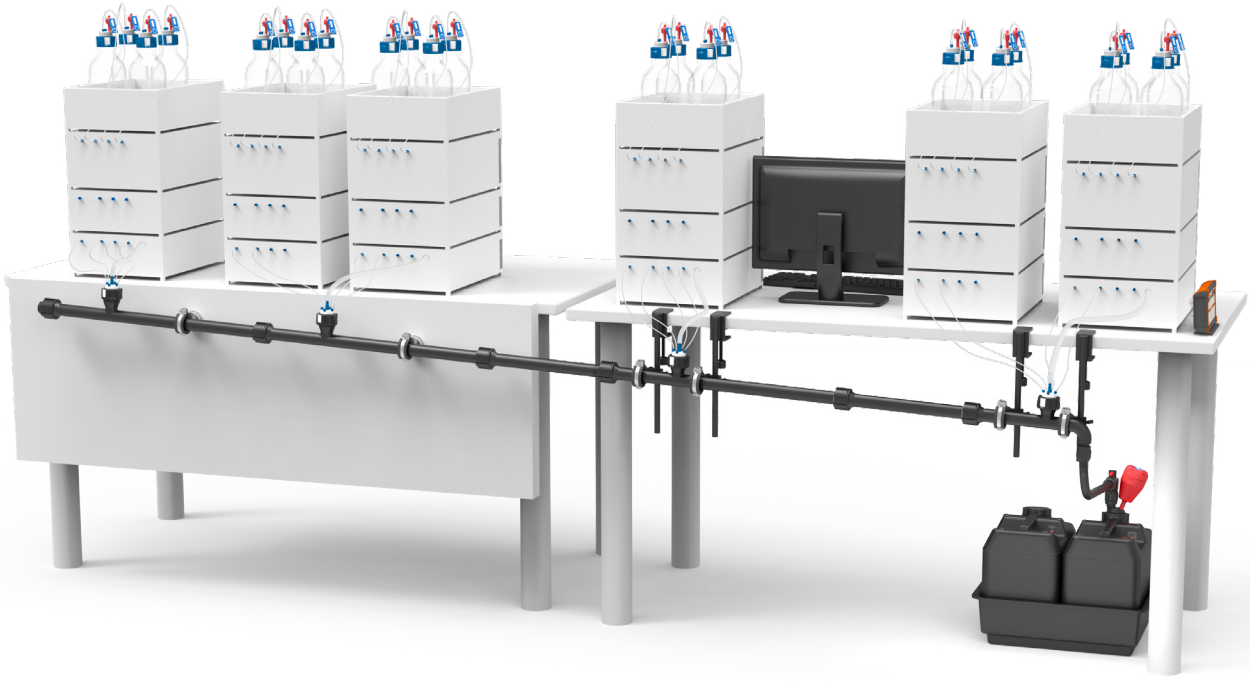
www.SymLine.de



EN

Always stay up-to-date!

Please visit our website: www.symline.de



We bring You Safety and Comfort

Thank you very much for your interest in SCAT!

SCAT stands for **S**afety **C**enter for **A**nalytical **T**echnologies and is your specialist for solvent supply and disposal systems. Our 25-year success story has its roots in our work as a maintenance and service provider for HPLC systems in analytical laboratories.

Close collaboration with our customers has repeatedly shown us the health risks associated with dermal or inhalative exposure to solvents. Additionally, solvent vapors can mix with laboratory air to create a highly explosive and flammable environment—a danger not to be underestimated. With our technological expertise, we set standards for maximum safety in handling solvents. Our mission is also our passion:

"Make your Lab a safer Place!"

Our products not only ensure workplace safety but also contribute to sustainability and cost reduction—whether through high-quality materials or reduced solvent consumption. A key part of our safety concept is the proper disposal of solvents. With **SymLine**, we offer a modular disposal system that efficiently connects HPLC stations—perfect for both existing laboratories and planned new installations.

Since 1998, we have been passionately developing innovative solutions that meet the highest standards. Quality for us is in the details, such as our new pipe fittings that can withstand tensile forces of up to 400 Newtons. These features significantly enhance system tightness and minimize potential user errors.

From the very beginning, we support you with expert advice and find the optimal solution even in complex situations. Our service technicians ensure professional on-site installation and guide you through the entire process.

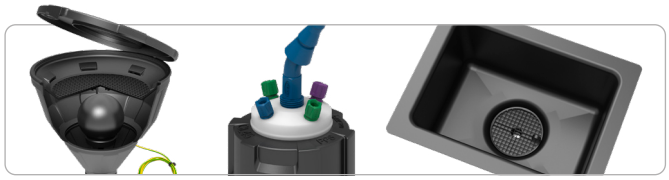
This catalog provides you with an initial overview of our products and safety concepts. On our website, you will always find the latest developments. Even better: Contact us directly: **info@scat-europe.com**

We will provide personalized advice and work together to develop solutions for the safety of your employees.

Yours sincerely,

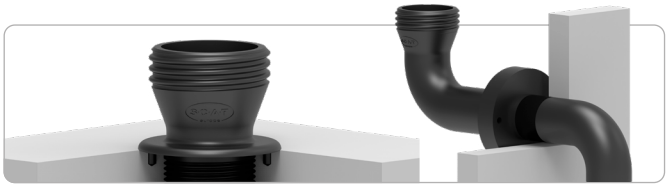
Peter Rebehn
Executive Partner
SymLine is a brand of SCAT Europe GmbH

The System



Filling Units

Filling safely and cleanly.

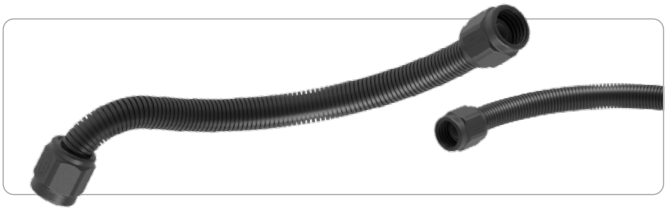


Feedthroughs

The straight Way to Disposal without Detours.

Pipe System

The safe Way to Disposal.



Tubing System

As safe as flexible.

Safety Waste Caps

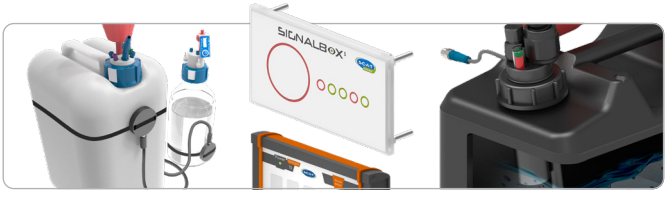
Hazardous Vapors under control.

Ventilation

Complete the Cycle of Disposal.

Containers

Store and collect Chemicals
and liquid Waste safely.



Level Control

Always up-to-date.

Safety Cabinets

The Cabinets with maximum safety.

Handling hazardous Liquids simply and safe!

The SymLine system is involved from the design phase of new laboratory buildings. The modular and flexible system can also be easily integrated into your existing laboratory equipment. Perfectly matched components make working with liquid waste as safe as ever before.

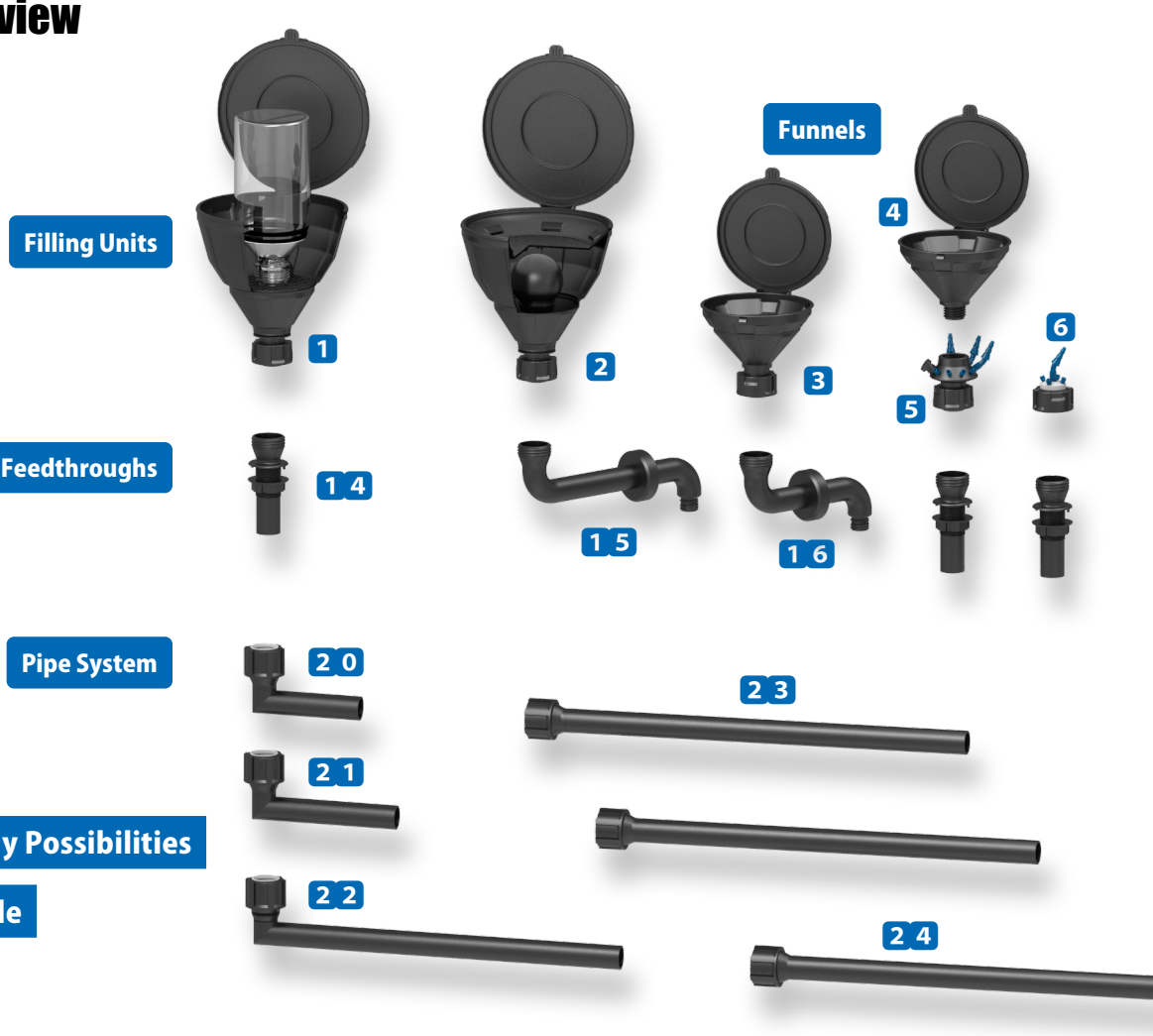
www.scat-europe.com

SymLine - Intro

The right Strategy for liquid Waste.

- Environment and Health Safety
- Sustainable Waste Management
- Modular and expandable System

SymLine - Intro
Component Overview

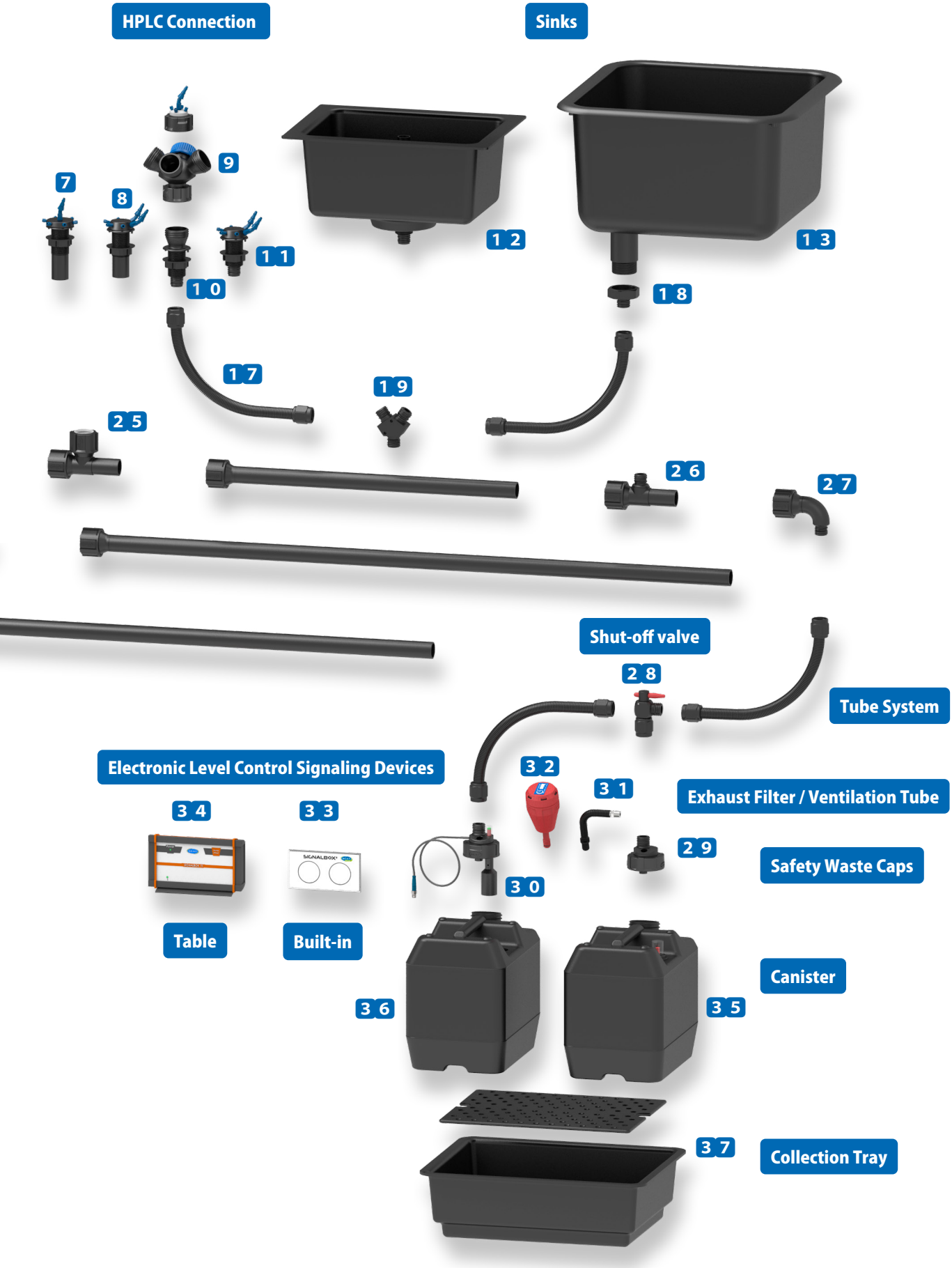


- One System, many Possibilities
- Freely Combinable
- Expandable

SymLine system components

1 317 633 Funnel ARNOLD with sieve
2 317 638 Funnel ARNOLD with ball valve
3 306 980 Funnel MARCO
4 450 120 Funnel LISA-Extension
5 450 045 Safety Waste Cap LISA
6 306 498 Safety Waste Cap
7 106 412 HPLC Table feedthrough pipe
8 106 669 HPLC Table feedthrough pipe **flat**
9 306 509 4-in-1 Collector NICOLE
10 106 455 Table feedthrough tube connection
11 106 616 HPLC Table feedthrough tube connection **flat**
12 118 021 Sink GL 25
13 118 003 Sink G 1 1/2"
14 106 450 Table feedthrough with pipe connection
15 106 601 Rear wall feedthrough for ARNOLD
16 106 612 Rear wall feedthrough for MARCO
17 106 575 FlexTube Pro 1500 mm
18 106 584 Thread adapter sink/tube
19 106 476 Tube connector Y-Distributor
20 106 430 Connection pipe, angled 150 mm
21 106 438 Connection pipe, angled 200 mm
22 106 440 Connection pipe, angled 500 mm
23 106 690 Connection pipe, straight 600 mm
24 106 700 Connection pipe, straight 1200 mm
25 106 712 T-Piece for pipes
26 106 711 T-Piece for pipes with tube connection
27 106 456 Curved element pipe to tube
28 106 475 Shut-off valve
29 306 482 Safety Waste Cap
30 106 480 Safety Waste Cap electr. level control
31 106 490 Ventilation tube
32 410 535 Exhaust filter
33 106 548 Built-in Signalbox²
34 108 087 Table Signalbox
35 108 042 Canister with mechanical level control
36 107 953 Canister
37 117 985 Collection tray with removable base insert

SymLine - Intro
Component Overview



SymLine - Intro
The Installation Systems

Perfect integration, variable and safe

The SymLine pipe and tube system adapts to your laboratory equipment and can flexibly be integrated in the planning phase of new laboratory buildings or in existing work environments. Liquid waste can flow from several work stations via pipe elements and tubes to a central collection point. No hazardous waste containers in the work area! Liquid waste transferred safely and compliantly between the work and storage areas.

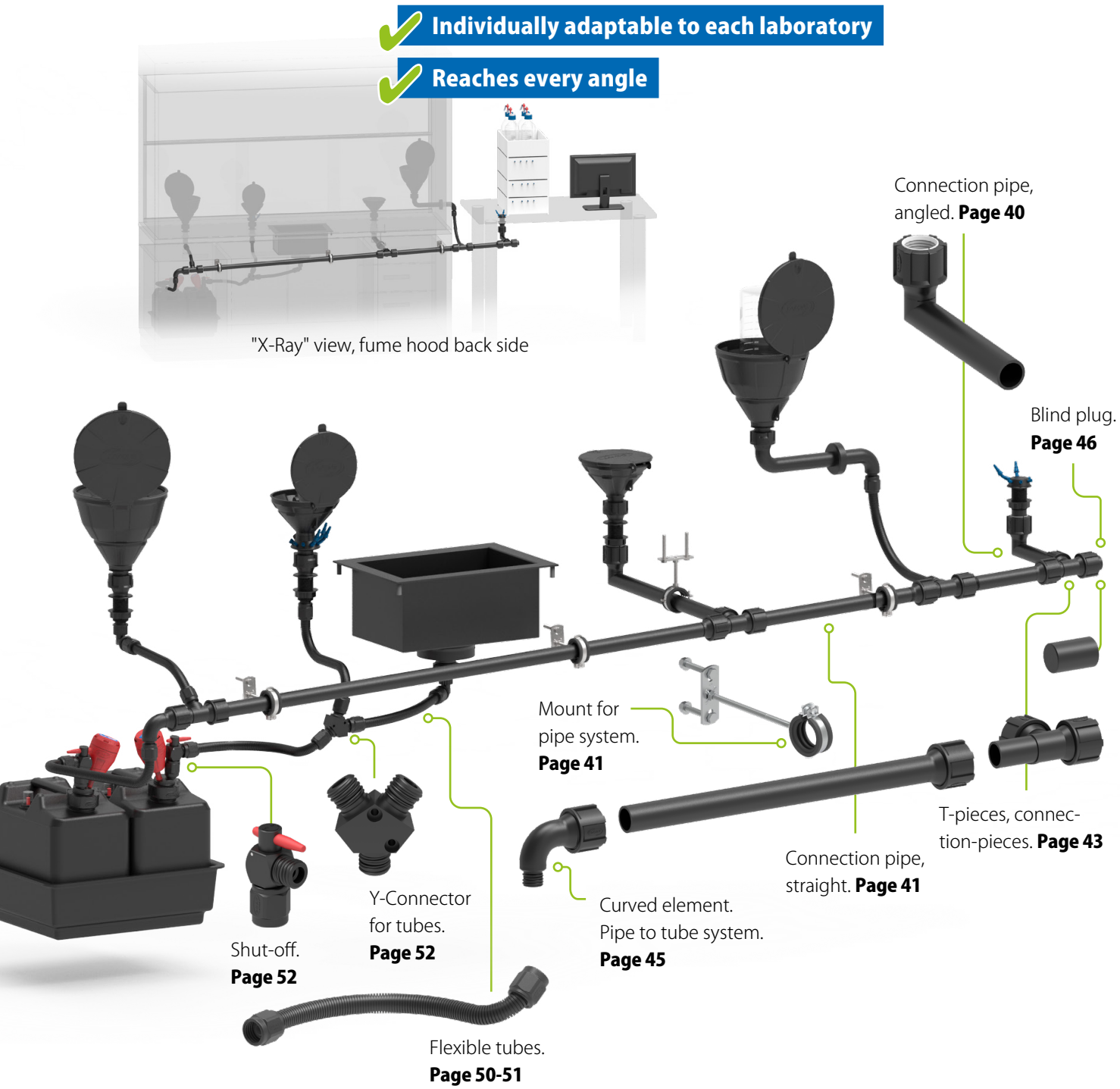
Example illustration, HPLC, table and fume hood

Back side with pipe and tube system

SymLine - Intro
The Installation Systems

Flexible in every detail

You are free to choose when installing and placing your filling units. Whether funnel, collection tray or table feed through, thanks to flexible tubes, pipe connections and numerous connecting pieces, every angle can be reached. Tubes and pipes are available in different lengths and can also be shortened according to your needs.



SymLine - Intro
The Installation Systems

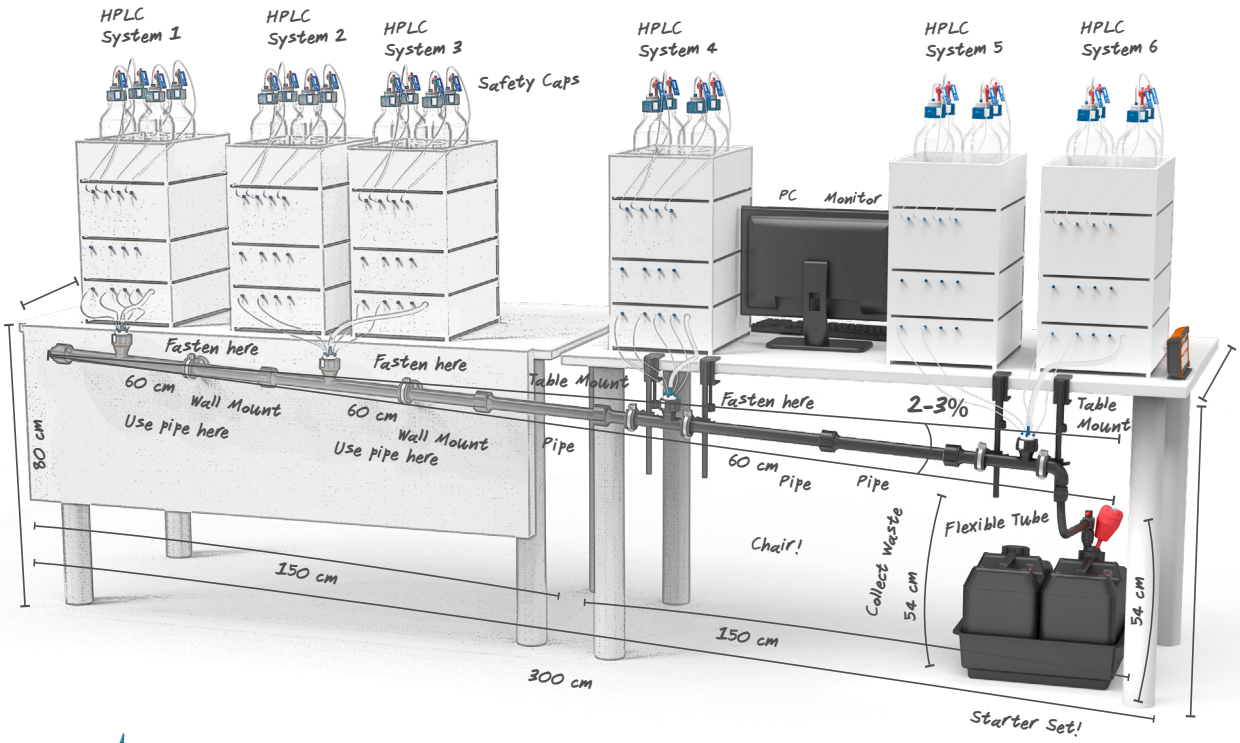
- Consulting & Planning
- Integrated Installation
- Space-saving Assembly

Classic

Filling Units starting from **page 24**. Straight pipes starting from **page 41**.

SymLine - Intro
The Attachment Systems

- Consulting & Planning
- Do-it-yourself Built-on
- Flexible Conversion



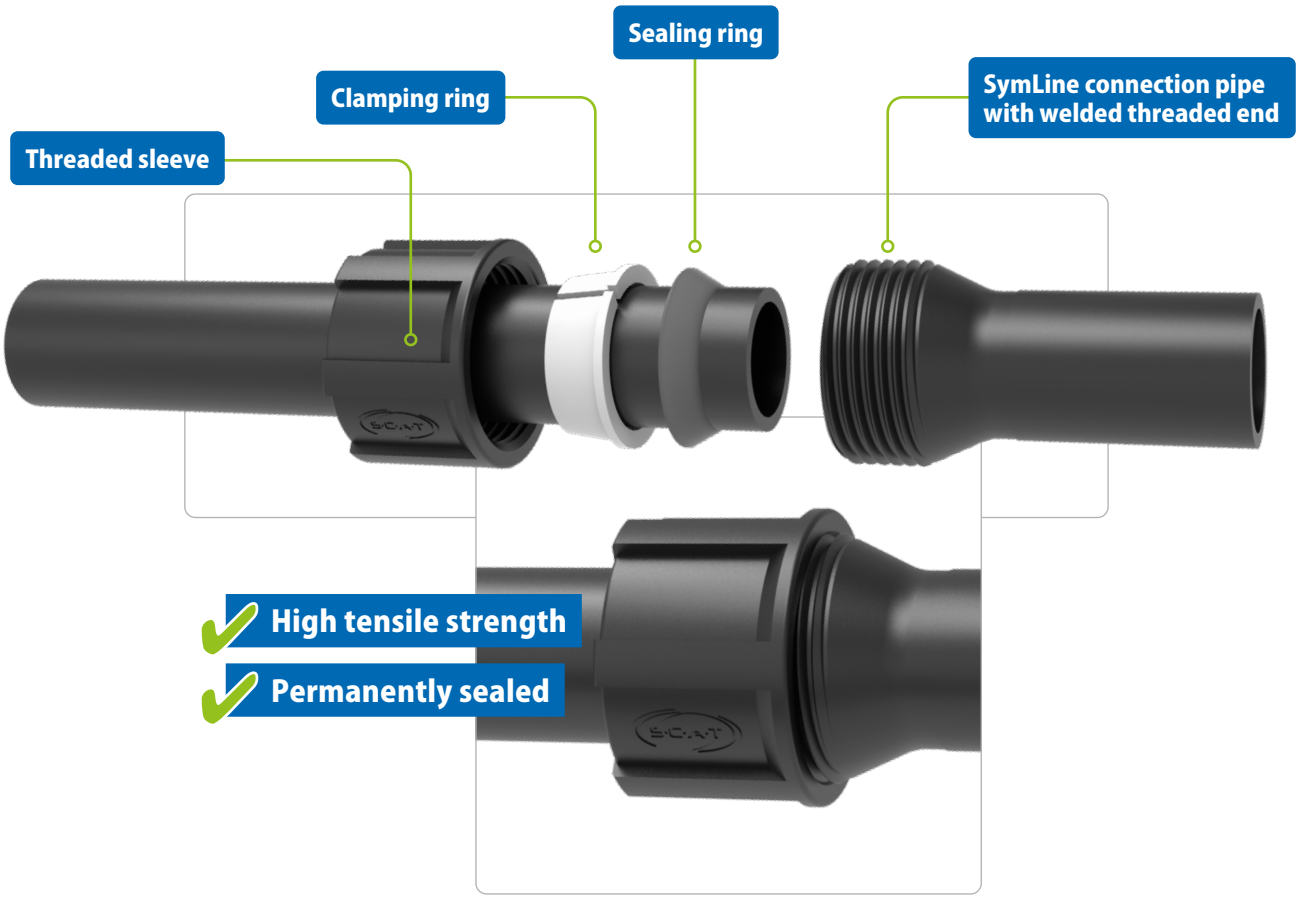
FLEX

Extensions starting from **page 42**. Pipe system accessories starting from **page 47**.

SymLine - Intro
The Pipe System - Safe Screw Connection

The tubular system: safe attachment, optimum flow direction

The SymLine FLEX tube extensions have a funnel-shaped threaded sleeve at one end and a smooth tube opening at the other. In order to tightly interconnect the tubular system, the threaded sleeve, clamping ring and sealing ring are simply pushed over the smooth end of one tube, and this is then firmly screwed on to the threaded part of the following extension piece (i.e. on the other tube). When done properly (tightening torque 10 - 15 Nm), the resulting connection will withstand a tensile force of 400 N. The system allows for optimum flow of waste liquids and prevents leakage.



PE-HD

SymLine material properties

All components made of electrostatic conductive plastic an be earthed and are suitable for voltage equalization, as per TRGS 727. Electrically conductive PE-HD EC displays a discharge resistance against earth of < 10^9 Ω, as per DIN EN 61340-5-1, and is suitable for Zones 0, 1 and 2, as per the German Hazardous Substances Ordinance (GefStoffV), EN 1127-1, DIN EN 60079-10-1 and DIN EN 60079-10-2. It is resistant to chemicals, as defined in SEFA 3 and SEFA 8.

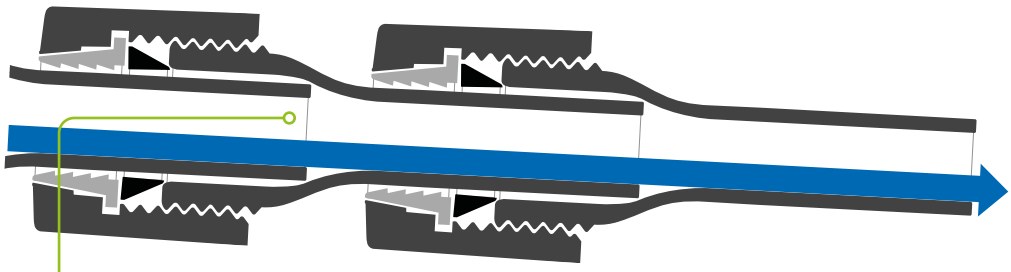
- TRGS 727
- GefStoffV Zone 0, 1 and 2
- DIN EN 60079-10-1
- SEFA 3
- DIN EN 61340-5-1
- EN 1127-1
- DIN EN 60079-10-2
- SEFA 8

SymLine - Intro
The Pipe System - Flow Concept

Pipe system

The principle "smooth tube end runs in funnel-shaped threaded socket" optimally leads waste liquids and prevents leaks. This SymLine design is the global standard for all types of waste disposal cycles and their installations. Trust SymLine - the market leader - for safe disposal.

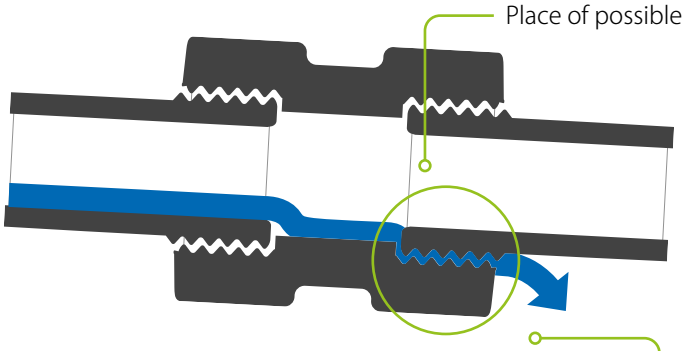
SymLine construction principle - optimal for waste transport



SymLine construction, with optimum liquid flow.
Liquids flow continually downwards, from the smooth pipe end, into the interconnected threaded one.

Cylindrical inner tube and conical outer tube, with sealing ring to ensure a tight connection.

Typical construction principle - liable to leaks!



Smooth pipe ends are interconnected, using connecting sleeves. This results in increased danger of leakage.

SymLine - Intro
The Material

By adding carbon, the plastic turns black and becomes electrostatic conductive.

PE-HD

SymLine material properties

All components made of electrostatic conductive plastic an be earthed and are suitable for voltage equalization, as per TRGS 727. Electrically conductive PE-HD EC displays a discharge resistance against earth of < 10^9 Ω, as per DIN EN 61340-5-1, and is suitable for Zones 0, 1 and 2, as per the German Hazardous Substances Ordinance (GefStoffV), EN 1127-1, DIN EN 60079-10-1 and DIN EN 60079-10-2. It is resistant to chemicals, as defined in SEFA 3 and SEFA 8.

- TRGS 727
- DIN EN 61340-
- GefStoffV Zone 0, 1 and 2
- EN 1127-1
- DIN EN 60079-10-1
- DIN EN 60079-10-2
- SEFA 3
- SEFA 8

The alternative to heavy stainless steel!

Organic solvents, acids, alkalis or other aggressive substances can be collected safely using the SymLine system. There will be no problems of corrosion as they are exist with stainless steel. Heavy stainless steel canisters are very difficult to transport when full. As a result of its light weight, electrostatic conductive plastic is the ideal material for use in the lab. This is why here SymLine products have a considerable advantage.

SymLine - Intro
The Grounding

Proactive protection against risks of ignition.

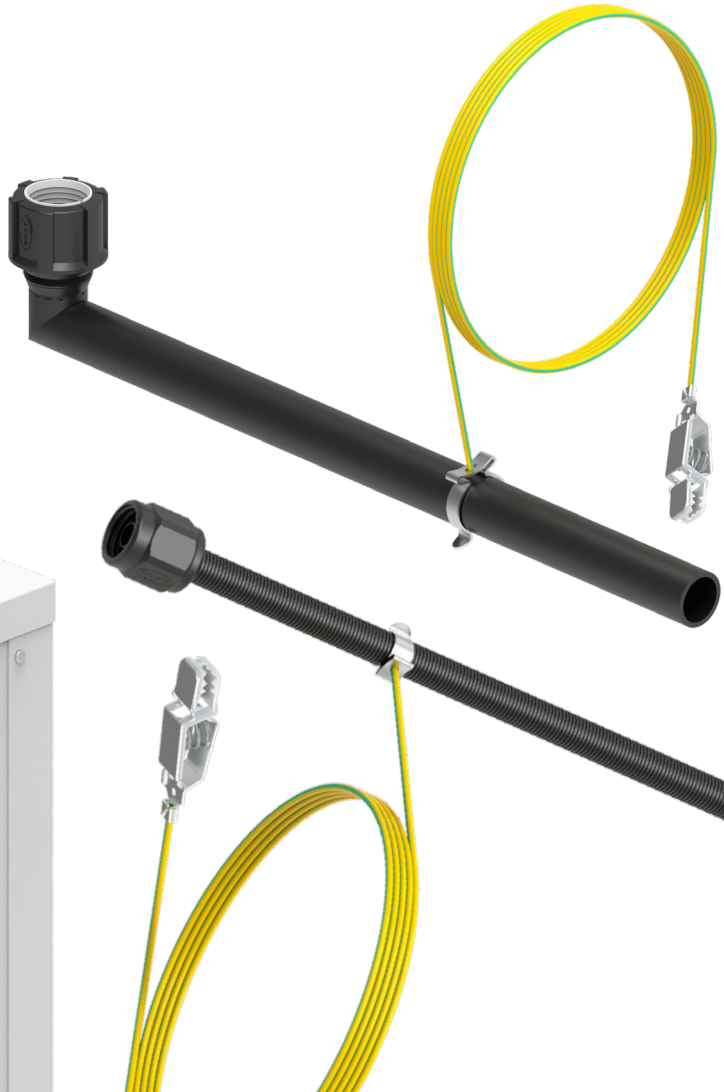
Why is grounding necessary?

Special care is required when collecting flammable liquids. Static charging may occur during drainage which is the cause of static sparking and increased fire risk. SymLine built-in solutions made of electrostatic conductive plastics prevent static charging and can be secured by means of additional grounding connections.

There are a number of directives and regulations that define how to assess and avoid risks of ignition and which proactive measures to take. Of special importance are the German Trade Association Rules for Safety and Health at Work (BGR) issued by the German Federation of Institutions for Statutory Accident Insurance and Prevention, HVBG): BGR 132 - Directive 'Static Electricity'. In terms of contents this corresponds mainly to the international norm CENELEC 50404 and the latest Technical Regulations for Hazardous Substances (TRGS) TRGS 727 (formerly TRBS 2153) - Avoiding ignition risks caused by electrostatic charging. Electrostatic conductive synthetic materials which have a volume resistance > 10^4 Ω & < 10^9 Ω can be used in protective systems which are subject to the ATEX directive provided they are sufficiently grounded.

ATEX compliant!

SymLine uses high-performance synthetic materials, provides an ideal link to safety cabinets and observes the ATEX directives.



SymLine - Intro
Protection from Fumes

How it works

Closed safety systems from SCAT Europe offer effective protection and additionally guarantee economical work in the laboratory.

Connection to System

- The pipe system is connected here.

Level Control

- Knowing in time when the container has reached the maximum fill level.

The Screw Cap

- The screw cap is screwed onto the corresponding canister. These are available in different threads.

Sensor Cabling / Grounding

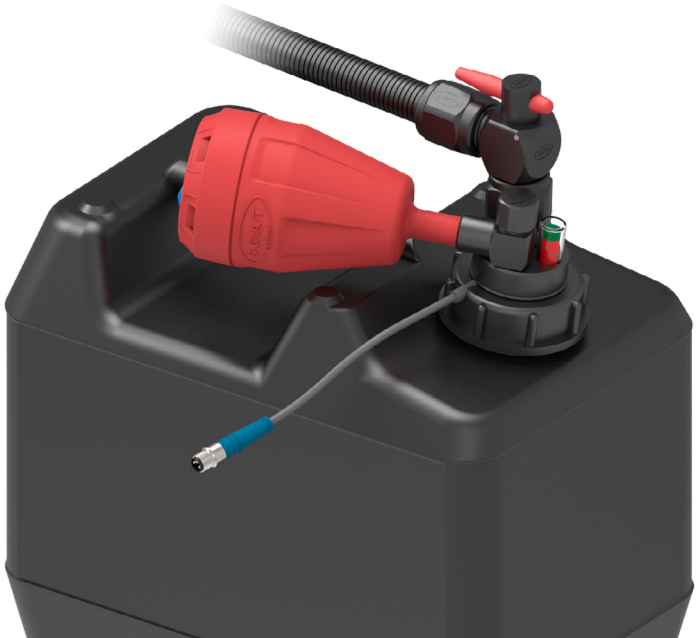
- This cable sends the signal to the Signalbox and at the same time grounds the corresponding component.

The Floater

- From contact with the liquid surface, the float moves the level indicator further up as the level rises.

Immersed Filling Lance

- Ensures that the waste is filled gently and thus protects against electrical charging, even if the waste container used is not conductive.

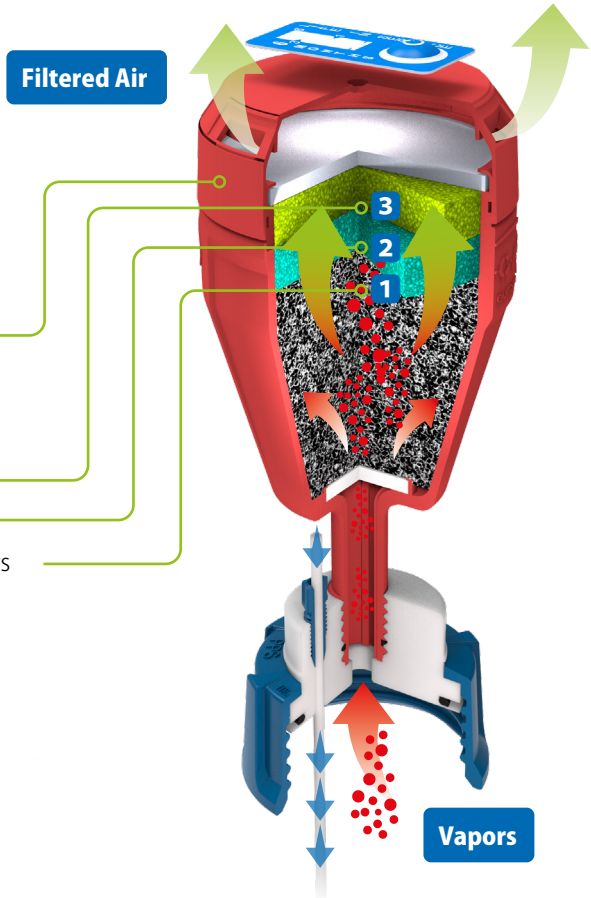


SymLine - Intro
Protection from Fumes

Disposal

Safety Waste Cap

Liquid laboratory waste can consist of a wide variety of substances and tends to produce toxic fumes. Users often do not know which mixtures are stored in their containers. The closed SymLine disposal system provides reliable protection against these toxic fumes. The Safety Waste Cap provides a safe connection to the waste containers. The freely rotatable core made of electrically conductive plastic ensures an ergonomic and secure closure and is suitable for use in potentially explosive areas and is ATEX-compliant! **Exhaust air systems can be connected directly to our Safety Waste Cap in order to be able to remove pollutants via the laboratory exhaust air - the SymLine standard for safe collection of liquid laboratory waste.**



Exhaust Filter

with three types of active carbon.

3. layer - binds acids
2. layer - binds alkalis
1. layer - adsorbs solvent vapors

Exhaust Filter

The SCAT exhaust filters offer optimal protection against the toxic laboratory waste vapors that are produced when there is no laboratory exhaust air. Thanks to the beveled core of the Safety Waste Cap, exhaust filters can be connected without offset adapters. Due to the composition of 3 layers of active carbon, SCAT exhaust filters are suitable for adsorbing solvent vapors and binding acids and alkalis.

SymLine - Intro
Installation Service

- SymLine Service Team
- On-site Advice, Planning and Installation Service
- Certified Installation Training

Installation service

The SymLine installation service by our experienced team guarantees the highest level of safety in demanding installations. We are a master when it comes to the drilling of holes for table and wall feedthroughs in the laboratory furniture equipment and the handling of safety cabinets. We install every system with commitment and precision.

Installation training

SymLine offers trading partners and service teams the opportunity to be certified installation partners. Installation training can take place on site and in our showrooms.
You are interested? Please get in touch with us!

S·C·A·T SYMLINE

+49 (0) 6105 305 586 0
info@scat-europe.com
www.scat-europe.com

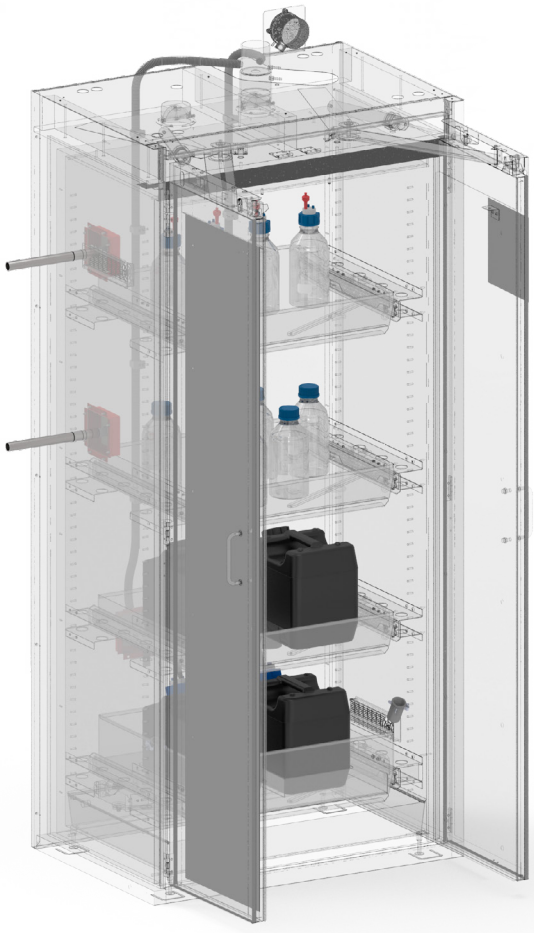
SymLine - Intro
Custom-made Solutions

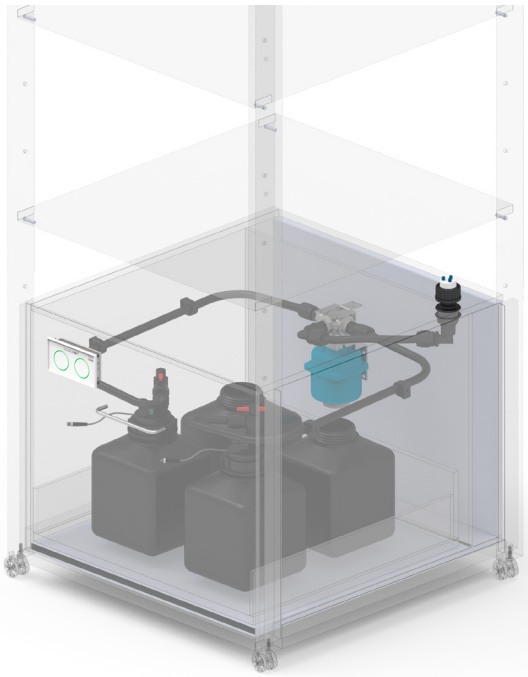
SymLine custom-made products

With the large number of different applications, it can happen that a system of standard components does not meet the demand perfectly. Therefore, we offer customized solutions meeting the customers' individual requirements. This gives the system an unique flexibility and individuality, whereby the highest quality standard is given at all times!

Mobile HPLC rack

Can be used flexibly thanks to castors. Safety Waste Cap with table feedthrough. Waste disposal with level control and automatic switching via 3-way ball valve.





Safety cabinet with HPLC connection for supply and disposal

Tall safety cabinet with steel tube feedthrough for HPLC tubes and capillaries. Through attachments the fire protection is maintained. HPLC supply and disposal without any contact with solvents.

Strong & clever Protection

Filling units are the true heroes of everyday laboratory work when it comes to the safe disposal of liquid waste. Funnels, basins, collectors and table feedthroughs offer the safest method for the user in every situation to quickly get rid of hazardous liquids and send them on their way to disposal.

Filling Units

Filling safely and cleanly.

- **Space-saving Attachment**
- **High working Comfort**
- **Safe Protection against Vapors**

Filling Units
Safety Funnels

Waste Disposal starts here!

The safe and clean solution for disposing of liquid waste directly in the work area.

- PE-HD electrostatic conductive
- Grounding connection (cable and clamp included)
- Hinged lid for safe closure
- Removable dirt sieve
- Can be combined with table and wall feedthroughs or directly on canisters

Feedthroughs

Desktop and wall feedthroughs you will find starting from **page 34**.

A 306 980

Funnel MARCO

- Safety funnel GL 45 (f)
- Funnel diameter = 157 mm OD (140 mm ID)
- Hinged lid
- Removable dirt sieve
- Grounding connection
- Can be combined with table and wall mounts or directly on canisters
- Material = PE-HD-EL

B 420 045

Universal Waste Hub JAN

- Safety funnel GL 45 (f)
- Funnel diameter = 157 mm OD (140 mm ID)
- Hinged lid
- Removable dirt sieve
- Grounding connection
- Material = PE-HD-EL
- 4 Connections capillary
- 3 Connections tube
- Fitting 1.6 mm: 4 pieces
- Fitting 2.3 mm: 4 pieces
- Fitting 3.2 mm: 4 pieces
- 3 Tube connector 5.0 -11.5 mm
- Exhaust filter M
- Blind plugs for all connections

Fig.	Part No.	Description	Material
A	**306 980**	Funnel MARCO, GL 45, electrostatic conductive	PE-HD-EL
	318 960	Funnel MARCO, S 60 / 61, electrostatic conductive	PE-HD-EL
B	**420 045**	Universal Waste Hub JAN, GL 45, electrostatic conductive	PE-HD-EL
	420 060	Universal Waste Hub JAN, S 60 / 61, electrostatic conductive	PE-HD-EL
	420 160	Universal Waste Hub JAN, S 60 / 61, with level control, electrostatic conductive	PE-HD-EL

Filling Units
Safety Funnels

A 317 638

Funnel ARNOLD

- Safety funnel GL 45 (f)
- Funnel diameter = 200 mm
- Hinged lid
- Ball valve
- Removable dirt sieve
- Grounding connection
- Can be combined with table and wall mounts or directly on canisters
- Material = PE-HD-EL

Double Safety

With hinged lid and ball valve.

Funnel ARNOLD

Available for many other container threads. Simply follow the QR code.

B 317 633

Funnel ARNOLD

- Safety funnel GL 45 (f)
- Funnel diameter = 200 mm
- Hinged lid
- Removable dirt sieve
- Ground connection
- Can be combined with table and wall feedthroughs or directly on canisters
- Material = PE-HD-EL

Application example

With laboratory glass bottle.

Fig.	Part No.	Description	Material
A	**317 638**	Funnel ARNOLD, with hinged lid and ball valve, GL 45, electrostatic conductive	PE-HD-EL
	317 621	Funnel ARNOLD, with hinged lid and ball valve, S 60 / 61, electrostatic conductive	PE-HD-EL
B	**317 633**	Funnel ARNOLD with hinged lid, GL 45, electrostatic conductive	PE-HD-EL
	317 634	Funnel ARNOLD with hinged lid, S 60 / 61, electrostatic conductive	PE-HD-EL

Filling Units
Lab Sinks

A 118 003

Lab sink, PP-EL

- G 1 1/2" (m)
- Removable dirt sieve
- Inside dimensions in mm: 400 x 400 x 250 (L x W x D)
- Material = PP-EL

B 106 434

Thread adapter

- G 1 1/2" (f)
- 32 mm (OD)
- Material = PE-HD-EL

C 106 584

Lab sink

- G 1 1/2" (f)
- GL 25 (m)
- Material = PTFE-EL

D 118 021

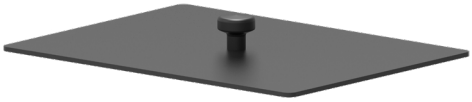
Lab sink

- GL 25 (m)
- Removable dirt sieve
- Grounding connection (cable and clamp included)
- Cover (optionally available) increases the work surface
- Inside dimensions in mm: 400 x 300 x 190 (L x W x D)
- Material = PE-HD-EL

E 118 026

Cover for sink

- Suitable for lab sink 118 020, 118 021, 118 024, 118 025
- Dimensions in mm: 400 x 300 x 30 (L x W x H)
- Material = PE-HD-EL



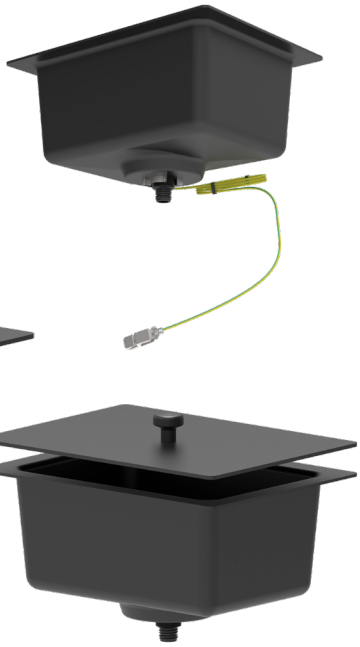
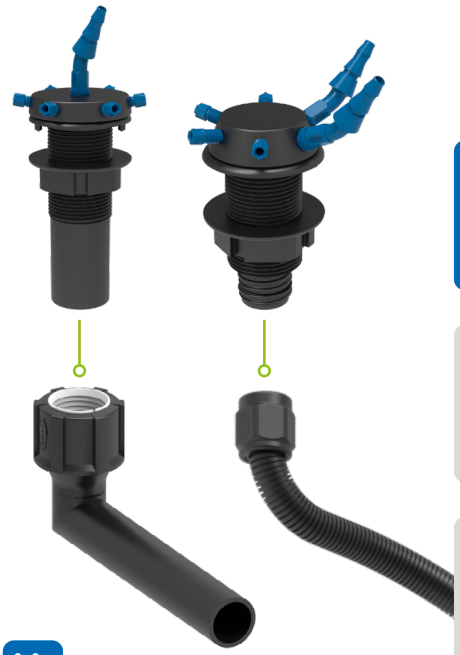


Fig.	Part No.	Description	Material
A	**118 003**	Lab sink, thread G 1 1/2" (m)	PP-EL
	118 005	Lab sink, thread G 1 1/2" (m), RAL7035 light grey, non conductive	PP
B	**106 434**	Thread adapter, G 1 1/2" (f) to (OD) 32 mm	PE-HD-EL
C	**106 584**	Thread adapter for basin, PTFE electrostatic conductive, G 1 1/2" (f) to GL 25 (m)	PTFE-EL
D	**118 021**	Lab sink, thread GL 25 (m)	PE-HD-EL
	118 020	Lab sink, thread G 1 1/2" (m)	PE-HD-EL
	118 024	Lab sink, pipe 32 mm (OD), vertical	PE-HD-EL
	118 025	Lab sink, pipe 32 mm (OD), angled with 2% slope	PE-HD-EL
E	**118 026**	Cover for sink (118 020, 118 021, 118 024, 118 025)	PE-HD-EL

Filling Units
HPLC Connection

All-in-one

Table feedthrough and Safety Waste Collector in one. Thanks to the integrated connections for capillaries and tubing, the installation protrudes only slightly from the work surface.



A 106 412
HPLC-Desktop mount

PE-HD

B 106 669
HPLC-Desktop mount

PE-HD

Pipe or Tube Connection

Pipe System starting from **page 40**.
Tubing System starting from **page 50**.

C 106 616
HPLC-Desktop mount

PE-HD

D 106 546
HPLC-Desktop mount

PE-HD

E 106 629
HPLC-Desktop mount

PE-HD

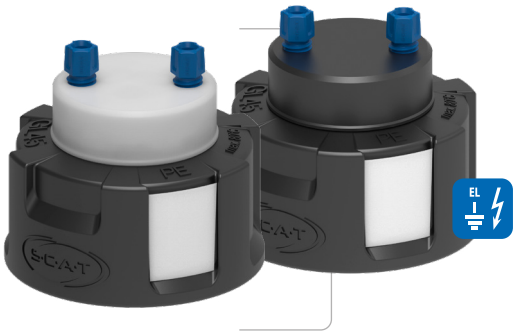
			Fittings included					
Fig.	Part No.	Description	2.3 mm	3.2 mm	Tube Connector	Connection	Pad Diameter	Material
A	**106 412**	HPLC-Desktop mount	6x	6x	1x 5.0 - 11.5 mm	32 mm pipe	53 mm	PE-HD-EL
B	**106 669**	HPLC-Desktop mount	4x	4x	2x 5.0 - 11.5 mm	32 mm pipe	53 mm	PE-HD-EL
C	**106 616**	HPLC-Desktop mount	4x	4x	2x 5.0 - 11.5 mm	GL 25 (m) tube	53 mm	PE-HD-EL
D	**106 546**	HPLC-Desktop mount	-	6x	1x 5.0 - 11.5 mm	G 1/2" (m)	53 mm	PE-HD-EL
E	**106 629**	HPLC-Desktop mount	-	-	1x 6.2 - 7.5 mm 6x 6.0 - 8.0 mm	32 mm pipe	53 mm	PE-HD-EL

Filling Units
HPLC Connection

A 306 489

Safety Waste Collector II

- GL 45, 2x Capillary connections
- Fitting 1.6 mm: 2 pieces
- Fitting 2.3 mm: 2 pieces
- Fitting 3.2 mm: 2 pieces



Safety Waste Collector

SymLine Safety Waste Collector route the waste tubes from your HPLC system directly into the disposal system. A choice of 2, 3, 4, 5 or 7 connections offers you complete freedom. Fittings for different capillary diameters are included in the scope of delivery.

B 306 492-EL

Safety Waste Collector VII

- GL 45, 7x Capillary connections
- Fitting 1.6 mm: 7 pieces
- Fitting 2.3 mm: 7 pieces
- Fitting 3.2 mm: 7 pieces

C 306 498-EL

Safety Waste Collector IV

- GL45, 4x Capillary connections, 1x Tube connection
- Fitting 1.6, 2.3, 3.2 mm: 4 pieces
- 1x Tube connector for tubes with 5.0 - 11.5 mm ID

D 450 045

LISA GL 45

- 4 Capillary connections
- 3 Tube connections
- Fitting 1.6 mm: 4 pieces
- Fitting 2.3 mm: 4 pieces
- Fitting 3.2 mm: 4 pieces
- Tube connector: 3 pieces
- Blind plugs

LISA

Strictly speaking, a Safety Waste Cap. The exhaust air filter connection can be sealed with a blind plug. This means that Safety Waste Cap LISA can also be used as a Safety Waste Collector. LISA can be found on **pages 58-63**.

					Incl. Fittings for Capillary-OD (mm)			Incl. TC. (mm)
Fig.	Part No.	Description	Core Material	Conn.	Ø 1.6	Ø 2.3	Ø 3.2	Ø 5.0 - 11.5
A	**306 489**	SWC II, GL 45	PTFE	2	2x	2x	2x	
A	**306 489-EL**	SWC II, GL 45	PTFE-EL	2	2x	2x	2x	
	306 491	SWC III, GL 45	PTFE	3	3x	3x	3x	
	306 491-EL	SWC III, GL 45	PTFE-EL	3	3x	3x	3x	
	306 493	SWC IV, GL 45	PTFE	4	4x	4x	4x	
	306 493-EL	SWC IV, GL 45	PTFE-EL	4	4x	4x	4x	
	306 494	SWC V, GL 45	PTFE	5	5x	5x	5x	
	306 494-EL	SWC V, GL 45	PTFE-EL	5	5x	5x	5x	
	306 492	SWC VII, GL 45	PTFE	7	7x	7x	7x	
B	**306 492-EL**	SWC VII, GL 45	PTFE-EL	7	7x	7x	7x	
	306 497	SWC II + 1, GL 45	PTFE	3	2x	2x	2x	1x
	306 497-EL	SWC II + 1, GL 45	PTFE-EL	3	2x	2x	2x	1x
	306 498	SWC IV, GL 45	PTFE	5	4x	4x	4x	1x
C	**306 498-EL**	SWC IV, GL 45	PTFE-EL	5	4x	4x	4x	1x
D	**450 045**	LISA GL 45	PTFE-EL	7	4x	4x	4x	3x

Filling Units
Accessories

A 306 509

4-in-1 Collector NICOLE

- The 4-in-1 collector named NICOLE allows you to place up to 4 Safety Waste Collectors on a collected drain
- 4x GL 45 (m)
- 1x GL 45 (f)
- PE-HD electrostatic conductive
- Can be combined with Safety Waste Collectors, table and wall feedthroughs

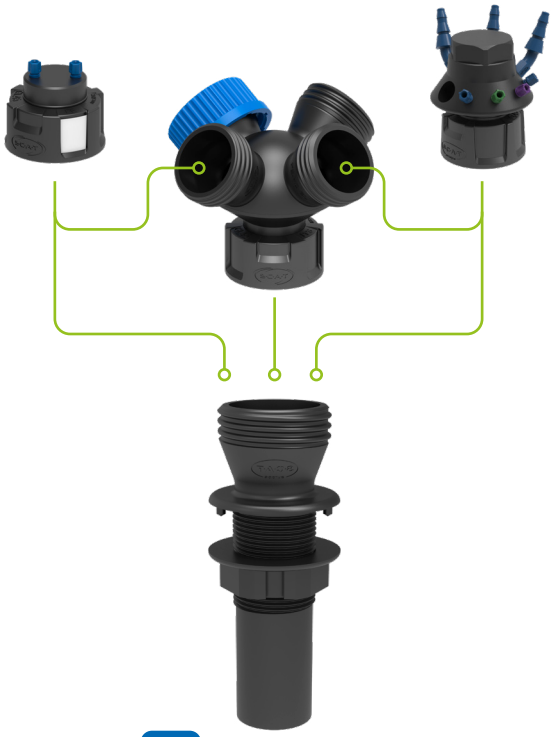


Table Feedthroughs
you will find on **pages 34-35**

Fig.	Part No.	Description	Material
A	**306 509**	4-in-1 collector NICOLE, 4x GL 45 (m) to 1x GL 45 (f), incl. blind cap	PE-HD-EL

Filling Units
HPLC Connection - Special Solutions

B 160 531

HPLC desktop collector

- 6 Capillary connections
- 7 Tube connections
- Fitting 1.6 mm: 6 pieces
- Fitting 2.3 mm: 6 pieces
- Fitting 3.2 mm: 6 pieces
- Tube connector: 7 pieces
- Blind plugs: 12 pieces

C 106 729

Collector-Plug for SymLine pipe system, 32 mm

- 2 Capillary connections
- 2 Tube connections
- Fitting 1.6 mm: 2 pieces
- Fitting 2.3 mm: 2 pieces
- Fitting 3.2 mm: 2 pieces
- Tube connector: 2 pieces
- Blind plugs: 4 pieces

Fig.	Part No.	Description	Material
B	**160 531**	HPLC desktop collector	PTFE-EL
C	**106 729**	Collector-Plug for SymLine pipe system, 32 mm	PE-HD-EL

Filling Units
Accessories

A 160 502
Blind Plug, PFA
- For capillary connection
- UNF1/4" 28G
- Colorless
- Quantity = 5 pieces

B 107 061
PFA fitting, 1.6 mm OD
- For capillary connection
- UNF1/4" 28G
- Green
- Quantity = 5 pieces

C 107 059
PFA fitting, 2.3 mm OD
- For capillary connection
- UNF1/4" 28G
- Violet
- Quantity = 5 pieces

D 107 063
PFA fitting, 3.2 mm OD
- For capillary connection
- UNF1/4" 28G
- Blue
- Quantity = 5 pieces

E 117 808
Tube connector, curved, 5.0 - 11.5 mm ID
- For tube connection
- NPT 1/8"
- Curved
- 5.0 - 11.5 mm ID
- Material = PP

G 117 816
Tube connector, suitable for capillary port
- For capillary connector
- UNF1/4" 28G
- Tube connector
- Straight
- 6 - 8 mm ID
- Material = PP

G 107 680
Blind plug, PTFE-EL, GL 14
- For exhaust filter connection
- GL 14
- Material = PTFE-EL

H 160 523
Blind plug, PTFE-EL, NPT 1/8"
- For tube connector
- NPT 1/8"
- Material = PTFE-EL

Fittings, Tube Connectors and Blind Plugs

Also suitable for Safety Waste Caps. Safety Waste Caps and Accessories starting from **page 56**.

Fig.	Part No.	Description	VE	Material
A	**160 502**	Blind plug for capillary connection	5	PFA
	160 501	Blind plug for capillary connection	10	PFA
B	**107 061**	Fitting for capillary connection, 1.6 mm, green	5	PFA
C	**107 059**	Fitting for capillary connection, 2.3 mm, violet	5	PFA
D	**107 063**	Fitting for capillary connection, 3.2 mm, blue	5	PFA
E	**117 808**	Stepped tube connector, curved, 5.0 - 11.5 mm	1	PP
F	**117 816**	Tube connector, straight, 6 - 8 mm	1	PP
G	**107 680**	Blind plug, for exhaust filter connection	1	PTFE-EL
H	**160 523**	Blind plug for tube connection	1	PTFE-EL


I THINK
I'M THROUGH...
WHAT WILL BE
INSTALLED HERE?

Installation for Professionals and those who want to become one!

SymLine feedthroughs connect filling units from the fume cupboard or laboratory bench with the collection stations for liquid waste located below the work area.

More space in the work area means more cleanliness and safety in daily laboratory work.

www.scat-europe.com

Feedthroughs

The straight Way to Disposal without Detours.

- Table and Wall Feedthroughs
- Pipe and Tube Connection
- Anti-rotation Protection

Feedthroughs
Table Feedthroughs

Cleverly integrated

The table feedthrough can be integrated into almost all work areas and is the perfect connection to the subsequent substructure in fume hoods.

A 106 455

Table feedthrough

- Material = PE-HD-EL
- 1x GL 45 (m)
- 1x GL 25 (m)

PE-HD

B 106 450

Table feedthrough

- Material = PE-HD-EL
- 1x GL 45 (m)
- 1x (OD) Ø 32 mm

PE-HD

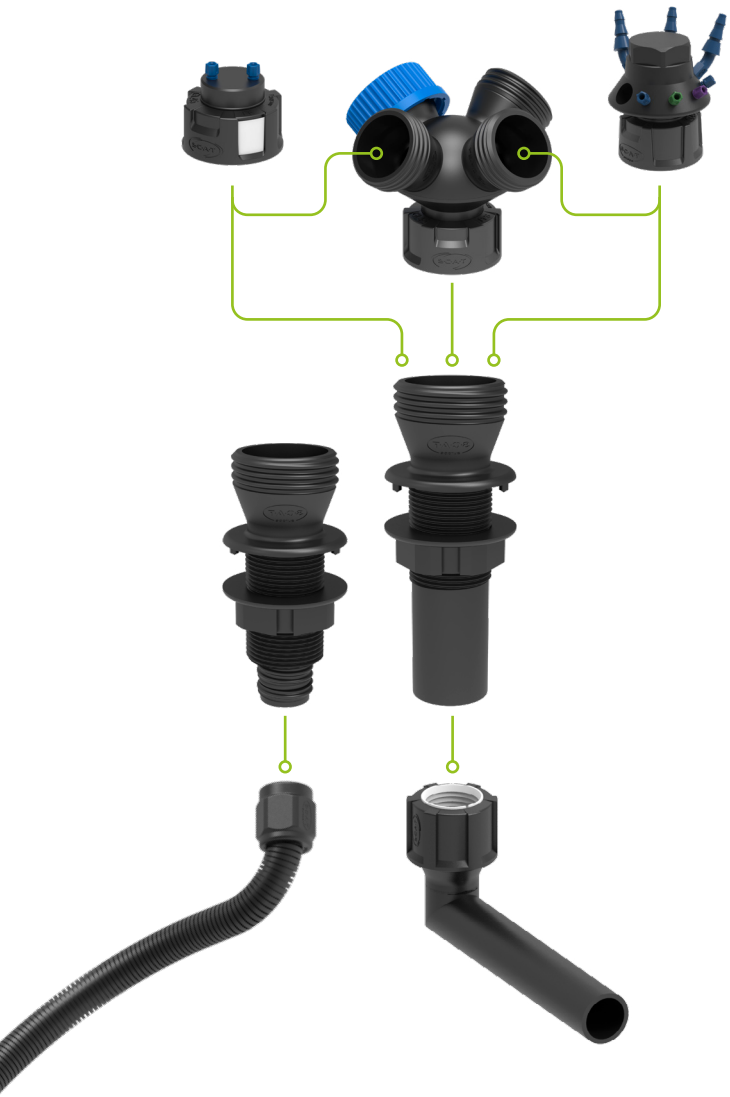
S·C·A·T SYMLINE

Safe Construction

Fixed through anti-rotation protection. Please do not remove them. Without them, the table feedthrough can rotate when handling.

Fig.	Part No.	Description	Material
A	**106 455**	Table feedthrough GL 45 (m) / GL 25 (m)	PE-HD-EL
B	**106 450**	Table feedthrough GL 45 (m) / Ø 32 mm OD	PE-HD-EL

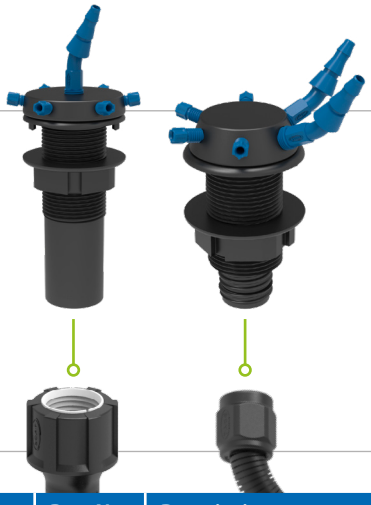
Feedthroughs
Table Feedthroughs



C 106 400

Table feedthrough

- Material = PE-HD-EL
- 1x GL 45 (m)
- 1x G 1/2" (f)



Feedthrougs with direct HPLC Connection

You will find in chapter filling units on **pages 24-31**.

Pipes and Tubes

you will find on **pages 40-53**.

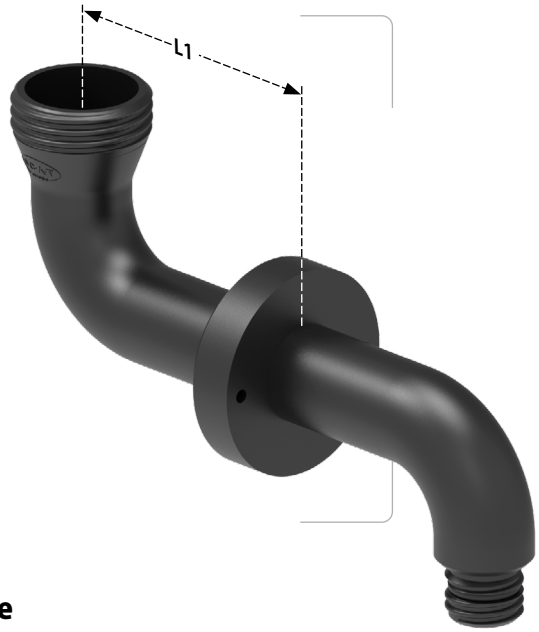
Fig.	Part No.	Description	Material
C	**106 400**	Table feedthrough with G 1/2" ID (f), 33.5 mm OD on GL 45 (m)	PE-HD-EL

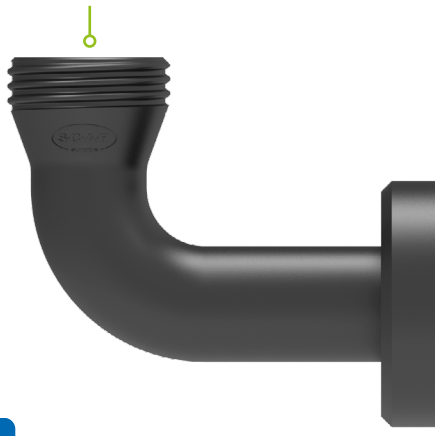
Feedthroughs
Wall Mounts

A 106 612

Rear Wall Mount

- GL 45 (m)
- GL 25 (m)
- Material = PE-HD-EL
- L1 = 99 mm





PE-HD

More free work space

With the rear wall mount, you make optimal use of your work area and there is more space for samples and structures, disposal can take place directly in the fume hood.

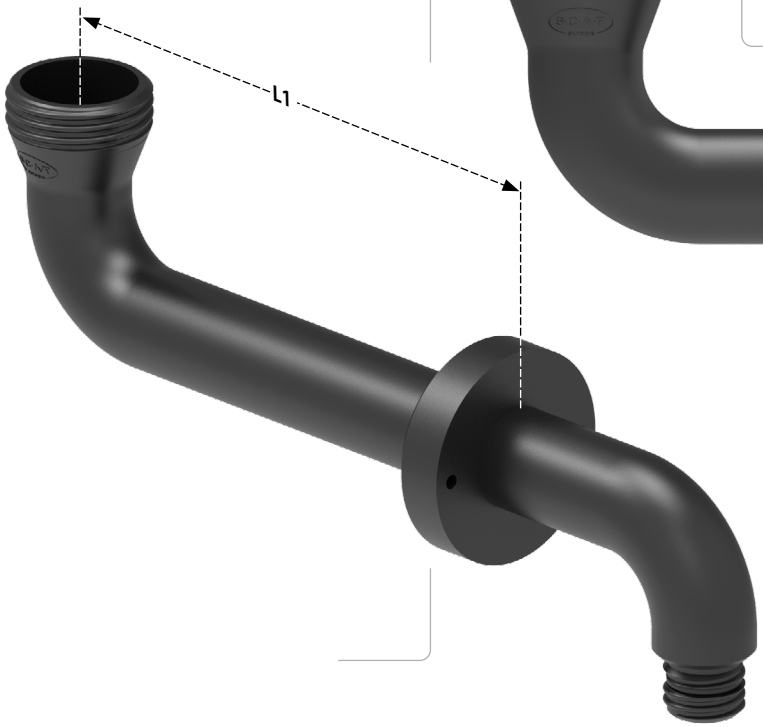
XL Version

B Also suitable for ARNOLD type funnels.

B 106 601

XL Rear Wall Mount

- GL 45 (m)
- GL 25 (m)
- Material = PE-HD-EL
- L1 = 186.5 mm



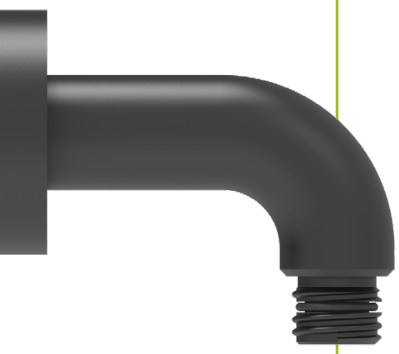
PE-HD

Fig.	Part No.	Description	Material
A	106 612	Rear wall mount, upper thread GL 45 (m), lower thread GL 25 (m), PE-HD electrostatic conductive, incl. mounting flange for rear wall borehole of 34 - 45 mm	PE-HD-EL
B	106 601	Rear wall mount, upper thread GL 45 (m), lower thread GL 25 (m), with mounting-flange, long shaft for funnel ARNOLD (317 633 & 317 638), with two bends of 90° and (OD) 32 mm, PE-HD elec. cond.	PE-HD-EL

Feedthroughs
Accessories

Wall Feedthrough

A The space-saving variant.



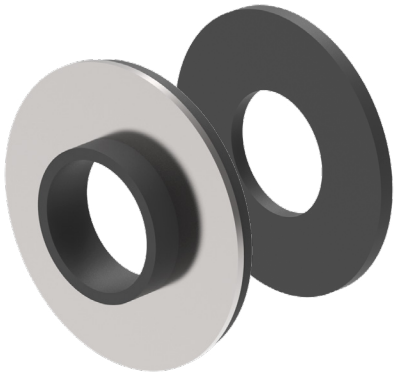
XL Version

B Also suitable for ARNOLD type funnels.

C 121 211

Borehole reduction adapter

- (OD) 54 - 75 mm
- (ID) 35 mm



PE-HD

D 106 680

Angled adapter

- Angled adapter GL 25 (f) to GL 25 (m)
- PE-HD electrostatic conductive - for mounting on desktop mount with GL 25 connection

PE-HD

Fig.	Part No.	Description	Material
C	121 211	Borehole reduction adapter, (ID) 35 mm, (OD) 54 - 75 mm, PE-HD electrostatic conductive	PE-HD-EL
D	106 680	Angled adapter GL 25 (f) to GL 25 (m), PE-HD - for mounting on desktop mount with GL 25 connection	PE-HD-EL

Trust SymLine - The Market Leader - for safe Disposal.

The SymLine pipe systems adapt to your laboratory equipment and can flexibly be integrated in the planning phase of new laboratory buildings or in existing work environments.

Liquid waste can flow from several work stations via pipe elements to a central collection point.

www.scat-europe.com

Pipe System

The safe Way to Disposal.

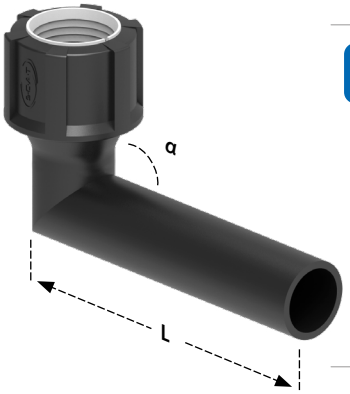
- Individually adaptable to any Laboratory
- Reaches every Corner
- High tensile Strength
- Permanently sealed

Pipe System
Connection Pipes, angled

A 106 430

Connection pipe angled

- 1x (ID) Ø 32 mm
- 1x (OD) Ø 32 mm
- L = 150 mm
- α = 2%
- Material = PE-HD-EL



Connection Pipes, angled, with incline

- Screw connection with ∅ 32 mm inner diameter, end piece with ∅ 32 mm outer diameter
- α = 2% incline of the tube
- PE-HD electrostatic conductive
- Can be combined with desktop mounts, connectors and grounding clip

B 106 438

Coonnection pipe angled

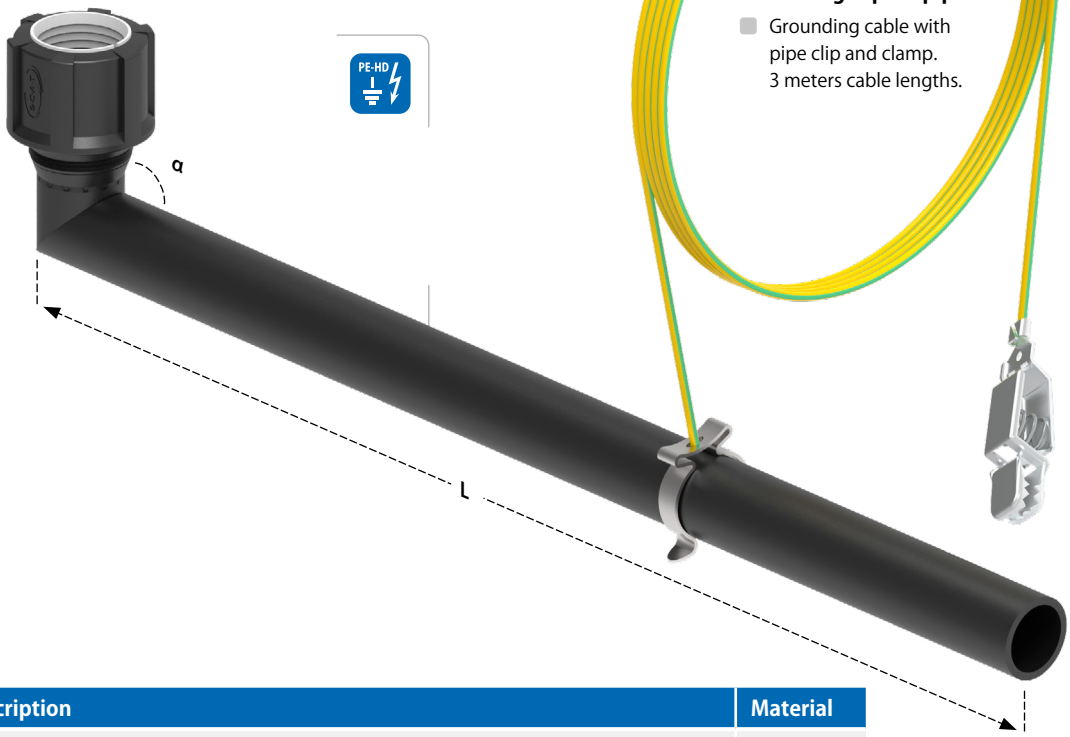
- 1x (ID) Ø 32 mm
- 1x (OD) Ø 32 mm
- L = 200 mm
- α = 2%
- Material = PE-HD-EL

Angled pipe pieces connected to feedthroughs, serve as the start of each disposal route below the work area

C 106 440

Connection pipe angled

- 1x (ID) Ø 32 mm
- 1x (OD) Ø 32 mm
- L = 500 mm
- α = 2%
- Material = PE-HD-EL



D 108 176

Grounding clip for pipe

- Grounding cable with pipe clip and clamp. 3 meters cable lengths.

Fig.	Part No.	Description	Material
A	**106 430**	Connection pipe angled, 1x (ID) Ø 32 mm, 1x (OD) Ø 32 mm, length 150 mm	PE-HD-EL
B	**106 438**	Connection pipe angled, 1x (ID) Ø 32 mm, 1x (OD) Ø 32 mm, length 200 mm	PE-HD-EL
C	**106 440**	Connection pipe angled, 1x (ID) Ø 32 mm, 1x (OD) Ø 32 mm, length 500 mm	PE-HD-EL
D	**108 176**	Grounding clip for Ø 32 mm pipe, with cable and clamp, length 3 m	

Pipe System
Connection Pipes, straight

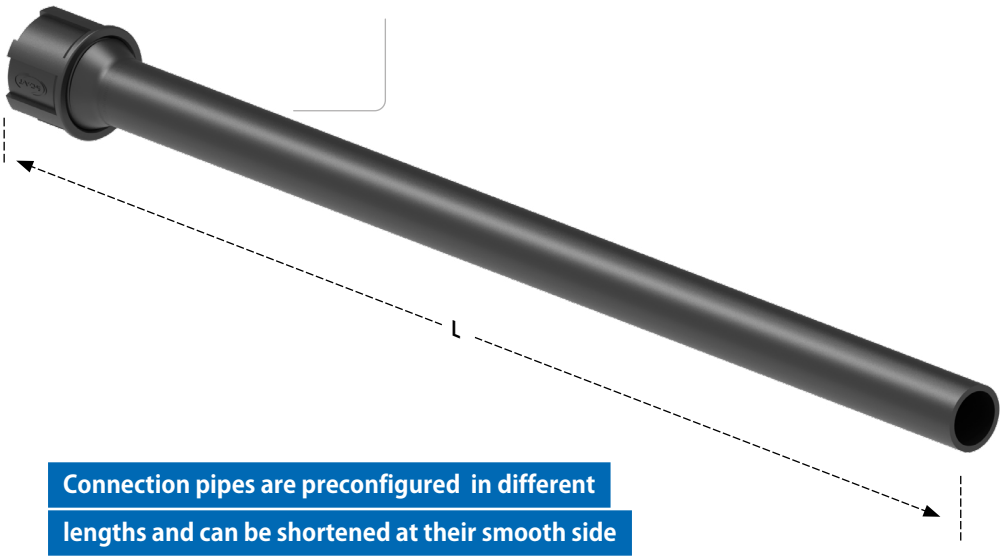
Connection Pipes, straight

- Screw connection with ∅ 32 mm inner diameter, end piece ∅ 32 mm outer diameter
- PE-HD electrostatic conductive
- Can be combined with angled connection pipes, connection pieces and grounding clip

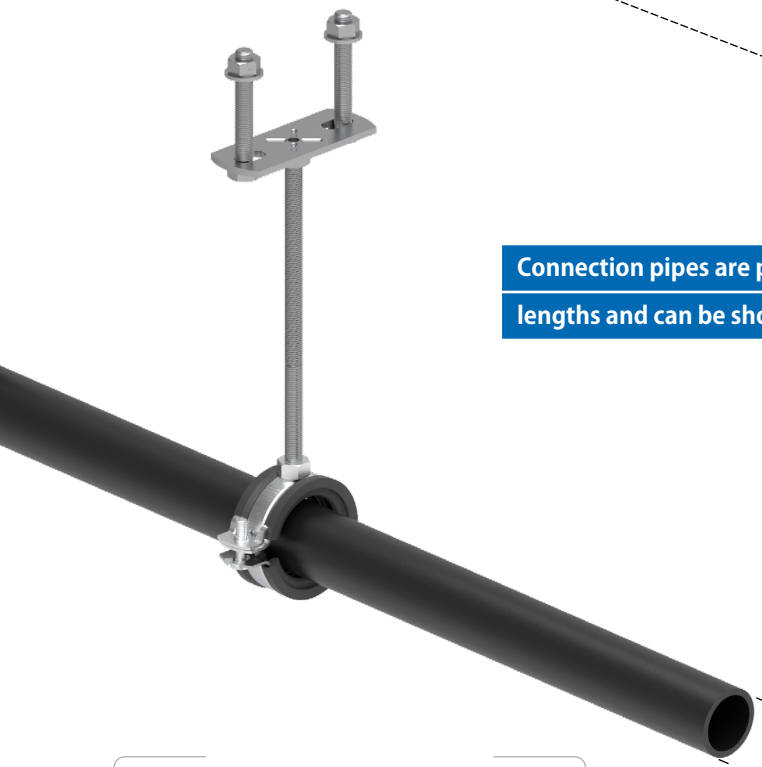
A 106 690

Connection pipe straight

- 1x (ID) Ø 32 mm
- 1x (OD) Ø 32 mm
- L = 600 mm
- Material = PE-HD-EL



Connection pipes are preconfigured in different lengths and can be shortened at their smooth side



Flexible length

With a suitable pipe cutter, you can adjust the length of the pipes as needed. Shorten the smooth side of the tubes to the desired length.

B 106 609

Attachment for pipe system

- including screws

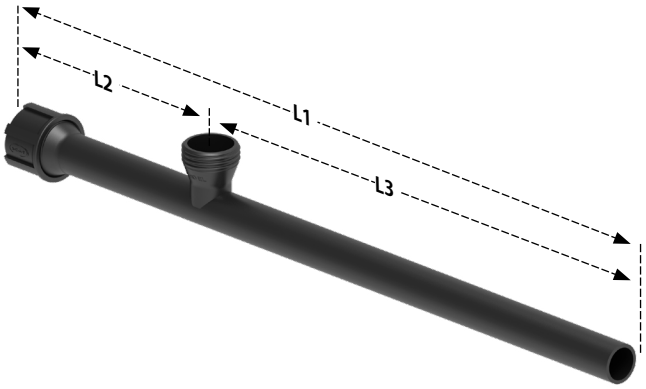
Fig.	Part No.	Description	Material
A	**106 690**	Connection pipe, straight, 1x (ID) Ø 32 mm, 1x (OD) Ø 32 mm, length 600 mm	PE-HD-EL
	106 700	Connection pipe, straight, 1x (ID) Ø 32 mm, 1x (OD) Ø 32 mm, length 1200 mm	PE-HD-EL
B	**106 609**	Attachment for pipe system Ø 32 mm	

Pipe System
Connection Pipes, straight

A 106 689

SymLine Extension

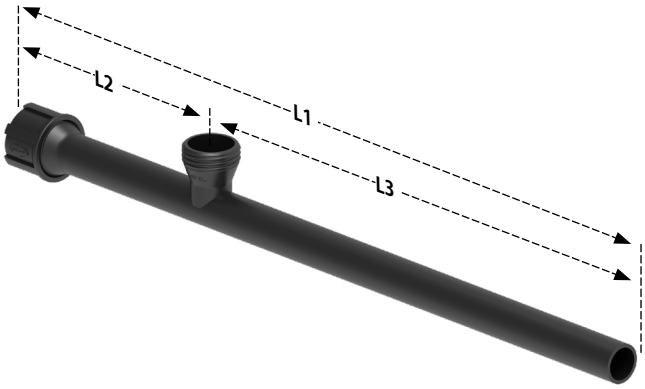
- ∅ 32 mm pipe
- L1 = 600 mm / L2 = 200 mm / L3 = 400 mm
- 1 Connection for GL 45
- Material = PE-HD EL



B 106 732

SymLine Extension

- ∅ 32 mm pipe
- L1 = 1200 mm / L2 = 200 mm / L3 = 1000 mm
- 1 Connection for GL 45
- Material = PE-HD EL



C 106 688

SymLine Basic 32 pipe

- ∅ 32 mm pipe
- L1 = 310 mm / L2 = 200 mm / L3 = 400 mm
- 1 Connection for GL 45
- Material = PE-HD EL

D 106 713

T-Piece for pipes

- 1x (ID) Ø 32 mm
- 1 Connection for GL 45
- Material = PE-HD EL

Fig.	Part No.	Description	Material
A	**106 689**	Connection pipe, straight, 1x (ID) Ø 32 mm, 1x (OD) Ø 32 mm, length 600 mm	PE-HD-EL
B	**106 732**	Connection pipe, straight, 1x (ID) Ø 32 mm, 1x (OD) Ø 32 mm, length 1200 mm	PE-HD-EL
C	**106 688**	SymLine FLEX - Basic 32 pipe	PE-HD-EL
D	**106 713**	T-piece, 1x (ID) 32 mm, 1x GL 45 (m), incl. GL 45 screw/blind cap	PE-HD-EL

Pipe System
Connectors

A 106 427

Connector for pipes

- 2x (ID) Ø 32 mm
- Material = PE-HD EL

B 106 426

T-Piece for pipes

- 3x (ID) Ø 32 mm
- Material = PE-HD EL

C 106 458

T-Piece for pipes

- 2x (ID) Ø 32 mm
- 1x GL 25
- Material = PE-HD EL

D 106 725

T-Piece for pipes

- 3% decline towards outlet
- 2x (ID) Ø 32 mm
- 1x GL 25
- Material = PE-HD EL

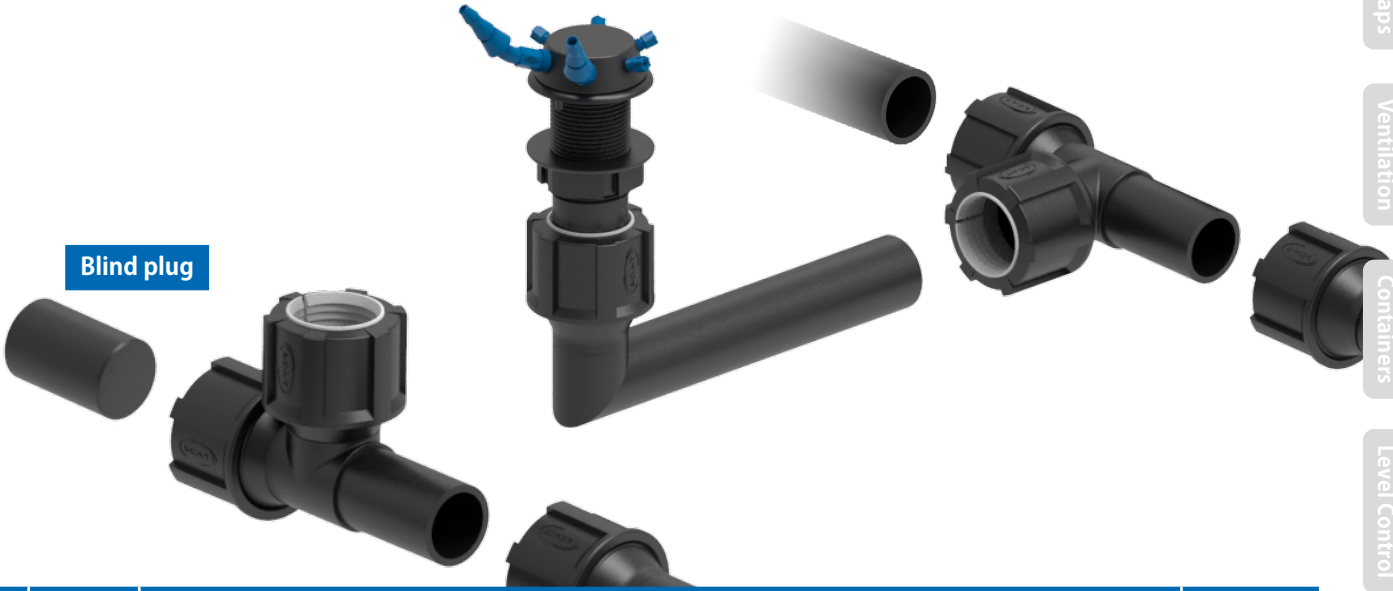


Fig.	Part No.	Description	Material
A	**106 427**	Connector, straight, (ID) 32 mm	PE-HD-EL
B	**106 426**	T-piece, 3x (ID) 32 mm	PE-HD-EL
C	**106 458**	T-piece for pipe, 2x (ID) 32 mm, 1x GL 25 (m)	PE-HD-EL
D	**106 725**	T-piece with 2% angle bothsides for pipe, 2x (ID) 32 mm, 1x GL 25 (m)	PE-HD-EL

Pipe System
Connectors

A 106 712

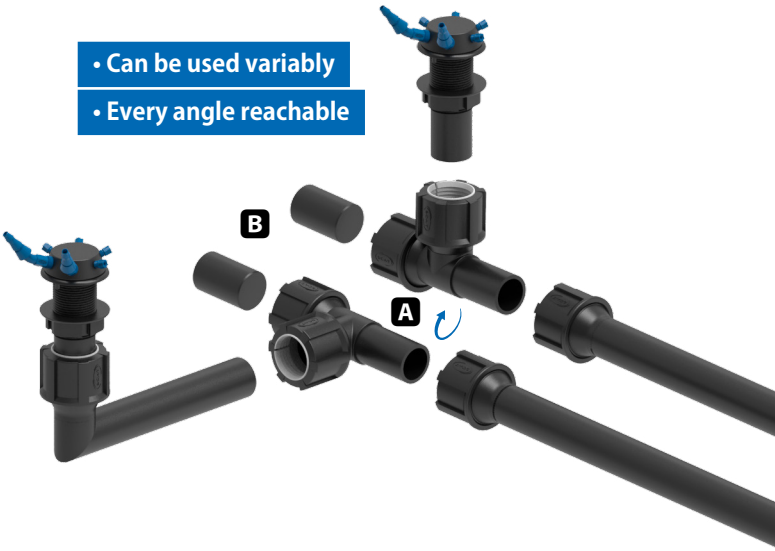
T-Piece for pipes

- 2x (ID) Ø 32 mm
- 1x (OD) Ø 32 mm
- Dimensions: 120 x 93 x 56 mm
- Material = PE-HD-EL
- Can be combined with table feedthrough, angled and straight connection pipes

Connectors

- Screw connection with ∅ 32 mm inner diameter, end piece ∅ 32 mm outside diameter
- PE-HD electrostatic conductive
- Can be combined with pipe and tube system

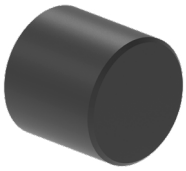
• Can be used variably
• Every angle reachable



B 106 423

Blind plug

- (OD) Ø 32 mm
- Dimensions: 50 mm
- Material = PE-HD-EL



Also available as collector plug, see page 46

GL 25 (m)
SymLine tube connection

C 106 711

T-Piece for pipes with GL 25 (m)

- 1x (ID) Ø 32 mm
- 1x GL 25 (m)
- 1x (OD) Ø 32 mm
- Dimensions: 120 x 70 x 56 mm
- Material = PE-HD-EL

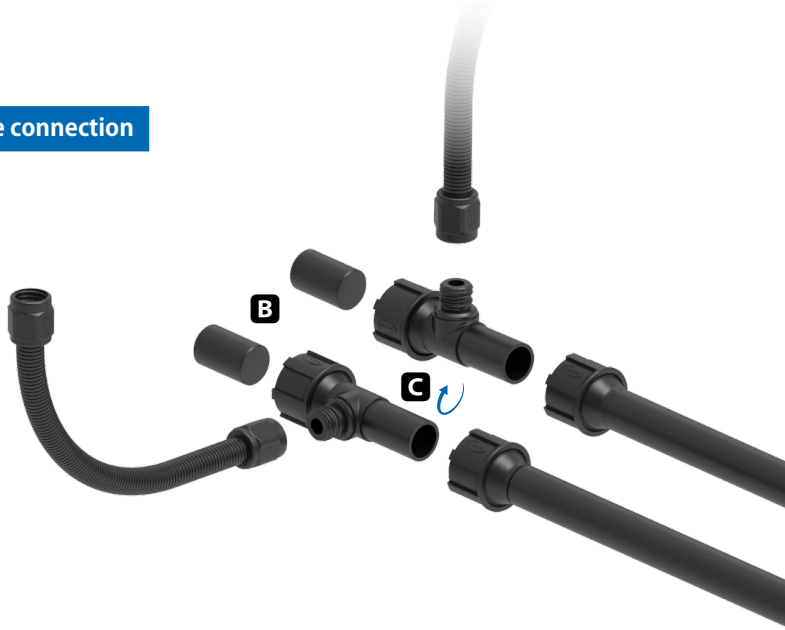


Fig.	Part No.	Description	Material
A	**106 712**	T-Piece, 2x Ø (ID) 32 mm, 1x Ø (OD) 32 mm	PE-HD-EL
B	**106 423**	Blind plug for screw connection Ø (OD) 32 mm	PE-HD-EL
C	**106 711**	T-Piece, 1x Ø (ID) 32 mm, 1x GL 25 (m), 1x Ø (OD) 32 mm	PE-HD-EL

Pipe System
Curved Elements

A 106 421

Curved element for pipes

- 1x (ID) Ø 32 mm
- 1x (OD) Ø 32 mm
- Dimensions: 92 x 90 x 56 mm
- Material = PE-HD-EL

Curved Elements

- Screw connection with ∅ 32 mm inner diameter, end piece ∅ 32 mm outside diameter or GL 25 tube connection
- PE-HD electrostatic conductive
- Can be combined with pipe and tube system

B 106 457

Curved element pipe to tube

- with 2% decline
- 1x (ID) Ø 32 mm
- 1x GL 25 (m)
- Dimensions: 76 x 76 x 56 mm
- Material = PE-HD-EL

C 106 456

Curved element pipe to tube

- 1x (ID) Ø 32 mm
- 1x GL 25 (m)
- Dimensions: 84 x 90 x 56 mm
- Material = PE-HD-EL

GL 25 (m)

SymLine tube connection

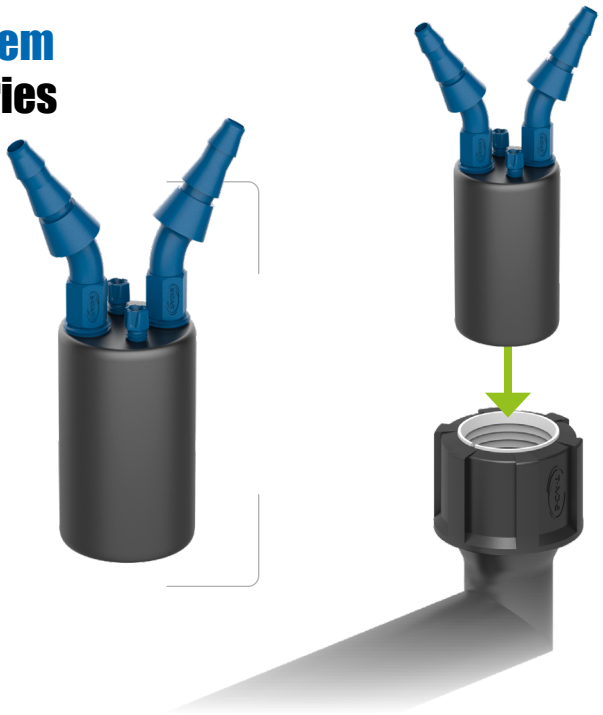
Fig.	Part No.	Description	Material
A	**106 421**	Curved element, Ø (ID) 32 mm to Ø (OD) 32 mm	PE-HD-EL
B	**106 457**	Curved element with 2% decline, Ø (ID) 32 mm to GL 25 (m)	PE-HD-EL
C	**106 456**	Curved element, Ø (ID) 32 mm to GL 25 (m)	PE-HD-EL

Pipe System Accessories

A 106 729

Collector-Plug

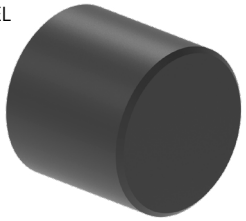
- For SymLine pipe system
- Ø 32 mm



B 106 423

Blind plug

- (OD) Ø 32 mm
- Dimensions: 50 mm
- Material = PE-HD-EL



C 108 293

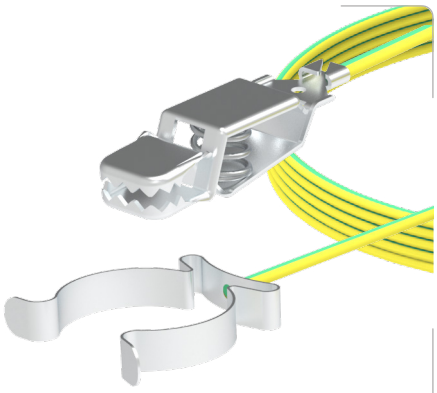
Thread adapter

- GL 25 (m)
- Pipe 50 mm OD

D 108 176

Grounding clip

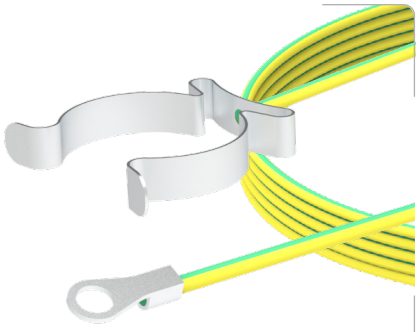
- L = 3 m



E 108 285

Grounding clip

- L = 1.5 m



F 108 262

Grounding clip

- L = 3 m

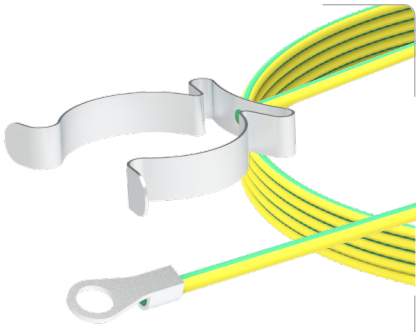


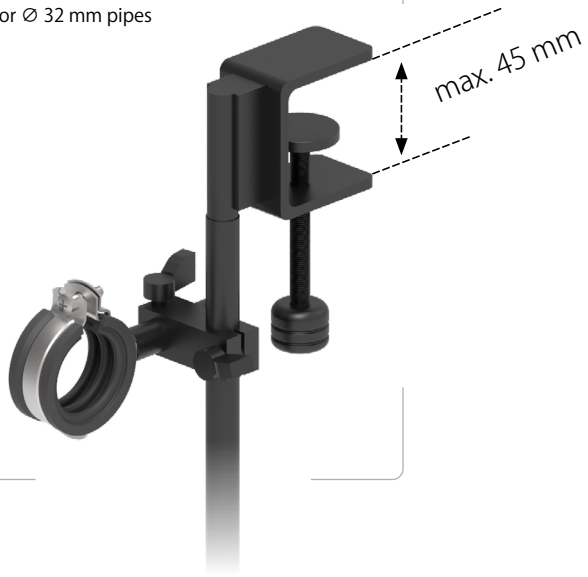
Fig.	Part No.	Description	Material
A	**106 729**	Collector-Plug for the SymLine pipe system, 32mm OD, PE-HD electrostatic conductive	PE-HD-EL
B	**106 423**	Blind plug for screw connection Ø (OD) 32 mm	PE-HD-EL
C	**108 293**	Thread adapter, PE-HD electrostatic conductive, GL 25 (m) to pipe 50 mm OD	PE-HD-EL
D	**108 176**	Grounding cable, 1x clip for Ø 32 mm pipe, 1x clamp, L = 3 m	
E	**108 285**	Grounding clip for Ø 32 mm pipe, with ring connector ID 5 mm, L = 1.5 m	
F	**108 262**	Grounding clip for Ø 32 mm pipe, with ring connector ID 5 mm, L = 3 m	

Pipe System
Accessories

A 106 691

Table attachment

- For ∅ 32 mm pipes



B 106 695

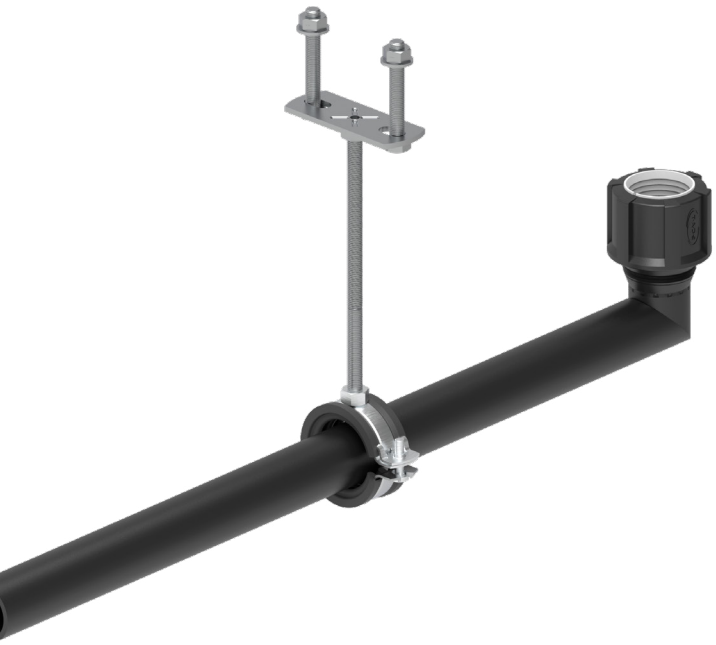
Wall attachment

- For ∅ 32 mm pipes
- **3 Fastening options:**
- Self-adhesive (mounting aid)
- Screw fastening
- Magnetic

C 106 609

Attachment

- For ∅ 32 mm pipes



D 106 724

Hook wrench with nose

- Hook wrench with nose, for mounting the union nut on SymLine pipe systems (Ø 52 - 55 mm)

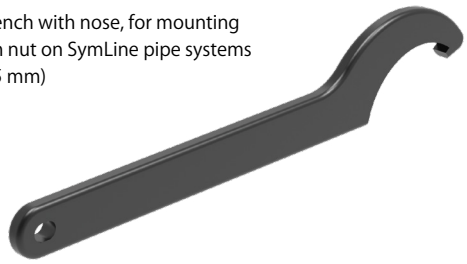
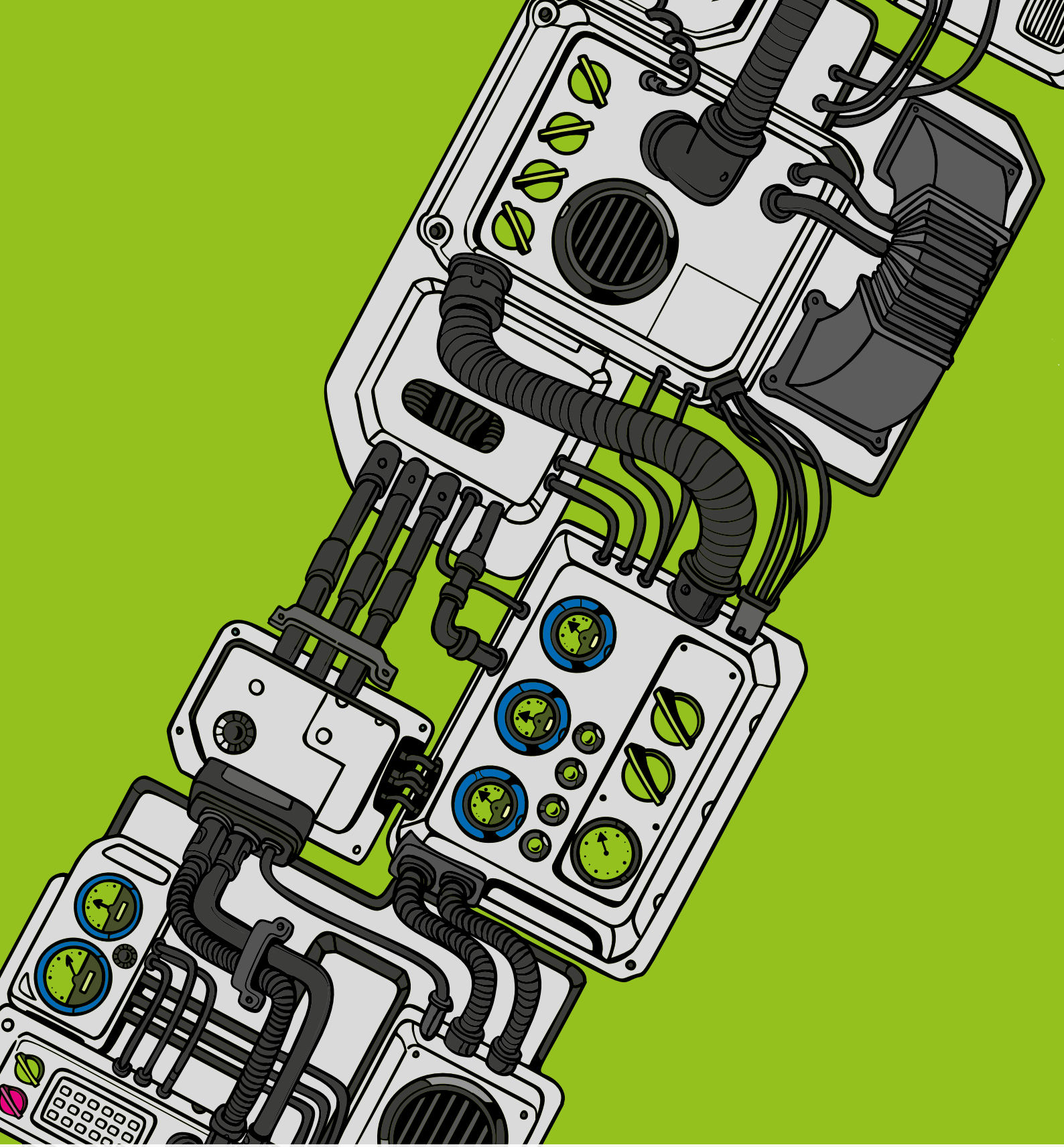


Fig.	Part No.	Description
A	**106 691**	Table attachment for ∅ 32 mm pipes
B	**106 695**	Wall attachment for ∅ 32 mm pipes
C	**106 609**	Attachment for ∅ 32 mm pipes
D	**106 724**	Hook wrench with nose, for mounting the union nut on SymLine pipe systems (Ø 52 - 55 mm)



Work with a flexible and safely closed Flow.

The SymLine tubing systems adapt to your laboratory equipment and can flexibly be integrated in the planning phase of new laboratory buildings or in existing work environments.

Liquid waste can flow from several work stations via tube elements to a central collection point.

www.scat-europe.com

Tubing System

As safe as flexible.

- Individually adaptable to any Laboratory
- Reaches every Corner
- High tensile Strength
- Permanently sealed

Tubing System
FlexTube

A B C D 106 569

FlexTube GL 25 (f)

- 2x GL 25 (f)
- Material = PTFE-EL

- Can be assembled - easy installation. If necessary, shorten tubes flexibly, then mount the optimized screw connection and seal.

- Fitting & bracket included

• Spiral inner wall

• Increased bending radius (> = 25 mm)

FlexTube, inner wall spiral

- PTFE for the best possible chemical resistance
- Electrostatic conductive < 10^6 Ω
- ∅ 19.8 mm outer diameter
- ∅ 11.5 mm inner diameter

All media-touching parts made of PTFE-EL

Installation guide

Fig.	Part No.	Description	Material
A	**106 569**	SymLine FlexTube GL 25 (f), length 600 mm, ∅ 19.8 mm OD	PTFE-EL
B	**106 568**	SymLine FlexTube GL 25 (f), length 1000 mm, ∅ 19.8 mm OD	PTFE-EL
C	**106 567**	SymLine FlexTube GL 25 (f), length 1500 mm, ∅ 19.8 mm OD	PTFE-EL
D	**106 566**	SymLine FlexTube GL 25 (f), length 2500 mm, ∅ 19.8 mm OD	PTFE-EL
	108 270	Grounding cable for SymLine FlexTube, with cable and clamp, length 3000 mm	

Tubing System
FlexTube Pro

A B C D 106 575

FlexTube Pro GL 25 (f)

- 2x GL 25 (f)
- Material = PTFE-EL

- Can be assembled - easy installation. If necessary, shorten tubes flexibly, then mount the optimized screw connection and seal.
- Fitting & bracket included

• Inner wall smooth
• Avoids deposits at the inner surface
• Bending radius (> = 60 mm)

FlexTube Pro, inner wall smooth

- PTFE for the best possible chemical resistance
- Electrostatic conductive < 10^6 Ω
- ∅ 16.9 mm outer diameter
- ∅ 10.7 mm inner diameter

All media-touching parts made of PTFE-EL

Installation guide

E 108 270

Grounding cable for tube

- Grounding cable with tube clip and clamp, 3 meter cable length.

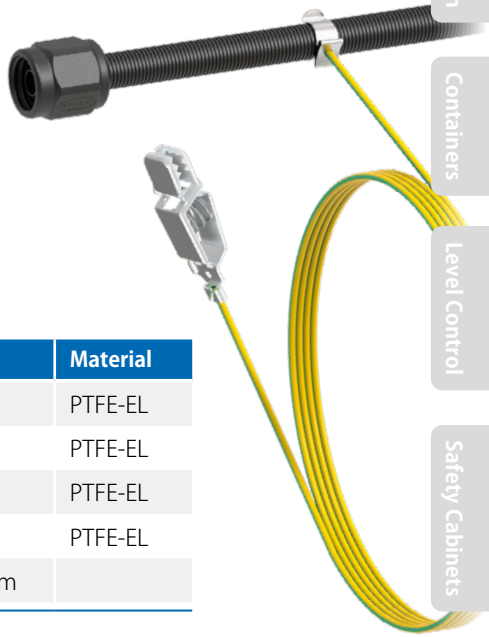


Fig.	Part No.	Description	Material
A	**106 575**	SymLine FlexTube Pro GL 25 (f), length 600 mm, ∅ 16.9 mm OD	PTFE-EL
B	**106 574**	SymLine FlexTube Pro GL 25 (f), length 1000 mm, ∅ 16.9 mm OD	PTFE-EL
C	**106 573**	SymLine FlexTube Pro GL 25 (f), length 1500 mm, ∅ 16.9 mm OD	PTFE-EL
D	**106 572**	SymLine FlexTube Pro GL 25 (f), length 2500 mm, ∅ 16.9 mm OD	PTFE-EL
E	**108 270**	Grounding cable for SymLine FlexTube, with cable and clamp, length 3000 mm	

Tubing System
Connectors for FlexTubes

A 106 475

Shut-off valve, angled

- 1x GL 25 (f)
- 1x GL 25 (m)
- Dimensions: 60 x 86 x 36 mm
- Material = PTFE-EL

- Stops the flow of waste liquids into the canister. Drip-free canister change or emptying.

- Compatible with Safety Waste Caps, connectors, manifolds and the SymLine FlexTube's.

B 106 476

Y-Distributor

- 3x GL 25 (m)
- Dimensions: 68 x 69 x 36 mm
- Material = PE-HD-EL

- Merging two SymLine FlexTube's to one exit. Two 0.5 mm holes for wall mounting.

- Compatible with the SymLine FlexTube's.

Accessories

Safety Waste Caps ..... **page 56**

Exhaust Filters ..... **page 68**

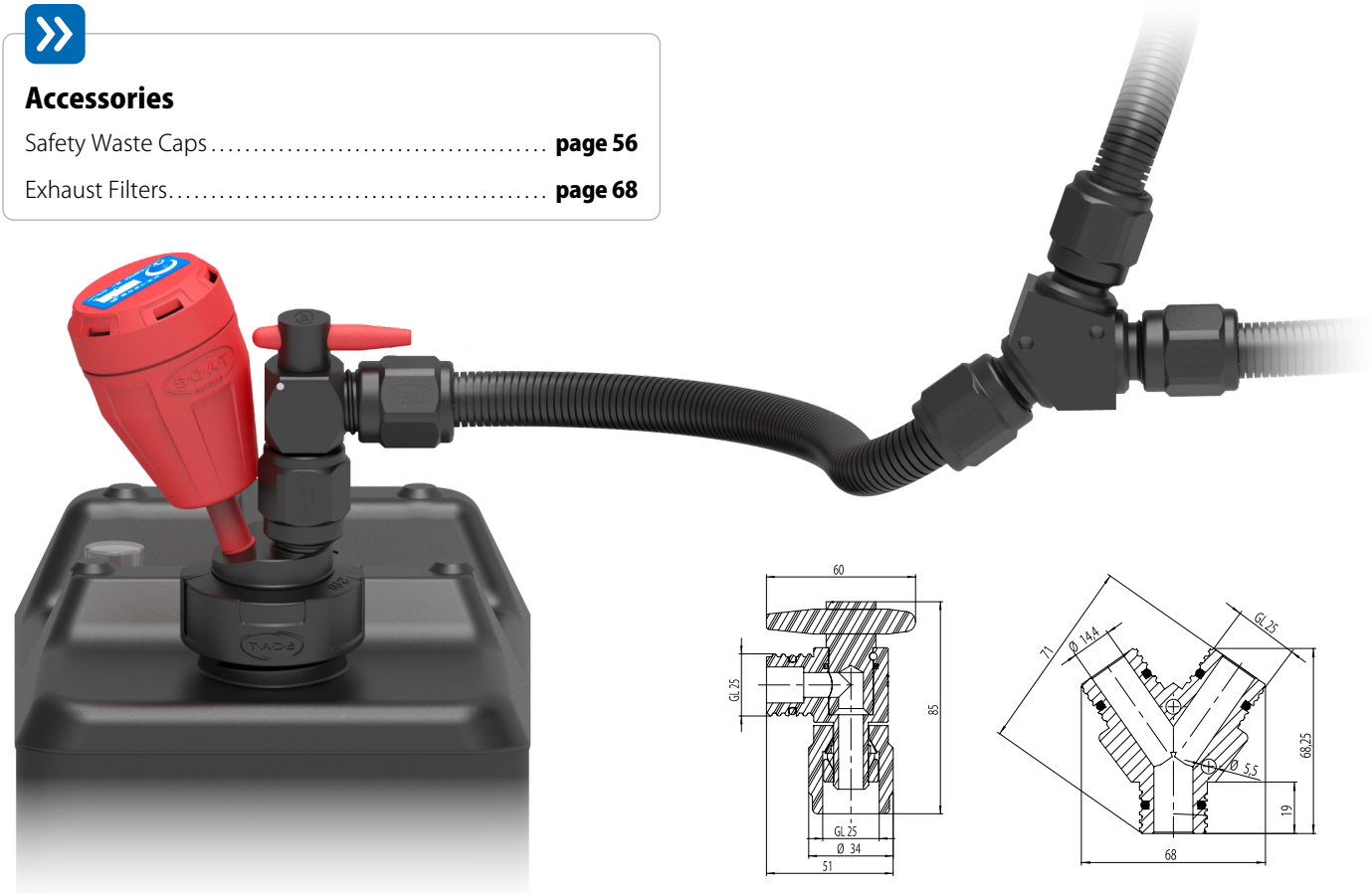


Fig.	Part No.	Description	Material
A	**106 475**	Shut-off, angled, 1x GL 25 (w) to 1x GL 25 (m), incl. wrench	PTFE-EL
B	**106 476**	Y-Distributor, 3x GL 25 (m), with 2 mounting holes	PE-HD-EL

Tubing System
Connectors for FlexTubes

A 106 680
Angled adapter
- 1x GL 25 (f)
- 1x GL 25 (m)
- Material = PE-HD-EL

B 106 620
Angled adapter
- 1x GL 25 (f)
- 1x GL 25 (m)
- Material = PE-HD-EL

C 106 415
Thread adapter
- GL 25 (m)
- G 1/2" (m)
- Material = PE-HD-EL

D 106 417
Thread adapter
- 2x GL 25 (m)
- Material = PE-HD-EL

E 106 447
Thread adapter
- GL 25 (m)
- G1/2" (f)
- Material = PE-HD-EL

F 106 523
Thread adapter
- 2x GL 25 (f)
- Material = PE-HD-EL

G 106 539
Thread adapter
- GL 25 (m)
- G3/4" (m)
- Material = PE-HD-EL

H 107 125
Distributor
- 2x GL 25 (m)
- 1x GL 25 (f)
- Material = PE-HD-EL

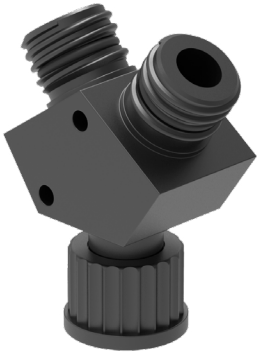


Fig.	Part No.	Description	Material
A	**106 680**	Angled adapter GL 25 (f) to GL 25 (m), for mounting on desktop mount with GL 25 connection	PE-HD-EL
B	**106 620**	Angled adapter GL 25 (f) to GL 25 (m), for mounting on Safety Waste Cap with GL 25 connection	PE-HD-EL
C	**106 415**	Thread adapter, PE-HD electrostatic conductive, GL 25 (m) to G1/2" (m)	PE-HD-EL
D	**106 417**	Thread adapter, PE-HD electrostatic conductive, GL 25 (m) to GL 25 (m)	PE-HD-EL
E	**106 447**	Thread adapter, G1/2" (f) to GL 25 (m), PE-HD electrostatic conductive, with O-ring EPDM	PE-HD-EL
F	**106 523**	Thread adapter, GL 25 (f) to GL 25 (f), PE-HD electrostatic conductive	PE-HD-EL
G	**106 539**	Thread adapter, GL 25 (m) to G3/4" (m), PE-HD electrostatic conductive	PE-HD-EL
H	**107 125**	Distributor, PE electrostatic conductive, 1x GL 25 (f) to 2x GL 25 (m)	PE-HD-EL

No more Worries about Waste - collected in one safe Place.

Working in the laboratory requires high concentration and a safe environment. Safety Waste Caps turn every collection container into a closed system according to the latest safety standards. This allows you to concentrate on your tasks undisturbed.

www.scat-europe.com

Safety Waste Caps

Hazardous Vapors under control.

- Closed System
- Clean Laboratory Air
- Standardized Connections

Safety Waste Caps with Sensor

S 55, S 60/61

A 106 478

Safety Waste Cap S 55

- Electronic level control
- Immersed filling
- 200 mm lance
- GL 25 (m)
- Material = PTFE-EL
- GL 14 connection

B 106 719

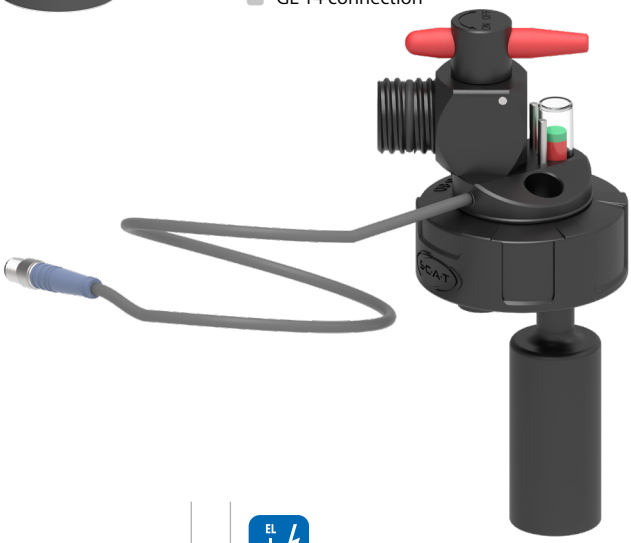
Safety Waste Cap S 55

- Electronic level control
- with shut-off
- GL 25 (m)
- Material = PTFE-EL
- GL 14 connection

C 106 718

Safety Waste Cap S 60/61

- Electronic level control
- with shut-off
- GL 25 (m)
- Material = PTFE-EL
- GL 14 connection



D 106 480

Safety Waste Cap S 60/61

- Electronic level control
- GL 25 (m)
- Material = PTFE-EL
- GL 14 connection

Fig.	Part No.	Description	Material
A	**106 478**	Safety Waste Cap, S 55, with immersed filling lance and electronic level control	PTFE-EL
B	**106 719**	Safety Waste Cap, S 55 with shut-off and electronic level control	PTFE-EL
C	**106 718**	Safety Waste Cap, S 60/61 with shut-off and electronic level control	PTFE-EL
D	**106 480**	Safety Waste Cap, S 60/61 with electronic level control	PTFE-EL

Safety Waste Caps
with Sensor

S 60/61, S 90

E 306 581

Safety Waste Cap S 60/61

- Adjustable capacitive level control
- Can only be used with switch amplifier
- 2 m cable length
- GL 25 (m)
- Material = PTFE-EL
- GL 14 connection

F 306 637

Safety Waste Cap S 60/61

- Adjustable capacitive level control
- Can only be used with switch amplifier
- 2 m cable length
- M8 cable connection
- GL 25 (m)
- Material = PTFE-EL
- GL 14 connection
- 3 pin mal connector

G 106 720

Safety Waste Cap S 90

- Electronic level control
- with shut-off
- GL 25 (mm)
- Material = PTFE-EL
- GL 14 connection

H 106 484

Safety Waste Cap S 90

- Electronic level control
- GL 25 (m)
- Material = PTFE-EL
- GL 14 connection

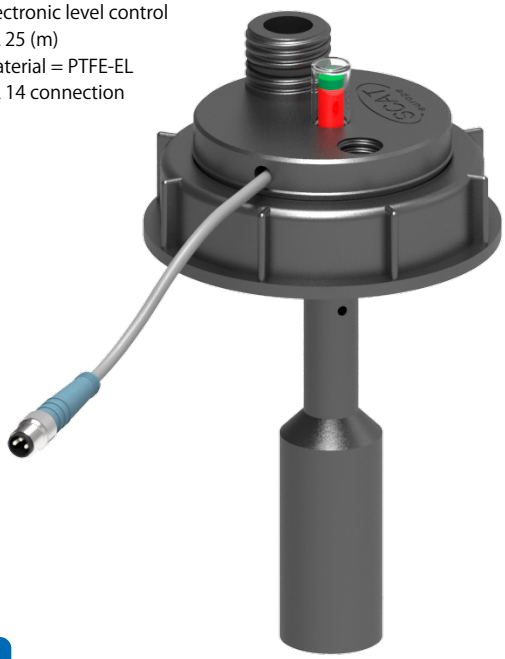


Fig.	Part No.	Description	Material
E	**306 581**	Safety Waste Cap, S 60/61 with adjustable capacitive level control, 2 m cable	PTFE-EL
	306 659	Safety Waste Cap, S 60/61 with adjustable capacitive level control, 5 m cable	PTFE-EL
F	**306 637**	Safety Waste Cap, S 60/61 with adjustable capacitive level control, 2 m cable, M8 cable connection	PTFE-EL
G	**106 720**	Safety Waste Cap, S 90 with shut-off and electronic level control	PTFE-EL
H	**106 484**	Safety Waste Cap, S 90 with electronic level control	PTFE-EL

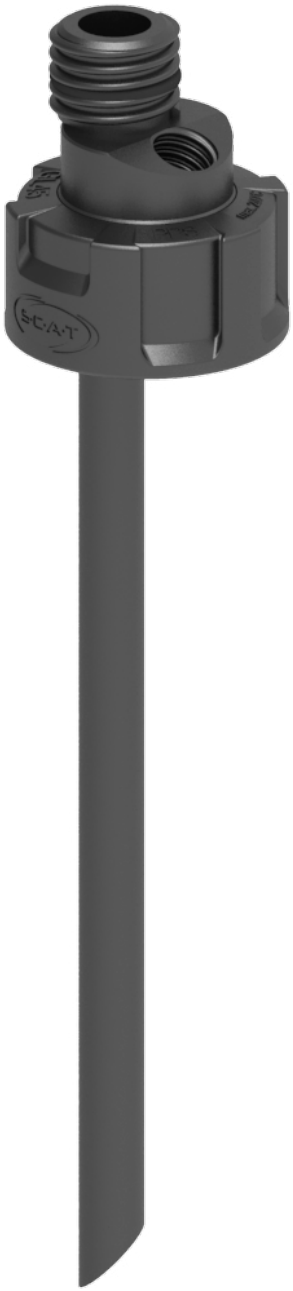
Safety Waste Caps
without Sensor

GL 45, S 50

A 106 527

Safety Waste Cap GL 45

- Immersed filling
- 200 mm lance
- GL 25 (m)
- Material = PTFE-EL
- GL 14 connection



EL

B 450 045

Safety Waste Cap LISA GL 45

- 4 Capillary connections
- 3 Tube connections
- Fitting 1.6 mm: 4 pieces
- Fitting 2.3 mm: 4 pieces
- Fitting 3.2 mm: 4 pieces
- Tube connector: 3 pieces
- Blind plugs
- Material = PTFE-EL
- GL 14 connection

EL

C 460 050

Safety Waste Cap S 50

- 2 Capillary connections
- 1 Tube connection
- Fitting 2.3 mm: 2 pieces
- Fitting 3.2 mm: 2 pieces
- Tube connector: 1 piece
- Material = PTFE-EL
- GL 14 connection

EL

D 450 050

Safety Waste Cap LISA S 50

- 4 Capillary connections
- 3 Tube connections
- Fitting 1.6 mm: 4 pieces
- Fitting 2.3 mm: 4 pieces
- Fitting 3.2 mm: 4 pieces
- Tube connector: 3 pieces
- Blind plugs
- Material = PTFE-EL
- GL 14 connection

EL

Fig.	Part No.	Description	Material
A	**106 527**	Safety Waste Cap, GL 45 with immersed filling lance	PTFE-EL
B	**450 045**	Safety Waste Cap LISA, GL 45	PTFE-EL
C	**460 050**	Safety Waste Cap, S 50	PTFE-EL
D	**450 050**	Safety Waste Cap LISA, S 50, adapter made of PE-HD-EL	PTFE-EL/PE-HD-EL

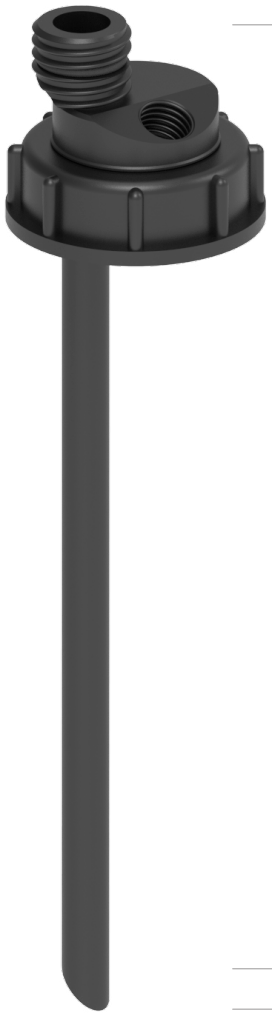
Safety Waste Caps
without Sensor

S 55, S 60/61

A 106 522

Safety Waste Cap S 55

- Immersed filling
- 200 mm lance
- GL 25 (m)
- Material = PTFE-EL
- GL 14 connection



B 450 055

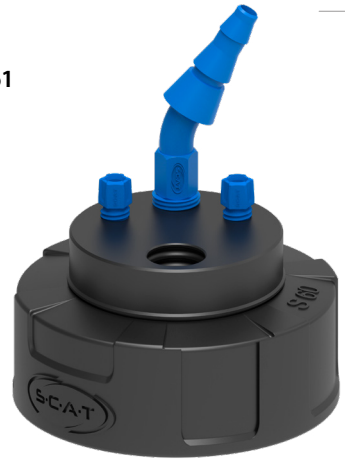
Safety Waste Cap LISA S 55

- 4 Capillary connections
- 3 Tube connections
- Fitting 1.6 mm: 4 pieces
- Fitting 2.3 mm: 4 pieces
- Fitting 3.2 mm: 4 pieces
- Tube connector: 3 pieces
- Blind plugs
- Material = PTFE-EL
- GL 14 connection

C 460 060

Safety Waste Cap S 60/61

- 2 Capillary connections
- 1 Tube connection
- Fitting 2.3 mm: 2 pieces
- Fitting 3.2 mm: 2 pieces
- Tube connector: 1 piece
- Material = PTFE-EL
- GL 14 connection



E 306 482

Safety Waste Cap S 60/61

- GL 25 (m)
- Material = PTFE-EL
- GL 14 connection

D 450 060

Safety Waste Cap LISA S 60/61

- 4 Capillary connections
- 3 Tube connections
- Fitting 1.6 mm: 4 pieces
- Fitting 2.3 mm: 4 pieces
- Fitting 3.2 mm: 4 pieces
- Tube connector: 3 pieces
- Blind plugs
- Material = PTFE-EL
- GL 14 connection

Fig.	Part No.	Description	Material
A	**106 522**	Safety Waste Cap, S 55 with immersed filling lance	PTFE-EL
B	**450 055**	Safety Waste Cap LISA, S 55	PTFE-EL
C	**460 060**	Safety Waste Cap, S 60/61	PTFE-EL
D	**450 060**	Safety Waste Cap LISA, S 60/61	PTFE-EL
E	**306 482**	Safety Waste Cap, S60/61	PTFE-EL

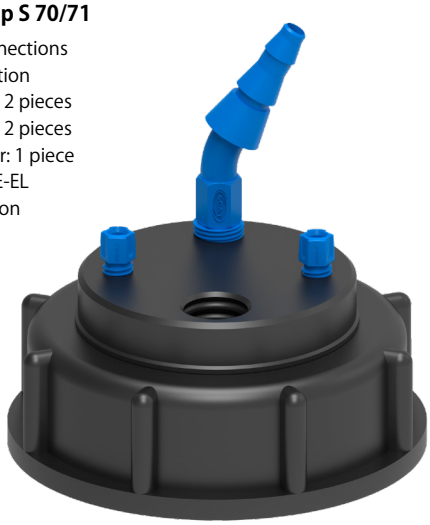
Safety Waste Caps
without Sensor

S 70/71, S 90

A 460 070

Safety Waste Cap S 70/71

- 2 Capillary connections
- 1 Tube connection
- Fitting 2.3 mm: 2 pieces
- Fitting 3.2 mm: 2 pieces
- Tube connector: 1 piece
- Material = PTFE-EL
- GL 14 connection



B 450 070

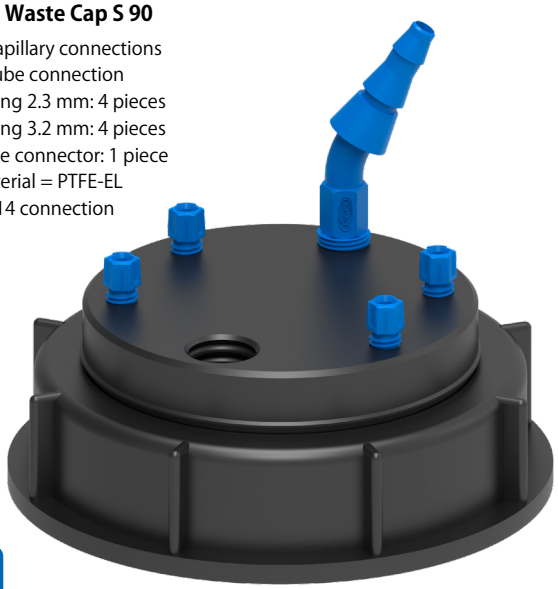
Safety Waste Cap LISA S 70/71

- 4 Capillary connections
- 3 Tube connections
- Fitting 1.6 mm: 4 pieces
- Fitting 2.3 mm: 4 pieces
- Fitting 3.2 mm: 4 pieces
- Tube connector: 3 pieces
- Blind plugs
- Material = PTFE-EL/PE-HD-EL
- GL 14 connection

C 460 090

Safety Waste Cap S 90

- 4 Capillary connections
- 1 Tube connection
- Fitting 2.3 mm: 4 pieces
- Fitting 3.2 mm: 4 pieces
- Tube connector: 1 piece
- Material = PTFE-EL
- GL 14 connection



D 450 090

Safety Waste Cap LISA S 90

- 4 Capillary connections
- 3 Tube connections
- Fitting 1.6 mm: 4 pieces
- Fitting 2.3 mm: 4 pieces
- Fitting 3.2 mm: 4 pieces
- Tube connector: 3 pieces
- Blind plugs
- Material = PTFE-EL/PE-HD-EL
- GL 14 connection

Fig.	Part No.	Description	Material
A	**460 070**	Safety Waste Cap, S 70/71	PTFE-EL
B	**450 070**	Safety Waste Cap LISA, S 70/71, adapter made of PE-HD-EL	PTFE-EL/PE-HD-EL
C	**460 090**	Safety Waste Cap, S 90	PTFE-EL
D	**450 090**	Safety Waste Cap LISA, S 90, adapter made of PE-HD-EL	PTFE-EL/PE-HD-EL

Safety Waste Caps
Accessories

A 106 475

Shut-off valve, angled

- 1x GL 25 (f)
- 1x GL 25 (m)
- Dimensions: 60 x 86 x 36 mm
- Material = PTFE-EL

- Stops the flow of waste liquids into the canister. Drip-free canister change or emptying.

- Compatible with Safety Waste Caps, connectors, manifolds and the SymLine FlexTube's.

B 106 620

Angled adapter

- 1x GL 25 (f)
- Drip edge
- 1x GL 25 (m)
- PE-HD-EL

C 106 680

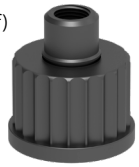
Angled adapter

- 1x GL 25 (f)
- 1x GL 25 (m)
- PE-HD-EL

D 106 502

Thread adapter

- NPT 1/8" (f)
- GL 25 (f)
- PE-HD-EL



E 160 206

Floater for level control

- 190 mm
- Material = PE-HD-EL / PE-HD

F 160 125

Floater for level control

- 150 mm
- Material = PE-HD-EL / PE-HD

G 160 121

Floater for level control

- 120 mm
- Material = PE-HD-EL / PE-HD

H 502 021

Floater for level control

- 105 mm
- Material = PE-HD-EL / PE-HD

Fig.	Part No.	Description	Material
A	**106 475**	Shut-off, angled, 1x GL25 (f) to 1x GL25 (m), PTFE electrostatic conductive	PTFE-EL
B	**106 620**	Angled adapter GL 25 (f) to GL 25 (m) with drip edge	PE-HD-EL
C	**106 680**	Angled adapter GL 25 (f) to GL 25 (m)	PE-HD-EL
D	**106 502**	Thread adapter NPT 1/8" (f) to GL 25 (f)	PE-HD-EL
E	**160 206**	Floater for mechanical / electronical level control, length 190 mm	PE-HD-EL / PE-HD
F	**160 125**	Floater for mechanical / electronical level control, length 150 mm	PE-HD-EL / PE-HD
G	**160 121**	Floater for mechanical / electronical level control, length 120 mm	PE-HD-EL / PE-HD
H	**502 021**	Floater for mechanical / electronical level control, length 105 mm	PE-HD-EL / PE-HD

Safety Waste Caps
Accessories

A 160 502
Blind Plug, PFA
- For capillary connection
- UNF1/4" 28G
- colorless
- quantity = 5 pieces

B 107 061
PFA fitting, 1.6 mm OD
- For capillary connection
- UNF1/4" 28G
- green
- quantity = 5 pieces

C 107 059
PFA fitting, 2.3 mm OD
- For capillary connection
- UNF1/4" 28G
- violet
- quantity = 5 pieces

D 107 063
PFA fitting, 3.2 mm OD
- For capillary connection
- UNF1/4" 28G
- blue
- quantity = 5 pieces

E 117 808
Tube connector, curved, 5.0 - 11.5 mm ID
- For tube connection
- NPT 1/8"
- curved
- 5.0 - 11.5 mm ID
- Material = PP

G 117 816
Tube connector, suitable for capillary port
- For capillary connector
- UNF1/4" 28G
- Tube connector
- straight
- 6 - 8 mm ID
- Material = PP

G 107 680
Blind plug, PTFE-EL, GL 14
- For exhaust filter connection
- GL 14
- Material = PTFE-EL

H 160 523
Blind plug, PTFE-EL, NPT 1/8"
- For tube connector
- NPT 1/8"
- Material = PTFE-EL

Fig.	Part No.	Description	VE	Material
A	**160 502**	Blind plug for capillary connection	5	PFA
	160 501	Blind plug for capillary connection	10	PFA
B	**107 061**	Fitting for capillary connection, 1.6 mm, green	5	PFA
C	**107 059**	Fitting for capillary connection, 2.3 mm, violet	5	PFA
D	**107 063**	Fitting for capillary connection, 3.2 mm, blue	5	PFA
E	**117 808**	Stepped tube connector, curved, 5.0 - 11.5 mm	1	PP
F	**117 816**	Tube connector, straight, 6 - 8 mm	1	PP
G	**107 680**	Blind plug, for exhaust filter connection	1	PTFE-EL
H	**160 523**	Blind plug for tube connection	1	PTFE-EL

Safety Waste Caps
LISA Accessories

A 450 100

Safety Waste Cap LISA, extension satellite

- 4 Capillary connections
- 3 Tube connections
- 1 GL 14 connection
- All accessories included
- Material = PTFE-EL

B 450 130

LISA extension GL 25

- GL 25 tube connector
- Material = PTFE-EL/PE-HD-EL

C 450 110

LISA blind plug

- Blind plug for LISA
- Material = PTFE-EL

D 450 122

LISA extension

- Mechanical level control

E 450 121

LISA extension

- Electronic level control

F 450 120

LISA funnel extension

- Safety funnel
- 140 mm diameter
- Hinged lid
- Removable dirt sieve
- Material = PE-HD-EL

Fig.	Part No.	Description	Material
A	**450 100**	Safety Waste Cap LISA, extension satellite, all accessories included	PTFE-EL
B	**450 130**	Safety Waste Cap LISA, extension GL 25 connection	PTFE-EL/PE-HD-EL
C	**450 110**	Safety Waste Cap LISA, blind plug satellite	PTFE-EL
D	**450 122**	Safety Waste Cap LISA, extension mechanical level control	PTFE-EL/PE-HD-EL
E	**450 121**	Safety Waste Cap LISA, extension electronic level control	PTFE-EL/PE-HD-EL
F	**450 120**	Safety Waste Cap LISA, extension funnel	PE-HD-EL

Freshly enter and leave the Laboratory every Day.

Take a deep breath. The SymLine collection system for hazardous waste liquids can be connected directly to the laboratory exhaust air. Exhaust air filters must be used wherever no connection is possible.

This gives you flexibility in your daily laboratory work and keeps the working environment 100% clean and safe.

www.scat-europe.com

Ventilation

Complete the Cycle of Disposal.

- Direct Connection to Laboratory Exhaust Air
- Compliant with occupational Limit Value
- Protection of Employees
- Clean Laboratory Air

Ventilation
Ventilation Tubes

A 106 490

Ventilation tube,
PE-HD electrostatic conductive

- OD = 13.9 mm
- Length = 1500 mm
- (OD) GL 14
- For connection to GL 14 (exhaust filter)
- PE-HD electrostatic conductive
- NPT 1/4" made of stainless steel
  for connection to HT-pipe

B 106 471

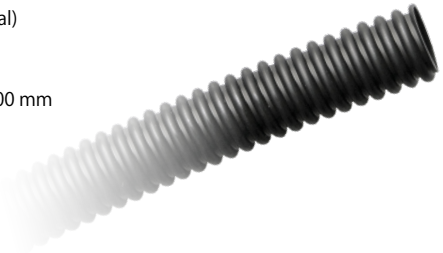
Electrostatic conductive PFA plastic tube

- Flexible (spiral)
- ID = 9 mm
- OD = 13 mm
- Length = 100 mm

C 108 015

Electrostatic conductive PFA plastic tube

- Flexible (spiral)
- ID = 9 mm
- OD = 13 mm
- Length = 1000 mm



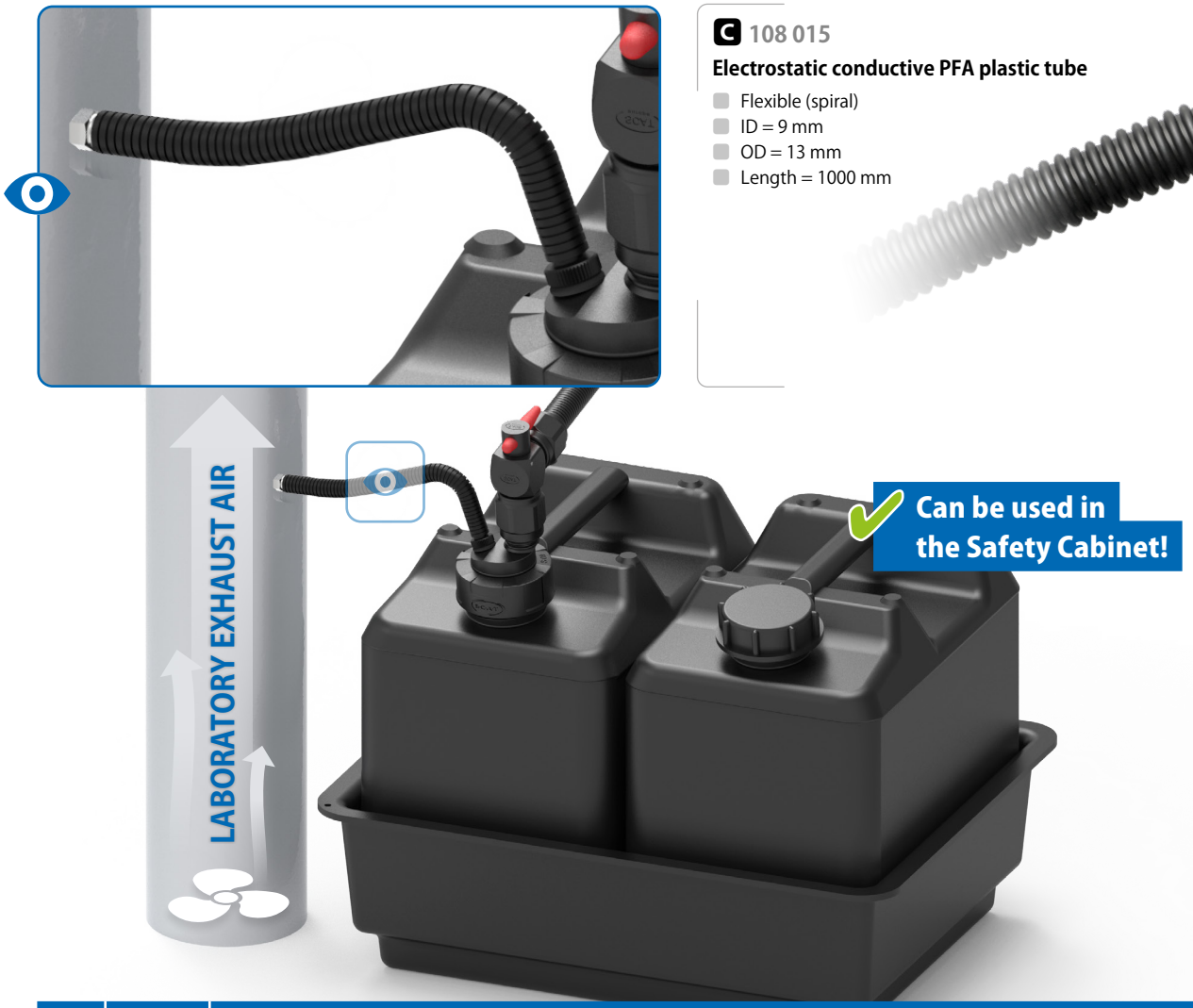


Fig.	Part No.	Description	Material
A	**106 490**	Ventilation tube, PE-HD electrostatic conductive	PE-HD-EL
B	**106 471**	Electrostatic conductive PFA plastic tube, length = 100 mm	PFA
C	**108 015**	Electrostatic conductive PFA plastic tube, length = 1000 mm	PFA

Ventilation
Ventilation Tubes

A 106 693

Ventilation tube, with check valve

- For connection to GL 14 (exhaust filter)
- NPT 1/8" fitting for connection to HT-pipe
- GL 14 (m)
- ID = 4 mm
- AD = 6 mm
- Smooth outside and inside
- PTFE electrostatic conductive
- Length = 2000 mm

B 106 677

Ventilation tube, without check valve

- For connection to GL 14 (exhaust filter)
- NPT 1/8" fitting for connection to HT-pipe
- GL 14 (m)
- ID = 4 mm
- AD = 6 mm
- Smooth outside and inside
- PTFE electrostatic conductive
- Length = 2000 mm

Fig.	Part No.	Description	Material
A	**106 693**	Ventilation tube, with check valve	PTFE-EL
B	**106 677**	Ventilation tube, without check valve	PTFE-EL

Ventilation
Exhaust Filters

GL 14

A 410 534

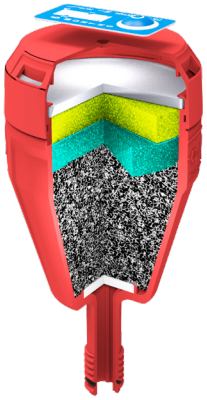
Exhaust Filter S V3.0

- With splash protection
- Change indicator
- 3 Months service life

B 410 535

Exhaust Filter M V3.0

- With splash protection
- Change indicator
- 6 Months service life



C 407 982

Exhaust Filter M V3.0

- With splash protection
- Change label
- 6 Months service life

D 407 986

Exhaust Filter L V3.0

- With splash protection
- Change indicator
- 12 Months service life

Fig.	Part No.	Description	Material
A	**410 534**	1x Exhaust Filter S, V3.0, with splash protection and change indicator, service life 3 months	PP
	490 335	4x Exhaust Filter S, V3.0, with splash protection and change indicator, service life 12 months	PP
B	**410 535**	1x Exhaust Filter M, V3.0, with splash protection and change indicator, service life 6 months	PP
	490 336	2x Exhaust Filter M, V3.0, with splash protection and change indicator, service life 12 months	PP
C	**407 982**	1x Exhaust Filter M, V3.0, with splash protection and change label, service life 6 months	PP
	490 914	2x Exhaust Filter M, V3.0, with splash protection and change label, service life 12 months	PP
D	**407 986**	1x Exhaust Filter L, V3.0, with splash protection and change indicator, service life 12 months	PP
	490 986	2x Exhaust Filter L, V3.0, with splash protection and change indicator, service life 24 months	PP
	407 983	1x Exhaust Filter L, V3.0, with splash protection and change label, service life 12 months	PP
	490 915	2x Exhaust Filter L, V3.0, with splash protection and change label, service life 24 months	PP

Ventilation
Accessories

GL 14

A 107 622

Offset adapter, long

- For exhaust filter
- GL 14 (f) to GL 14 (m)

PE-HD

B 107 627

Offset adapter, 45°

- For exhaust filter
- GL 14 (f) to GL 14 (m)

PE-HD

C 107 621

Adapter, Extension

- Offset adapter
- Extension for exhaust filter
- GL 14 (f) to GL 14 (m)

PE-HD

D 107 624

Offset adapter, 90°

- For exhaust filter
- GL 14 (f) to GL 14 (m)

PE-HD

Fig.	Part No.	Description	Material
A	**107 622**	Offset adapter, long	PE-HD-EL
B	**107 627**	Offset adapter, 45°	PE-HD-EL
C	**107 621**	Adapter, Extension	PE-HD-EL
D	**107 624**	Offset adapter, 90°	PE-HD-EL

The right Containers for everyone, for every Purpose.

SCAT offers a wide range of safety containers for all common requirements in your everyday laboratory work.

www.scat-europe.com

Containers

Store and collect Chemicals
and liquid Waste safely.

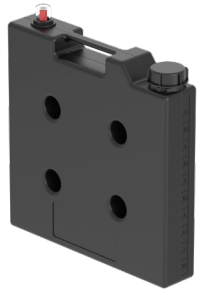
- **Electrostatic conductive PE-HD-EL**
- **5 to 30 Liters**
- **Trays with removable Base Insert**
- **Starter Sets**

Containers
Canisters

S 50, S 60/61

A 108 317

B 108 950



C 108 421

D 108 329

E 108 214

F 108 215

G 108 216

H 108 217

I 107 953

J 108 042

K 108 042-S1

L 108 292

Fig.	Part No.	Thread	Content	UN-Approval	Special feature	W x H x D in mm	Material
A	**108 317**	S 50	5 liters	No	space-saving canister design	65 x 335 x 335	PE-HD-EL
B	**108 950**	S 50	5 liters	No	with floater	65 x 360 x 335	PE-HD-EL
C	**108 421**	S 50	10 liters	Yes	UN-X approval with sight strip	190 x 315 x 230	PE-HD-EL
D	**108 329**	S 60 / 61	5 liters	Yes	UN-Y approval	165 x 241 x 195	PE-HD-EL
E	**108 214**	S 60 / 61	10 liters	No	with a blue stripe	185 x 265 x 290	PE-HD-EL
F	**108 215**	S 60 / 61	10 liters	No	with a yellow stripe	185 x 265 x 290	PE-HD-EL
G	**108 216**	S 60 / 61	10 liters	No	with a red stripe	185 x 265 x 290	PE-HD-EL
H	**108 217**	S 60 / 61	10 liters	No	with a green stripe	185 x 265 x 290	PE-HD-EL
I	**107 953**	S 60 / 61	10 liters	Yes	UN-Y approval	185 x 265 x 290	PE-HD-EL
J	**108 042**	S 60 / 61	10 liters	No	with floater	185 x 265 x 290	PE-HD-EL
K	**108 042-S1**	S 60 / 61	10 liters	No	with holder for sensor 108 178	185 x 265 x 290	PE-HD-EL
L	**108 292**	S 60 / 61	10 liters	No	housing for M30 sensor	185 x 265 x 290	PE-HD-EL

Containers
Canisters

S 60/61, S 90

M 108 330

N 108 331

O 108 027

P 108 043

Q 108 192

R 108 193

S 108 420

Electrostatic conductive PE-HD

All SCAT Europe / SymLine canisters in black are made of electrostatic conductive PE-HD and can be grounded.

Safety Notice

According to TRGS 727, paragraph 4.5.5, the largest permissible container volume in zone 1 for non-conductive containers is 5 liters. Even when working with aqueous solutions that are highly conductive, this regulation must not be deviated from, since when working with flammable liquids in the immediate vicinity of the container, an explosive Atmosphere is created as generally defined for Zone 1.

Canister Accessories

Informations about thread identification on **page 96**.

Grounding cables..... **page 46**

Safety Waste Caps..... **page 56-63**

Collecting trays..... **page 74**

Fig.	Part No.	Thread	Content	UN-Approval	Special feature	W x H x D in mm	Material
M	**108 330**	S 60 / 61	10 liters	Yes	UN-Y approval	192 x 311 x 232	PE-HD-EL
N	**108 331**	S 60 / 61	20 liters	Yes	UN-Y approval	290 x 399 x 245	PE-HD-EL
O	**108 027**	S 60 / 61	20 liters	Yes	UN-Y approval	185 x 500 x 290	PE-HD-EL
P	**108 043**	S 60 / 61	20 liters	No	with floater	185 x 500 x 290	PE-HD-EL
Q	**108 192**	S 60 / 61	30 liters	Yes	UN-Y approval	240 x 455 x 364	PE-HD-EL
R	**108 193**	S 60 / 61	30 liters	No	with floater	240 x 455 x 364	PE-HD-EL
S	**108 420**	S 90	10 liters	Yes	UN-Y approval with sight strip	195 x 380 x 195	PE-HD-EL

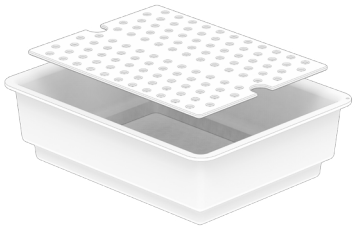
Containers
Collecting Trays

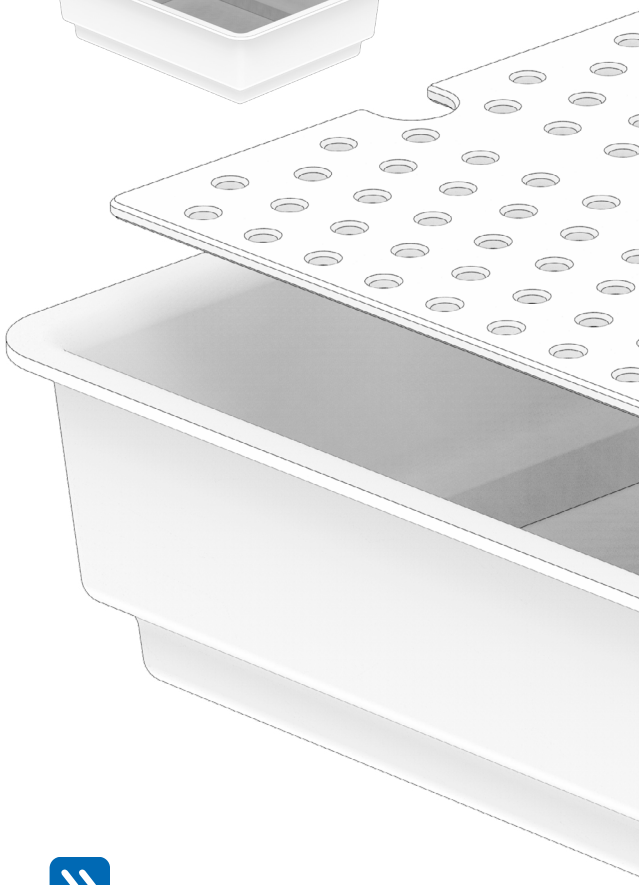
A 117 985

Collecting tray

- Removable base insert
- Grounding connection
- Material = PE-HD-EL

Removable Base Insert

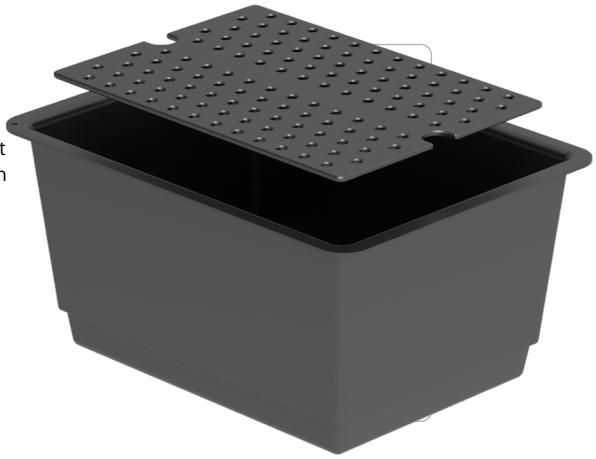




B 117 986

Collecting tray

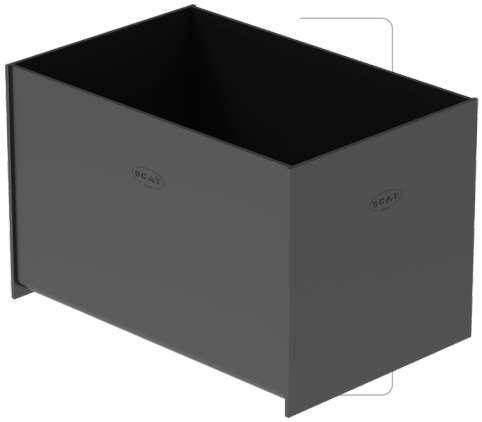
- Removable base insert
- Grounding connection
- Material = PE-HD-EL



C 108 981

Collecting tray

- Grounding connection
- Material = PE-HD-EL



Collecting Tray Accessories

Grounding cables..... **page 46**

Canisters..... **page 72-73**

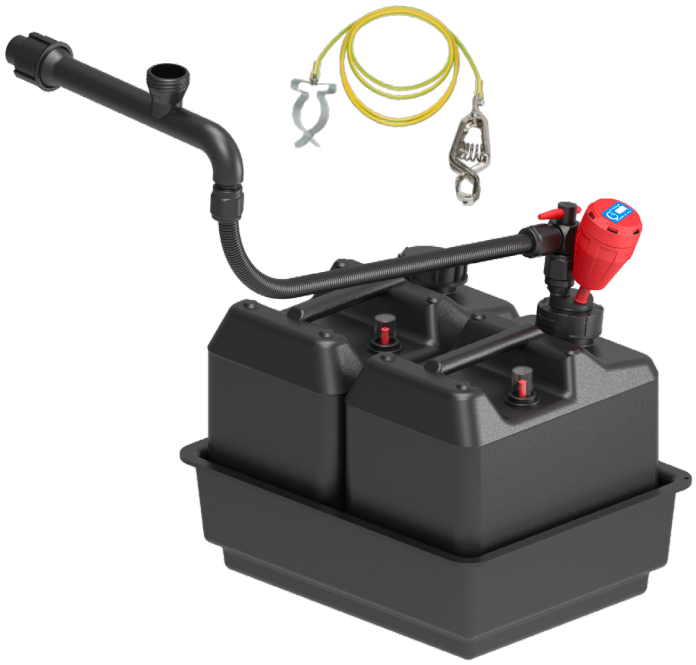
Fig.	Part No.	Description	Material
A	117 985	Collecting tray with base insert, PE-HD electrostatic conductive, dimensions (W x H x D): 285 x 95 x 385 mm (inside), dimensions (W x H x D): 355 x 135 x 445 mm (outside)	PE-HD-EL
B	117 986	Collecting tray with base insert, PE-HD electrostatic conductive, dimensions (W x H x D): 295 x 200 x 415 mm (inside), dimensions (W x H x D): 365 x 240 x 490 mm (outside)	PE-HD-EL
C	108 981	Collecting tray, PE-HD electrostatic conductive, dimensions (W x H x D): 200 x 200 x 300 mm (inside), dimensions (W x H x D): 225 x 215 x 325 mm (outside)	PE-HD-EL
	118 008	Collecting tray, PP electrostatic conductive, dimensions (W x H x D): 370 x 315 x 570 mm (interior), dimensions (W x H x D): 400 x 320 x 600 mm (exterior)	PP
	118 009	Collecting tray, PP electrostatic conductive, dimensions (W x H x D): 370 x 265 x 570 mm (interior), dimensions (W x H x D): 400 x 270 x 600 mm (exterior)	PP

Containers
Starter Sets

A 106 692

Starter Set Basic

- 1x 106 688 (Basic 32 pipe)
- 1x 106 423 (Blind plug for 32 pipe)
- 1x 106 568 (SymLine FlexTube, Length 1000 mm)
- 1x 106 475 (Shut-off, angled)
- 1x 490 336 (Exhaust filter M, V3.0, service life 12 months)
- 1x 306 482 (Safety Waste Cap, S 60/61)
- 2x 108 042 (Canister 10 L, S 60/61, with floater)
- 1x 117 985 (Collecting tray with base insert)
- 1x 108 176 (Grounding cable)
- Electrostatic conductive materials



B 106 694

Starter Set Premium

- 1x 106 688 (Basic 32 pipe)
- 1x 106 423 (Blind plug for 32 pipe)
- 1x 106 568 (SymLine FlexTube, Length 1000 mm)
- 1x 106 475 (Shut-off, angled)
- 1x 490 336 (Exhaust filter M, V3.0, service life 12 months)
- 1x 106 480 (Safety Waste Cap, S 60/61, electronic level control)
- 2x 107 953 (Canister 10 L, S 60/61)
- 1x 117 985 (Collecting tray with base insert)
- 1x 108 176 (Grounding cable)
- 1 x 108 050 (Signal cable for electronic level control, length = 3 m)
- 1 x 108 087 (Signal Box T1 - EU)
- Electrostatic conductive materials

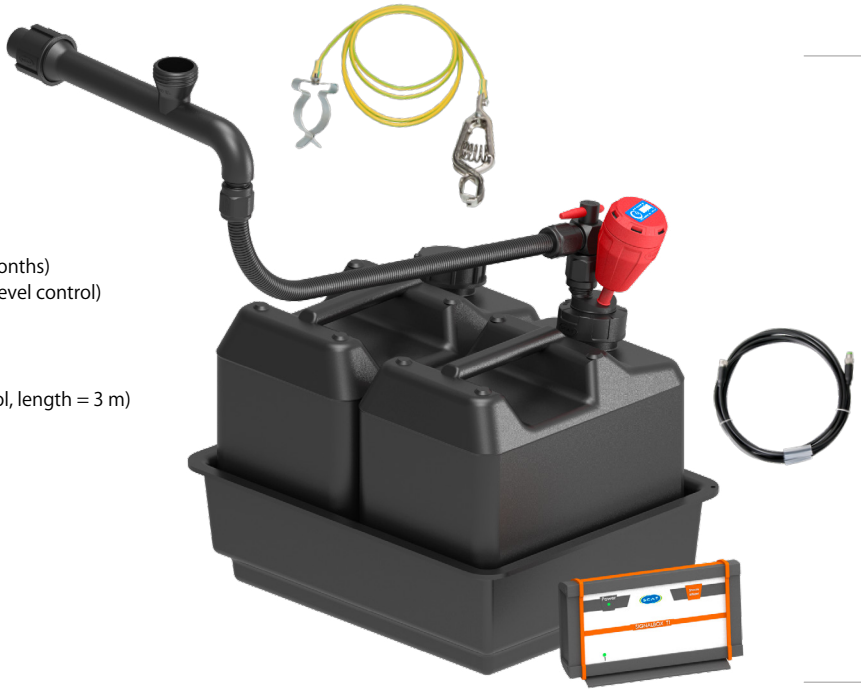


Fig.	Part No.	Description
A	**106 692**	Starter Set Basic
B	**106 694**	Starter Set Premium

Keep your filling Levels under Control!

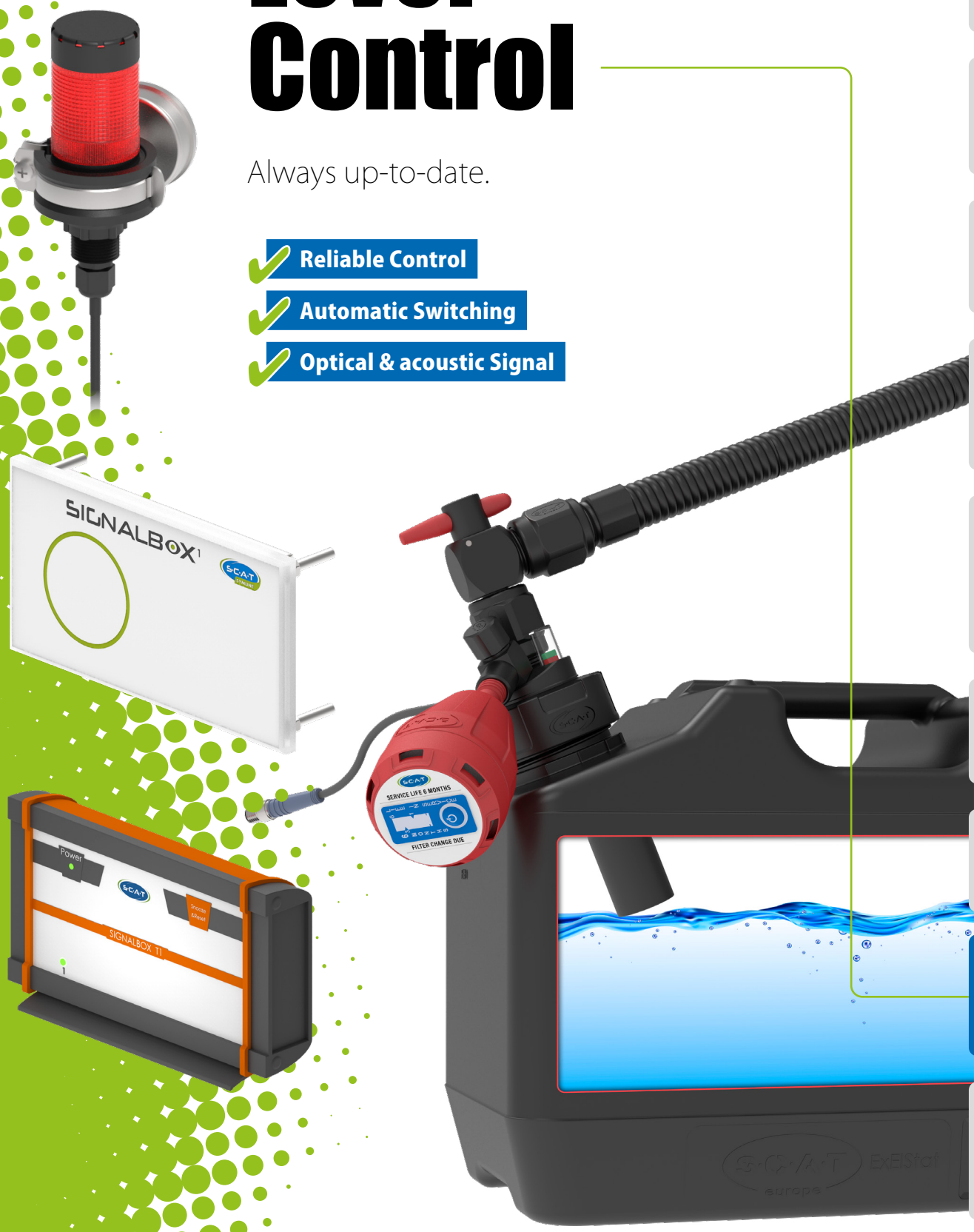
SCAT level controls warn of overflowing or empty containers with a visual and acoustic signal.
In addition, peripheral devices such as pumps and valves can be controlled via contact switches.

www.scat-europe.com

Level Control

Always up-to-date.

- Reliable Control
- Automatic Switching
- Optical & acoustic Signal

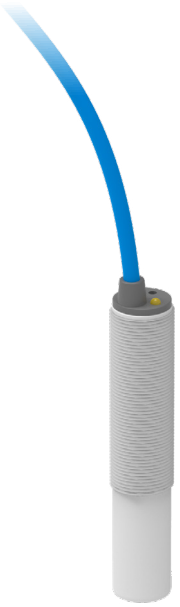


Level Control
Sensors

A 108 277

Capacitive rod sensor, PTFE

- Housing material = PTFE
- Thread = M12x1
- Length sensor = 70 mm
- With LED display
- Cable length = 2 m
- For ATEX zone 0
- ATEX Ex II 1G Ex ia IIC T1-T6 Ga
- Output function = NAMUR
- Operating distance 1 - 6 mm adjustable
- Switch amplifier necessary (108 278)



B 108 178

Capacitive rod sensor, brass

- Housing material = brass
- Thread = M18x1
- Length sensor = 70 mm
- With LED display
- Cable length = 2 m
- For ATEX zone 0
- ATEX Ex II 1G Ex ia IIC T1-T6 Ga
- Output function = NAMUR
- Operating distance 1 - 8 mm adjustable
- Switch amplifier necessary (108 278)

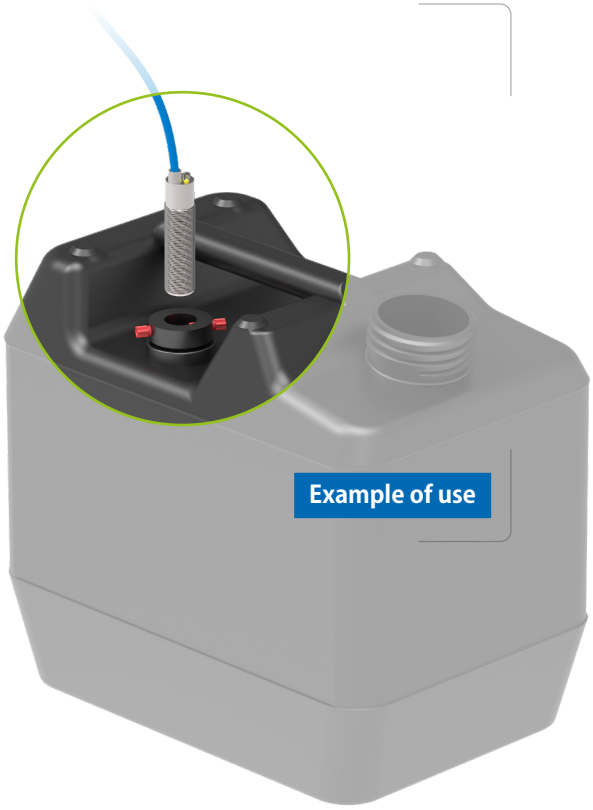


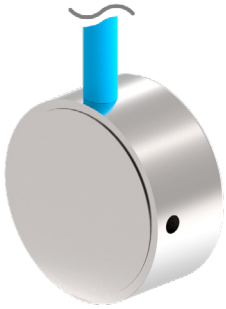
Fig.	Part No.	Description
A	**108 277**	Capacitive rod sensor, length cable 2 m , PTFE
	108 303	Capacitive rod sensor, length cable 5 m , PTFE
B	**108 178**	Capacitive rod sensor, length cable 2 m, brass

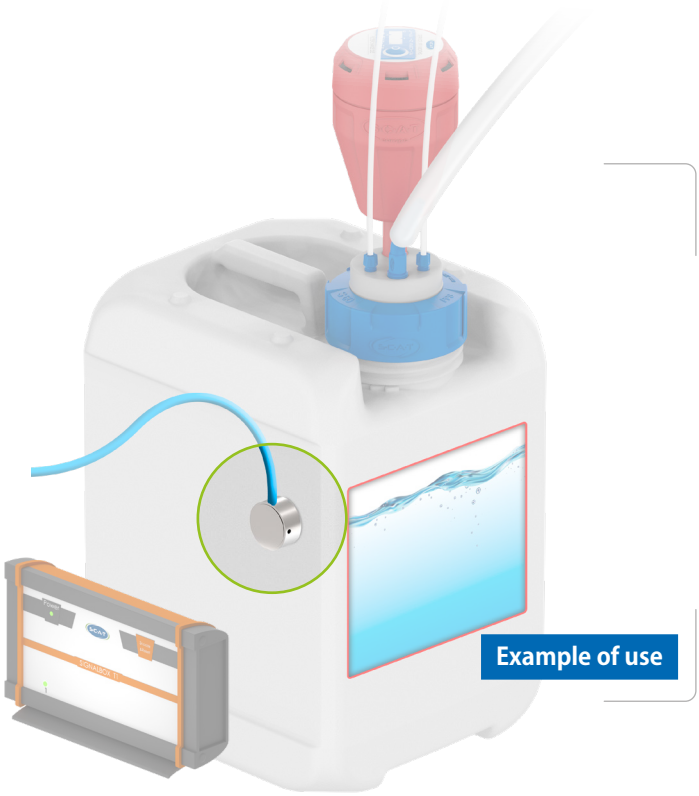
Level Control
Sensors

A 108 291

Capacitive disc sensor, operating distance 1 - 10 mm

- Housing material = stainless steel
- Active surface = PTFE
- For ATEX zone 0
- Cable length = 2 m
- ATEX Ex II 1G Ex ia IIC T1-T6 Ga
- Output function = NAMUR
- Operating distance 1 - 10 mm adjustable
- Switch amplifier necessary (108 278)



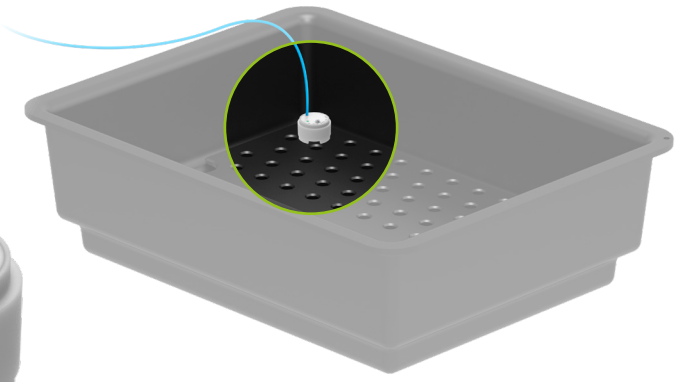


Example of use

B 108 301

Capacitive leakage sensor, operating distance 0.5 - 3 mm

- Capacitive sensor for leakage control
- Housing material = PTFE
- For ATEX zone 1
- ATEX Ex II 2G EEx ia IIC T1-T4
- Cable length = 2 m
- Output function = NAMUR
- Operating distance 0.5 - 3 mm adjustable
- Switch amplifier necessary (108 278)



Example of use

ATEX

According to the ATEX guidelines, Ex-sensors for use in potentially explosive atmospheres (Ex-zone) must be protected with switch amplifier. **See page 86**.

Fig.	Part No.	Description
A	**108 291**	Capacitive disc sensor, length cable 2 m
B	**108 301**	Capacitive leakage sensor, length cable 2 m
	106 737	Holder for leakage sensor for positioning below the positioning plate in the safety storage cabinet, PE-HD-EL

Level Control
Signaling Devices - Built-in Signalbox

A 106 741

Built-in Signalbox[1] (EU / UK / US)

- 1-channel
- For Safety Waste Cap and other electronical level controllers
- Touchless alarm-resetting fields for one container
- One switch input and one switch output for peripheral units
- Incl. 24V power supply

B 106 548

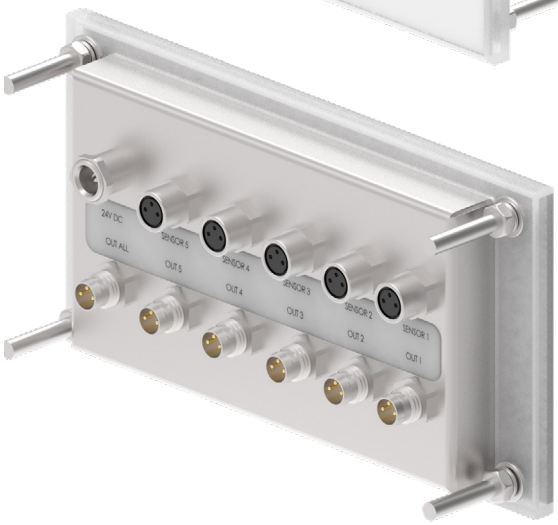
Built-in Signalbox[2] (EU / UK / US)

- 2-channels
- For Safety Waste Cap and other electronical level controllers
- Touchless alarm-resetting fields for two containers
- Two switch inputs and two switch outputs for peripheral units
- Incl. 24V power supply

C 106 735

Built-in Signalbox[5] (EU / UK / US)

- 5-channels
- For Safety Waste Cap and other electronical level controllers
- Touchless alarm-resetting fields for five containers
- Five switch inputs and five switch outputs for peripheral units
- Incl. 24V power supply



Switch outputs for peripheral units (e.g. pumps, valves etc.) Put the built-in signal box on your desktop with our table display 106 733 see on **page 86**.

Fig.	Part No.	Description
A	**106 741**	Built-in Signalbox[1], 1-channel, incl. power supply, (W x H x D): ca. 139 x 74 x 36 mm
B	**106 548**	Built-in Signalbox[2], 2-channel, incl. power supply, (W x H x D): ca. 139 x 74 x 36 mm
C	**106 735**	Built-in Signalbox[5], 5-channel, incl. power supply, (W x H x D): ca. 139 x 74 x 36 mm

Level Control
Signaling Devices - Table Signalbox

A 108 087

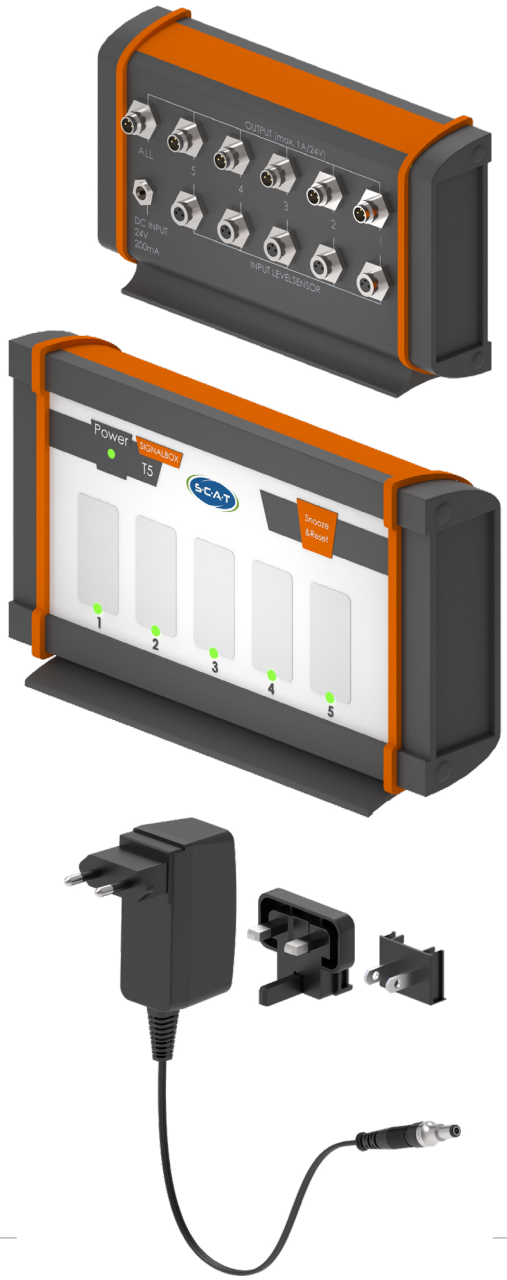
Table signal box T1 (EU / UK / US)

- 1-channel
- For Safety Waste Cap and other electronical level controllers
- Touchless alarm-resetting fields for one container
- One switch input and one switch output for peripheral units
- Incl. 24V power supply

B 108 088

Table signal box T5 (EU / UK / US)

- 5-channels
- For Safety Waste Cap and other electronical level controllers
- Touchless alarm-resetting fields for five containers
- Five switch inputs and five switch outputs for peripheral units
- Incl. 24V power supply



Cables

All SCAT Europe and SymLine signaling devices as signal boxes or signal lamps come with power supply and adapters for UK and US sockets. Signal cables you will find on **page 87**.

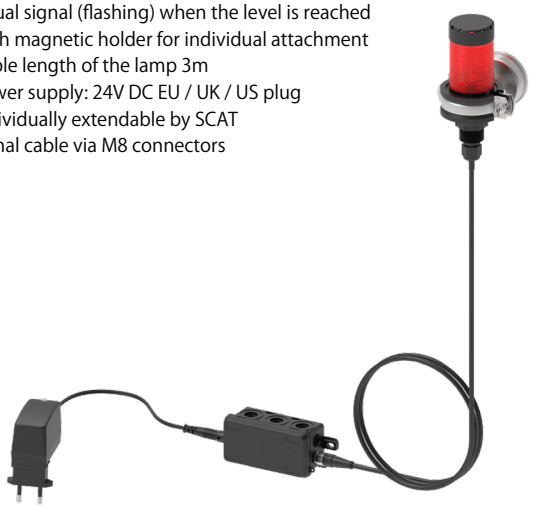
Fig.	Part No.	Description
A	**108 087**	Table signal box T1, incl. power supply, (W x H x D): ca. 180 x 105 x 55 mm
B	**108 088**	Table signal box T5, incl. power supply, (W x H x D): ca. 180 x 105 x 55 mm

Level Control
Signaling Devices - Signal Lamp

A 108 334

Signal lamp for level control (visual)

- Visual signal (flashing) when the level is reached
- With magnetic holder for individual attachment
- Cable length of the lamp 3m
- Power supply: 24V DC EU / UK / US plug
- Individually extendable by SCAT signal cable via M8 connectors



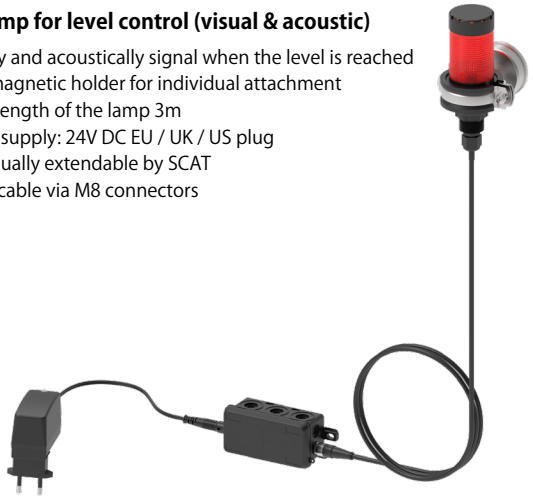
Directly connected to a Canister or a SCAT Safety Waste Cap

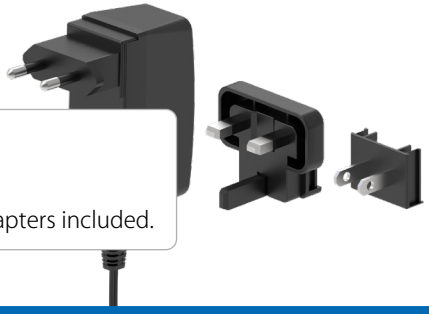
No signal box needed.

B 108 334-T

Signal lamp for level control (visual & acoustic)

- Visually and acoustically signal when the level is reached
- With magnetic holder for individual attachment
- Cable length of the lamp 3m
- Power supply: 24V DC EU / UK / US plug
- Individually extendable by SCAT signal cable via M8 connectors





EU / UK / US

Power supply and adapters included.

Soundcheck!

SCAT Europe signal lamp for level control is available in two versions. Just scan the QR code and watch the video. Please turn on your speakers to check the sound.

Fig.	Part No.	Description
A	108 334	Signal lamp for level control (visual), incl. power supply
B	108 334-T	Signal lamp for level control (visual & acoustic), incl. power supply

Level Control
Sets for automatic Switching

A 106 752

Set: automatic switching for containers (ATEX compliant)

- 1x Built-in Signalbox², EU / UK /US, 2-channel, two switch inputs and two switch outputs for peripheral units (106 548)
- 1x Switch amplifier set for safety cabinets „EU-plug“, consisting of: 1x Switch amplifier EU, 2 channels (106 678)
- 1x Switch Box: control unit for SCAT Built-in Signalbox or signal box T1 / T5 (106 730)
- 1x 3-way ball valve, 3x GL 25 (m), electric, material: galvanized steel (160 178)
- 1x 3-way ball valve mount, stainless steel (106 580)
- 2x signal cable for electronic level monitoring, length = 3 m (108 050)

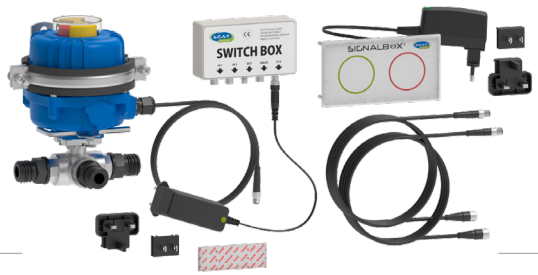
The Function

When a container reaches its maximum fill level, the automatic switching diverts the hazardous substances to another canister connected to the system. It warns you in good time before the fill level of your collection containers reaches a critical level.

B 106 751

Set: automatic switching for containers with signal box

- 1x Built-in Signalbox², EU / UK /US, 2-channel, two switch inputs and two switch outputs for peripheral units (106 548)
- 1x Switch Box: control unit for SCAT Built-in Signalbox or signal box T1 / T5 (106 730)
- 1x 3-way ball valve, 3x GL 25 (m), electric, material: stainless steel (160 178)
- 1x 3-way ball valve mount, galvanized steel (106 580)
- 2x signal cable for electronic level monitoring, length = 3 m (108 050)



C 106 750

Set: automatic switching for containers

- 1x Switch Box: control unit for SCAT Built-in Signalbox or signal box T1 / T5 (106 730)
- 1x 3-way ball valve, 3x GL 25 (m), electric, material: galvanized steel (160 178)
- 1x 3-way ball valve mount, stainless steel (106 580)
- 2x signal cable for electronic level monitoring, length = 3 m (108 050)

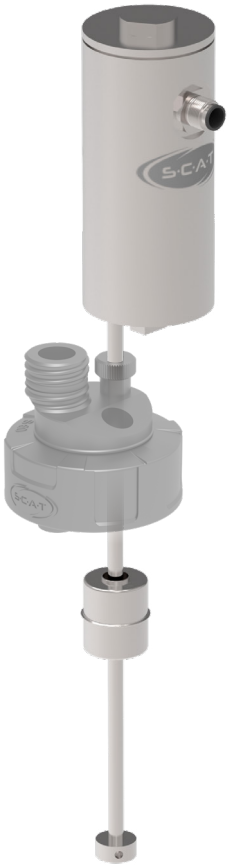
Fig.	Part No.	Description
A	**106 752**	Set: automatic switching for containers (ATEX)
B	**106 751**	Set: automatic switching for containers with signal box
C	**106 750**	Set: automatic switching for containers

Level Control
Sets

A 502 042

Continuous level control

- Set for continuous level control with Signalbox UM-O-Ex with 230 VAC
- With display unit and stainless steel sensor probe
- Incl. cable with open ends
- Pre-alarm at 75%, max. level at 95% of the container 107 953
- Level sensor TORRIX Ex 6 B NT for Bypass without HART
- Probe head material: stainless steel 303/316L
- Protection class IP68
- Probe tube material = stainless steel canister 1.4571
- Probe length: 265 mm
- Probe tube diameter: 6 mm
- For canister 107 953 and Safety Waste Cap 106 507
- Accuracy: up to +-0,01%
- Alarms can be freely set



Measure filling levels permanently

- Automatic warning for 5 different levels freely selectable
- Accuracy up to ±0.5mm
- The signal box offers 4 freely configurable outputs for controlling external devices
- The compact design and the independent mains supply enable easy handling and installation, even outside of control cabinets

B 106 507

Safety Waste Cap, S 60/61

- GL 25 (m)
- Fitting for continuous level control (502 042)
- PE-HD electrostatic conductive
- Connector for exhaust filter

Fig.	Part No.	Description
A	**502 042**	Continuous level control
B	**106 507**	Safety Waste Cap, S 60/61

Level Control
Sets

A 106 694

SymLine FLEX - Starter Set, Premium

- 1x 106 688 (Basic 32 pipe)
- 1x 106 423 (Blind plug for 32 pipe)
- 1x 106 568 (SymLine FlexTube, Length 1000 mm - flexible adaptable)
- 1x 106 475 (Shut-off, angled)
- 1x 490 336 (Exhaust filter M, V3.0, economy package)
- 1x 106 480 (Safety Waste Cap, S 60/61, electronic level control, GL 25(m), connector for exhaust filter, PE-HD electrostatic conductive)
- 2x 107 953 (Canister 10 L, S 60/61, PE-HD electrostatic conductive)
- 1x 117 985 (Collecting tray with base insert)
- 1x 108 176 (Grounding cable)
- 1 x 108 050 (Signal cable for electronic level control, length = 3 m)
- 1 x 108 087 (Signal Box T1 - EU)

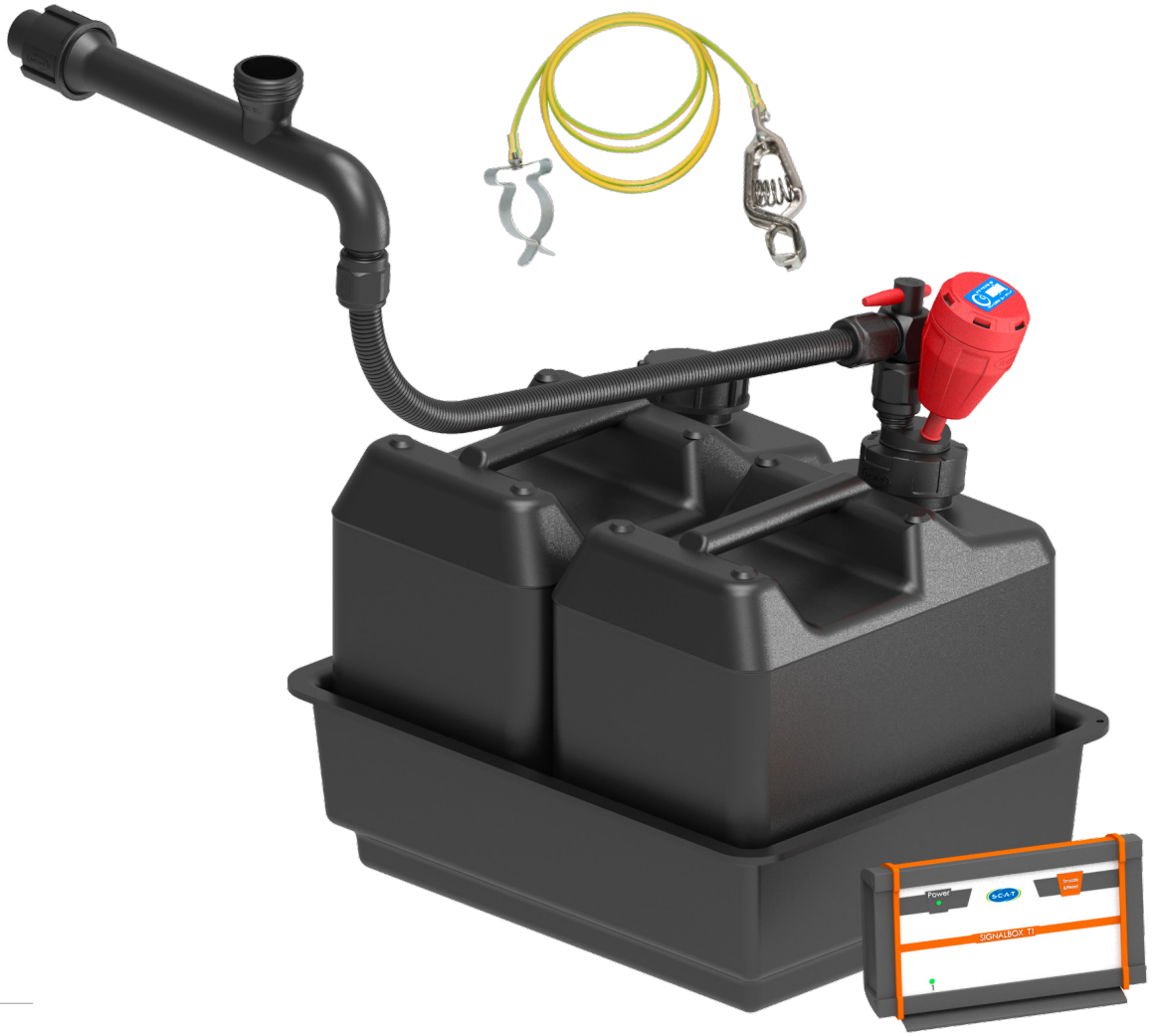


Fig.	Part No.	Description
A	**106 694**	SymLine FLEX - Starter Set, Premium

Level Control
Accessories

A 108 278

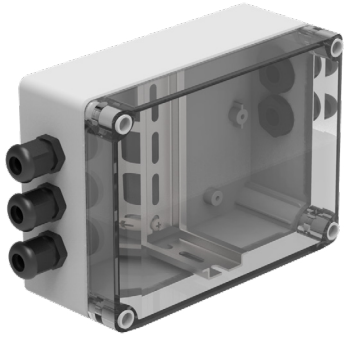
Switch amplifier EU, 2 channels

- Switch amplifier EU
- 2 channels safety barrier
- 120 - 230 V AC supply
- Contact or NAMUR-inputs
- ATEX: Ex II (1) G [Ex ia] IIC
- Ex II (1) D [Ex ia] IIIC
- Including power cable 230V

B 106 590

Housing for switch amplifier 108 278

- Housing for the isolating switch amplifier 108 278
- L x W x H: 75 mm x 125 mm x 175 mm
- Material: polycarbonate light-grey (RAL 7035)
- Weight: 450g
- Protection class: IP 66



C 106 678

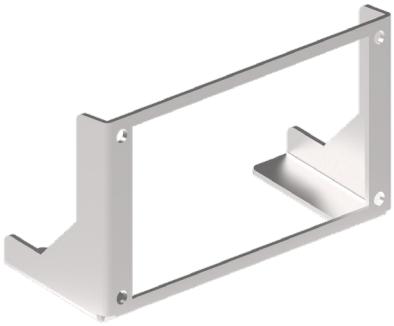
Switch amplifier set „EU plug“

- 1x Switch amplifier EU, 2 channels (108 278) 1x Housing for the isolating switch amplifier (106 590)
- 2x Cable set: Connection for switch amplifier to Safety Waste Cap with sensor

D 106 733

Table signal box display

- Brushed stainless steel
- Wall thickness = 2 mm
- For signal boxes 1/2/5 with cable connection on the back (Version 2024)
- Stainless steel



E 106 658

Mount for built-in signal box

- Mount for signal box (for corner) (furniture installation)
- Wall thickness = 2 mm
- Stainless steel

F 106 703

Front panel for built-in signal box

- Front panel for built-in signal box
- Wall thickness = 2 mm
- Stainless steel

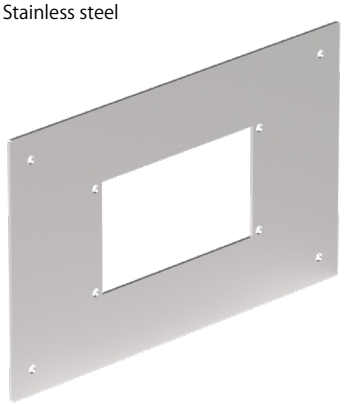


Fig.	Part No.	Description
A	**108 278**	Switch amplifier EU, 2 channels
B	**106 590**	Housing for switch amplifier 108278
C	**106 678**	Switch amplifier set „EU plug“
D	**106 733**	Table signal box display
E	**106 658**	Mount for built-in signal box
F	**106 703**	Front panel for built-in signal box

Level Control
Accessories

A 108 304

Signal cable, length = 1.5 m

- Signal cable for electronic level control
- Length = 1.5 m

B 108 039

Cable for signalbox potential-free output, for peripheral instruments, 5 m

- Cable for relay contact, for switch off peripheral instruments
- Length = 5 m

C 108 314

Cable set Built-in signal box

- Connection for switch amplifier (108 278) / Built-in Signalbox consisted of:
- 1x 1.5 m cable connection for sensor with M8 (f) + 3x cable shoes
- 1x 3.5 m cable connection for signal box with M8 (m) + 3x cable shoes

Fig.	Part No.	Description
A	**108 304**	Signal cable, length = 1.5 m
	108 050	Signal cable, length = 3 m
	108 037	Signal cable, length = 5 m
	108 038	Signal cable, length = 10 m
B	**108 039**	Cable for signalbox potential-free output, for peripheric instruments, length = 5 m
C	**108 314**	Cable set Built-in signal box 1.5 m (m) 3.5 m (f)
	108 219	Cable set Built-in signal box 3.5 m (m) 1.5 m (f)

A well interacting Team! Saftey Cabinets and SymLine Components.

SCAT Europe components for safety cabinets and the specially developed High Flow Solution system.

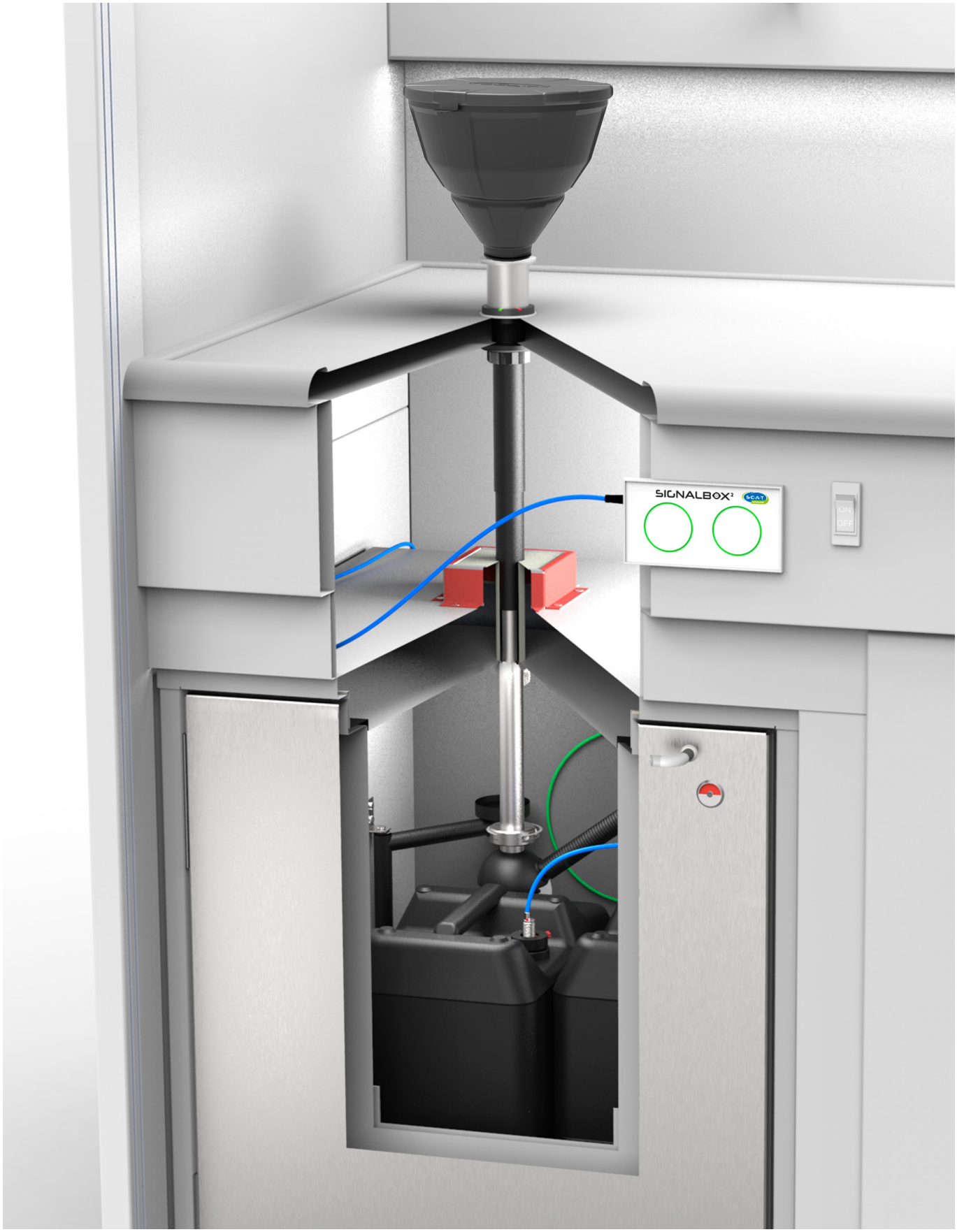
www.scat-europe.com

Safety Cabinets

The Cabinets with maximum safety.

- High Flow Solution
- Ventilation
- Fire Protection

Safety Cabinets
High Flow Solution



Safety Cabinets
High Flow Solution

A 106 623

High Flow Solution, Safety cabinet

- High Flow Solution System:
- XL funnel with lid, OD 200 mm,
  Material = PE-HD-EL, including coarse sieve
- Main pipe, OD 24 mm, ID 20 mm, length approx. 800 mm
  Material = stainless steel
- Gliding sleeve with counter nut, Material = PE-HD-EL
- Locking system - bayonet lock, Material = stainless steel
- Exhaust system for indirect ventilation of the waste container,
  Material = PE-HD-EL
- Waste container (2x10 liters), S 60 thread, including sensor sleeve,
  Material = PE-HD-EL
- Grounding terminal fastened on the pull-out tray,
  alligator clip connection to the waste container
- Capacitive sensor
- Safety switch barrier
- Built-in Signalbox², two sensor connections
- Wiring cables

- Safety cabinet:
- SI-UB-Safety cabinet UB-T-90 TL, Dimensions: 593 x 574 x 600 mm,
  electrostatic conductive powder coating outside and inside,
  pull-out tray with waste container, stainless steel

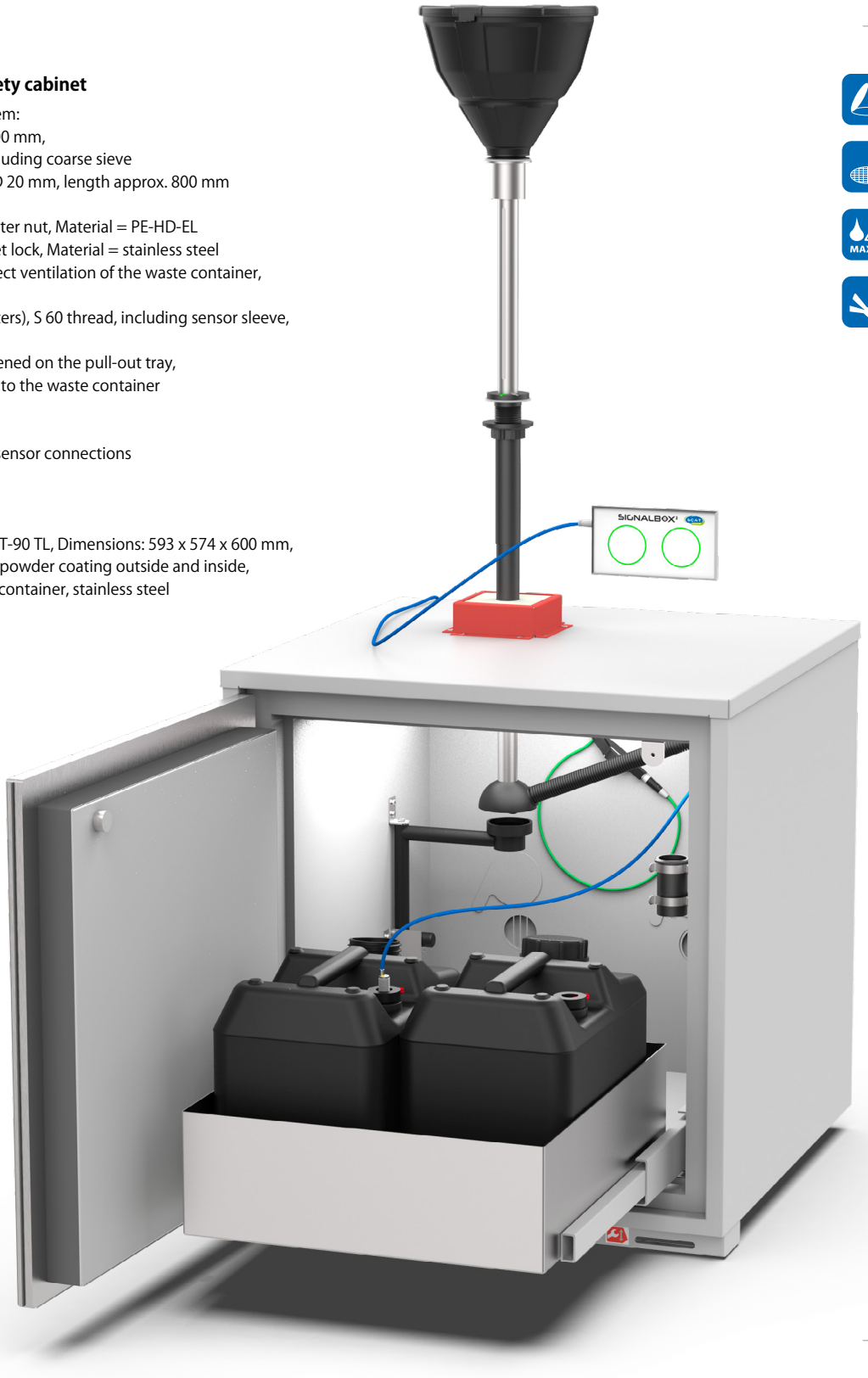


Fig.	Part No.	Description
A	**106 623**	High Flow Solution, Safety cabinet

Safety Cabinets
Ventilation Tubes

A 106 490

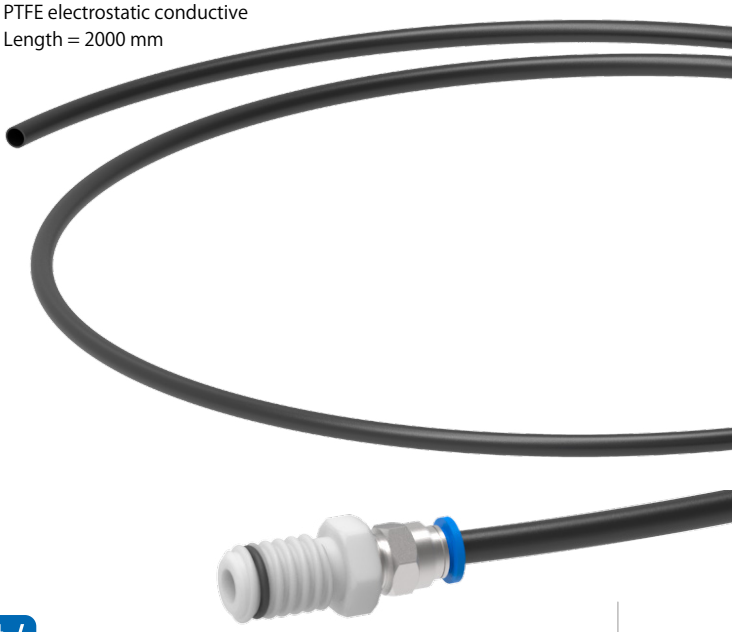
Ventilation tube, PE-HD electrostatic conductive

- OD = 13.9 mm
- Length = 1500 mm
- (OD) GL 14
- For connection to GL 14 (exhaust filter)
- PE-HD electrostatic conductive
- NPT 1/4" made of stainless steel for connection to HT-pipe

B 106 693

Ventilation tube, with check valve

- For connection to GL 14 (exhaust filter)
- NPT 1/8" fitting for connection to HT-pipe
- GL 14 (m)
- ID = 4 mm
- AD = 6 mm
- Smooth outside and inside
- PTFE electrostatic conductive
- Length = 2000 mm



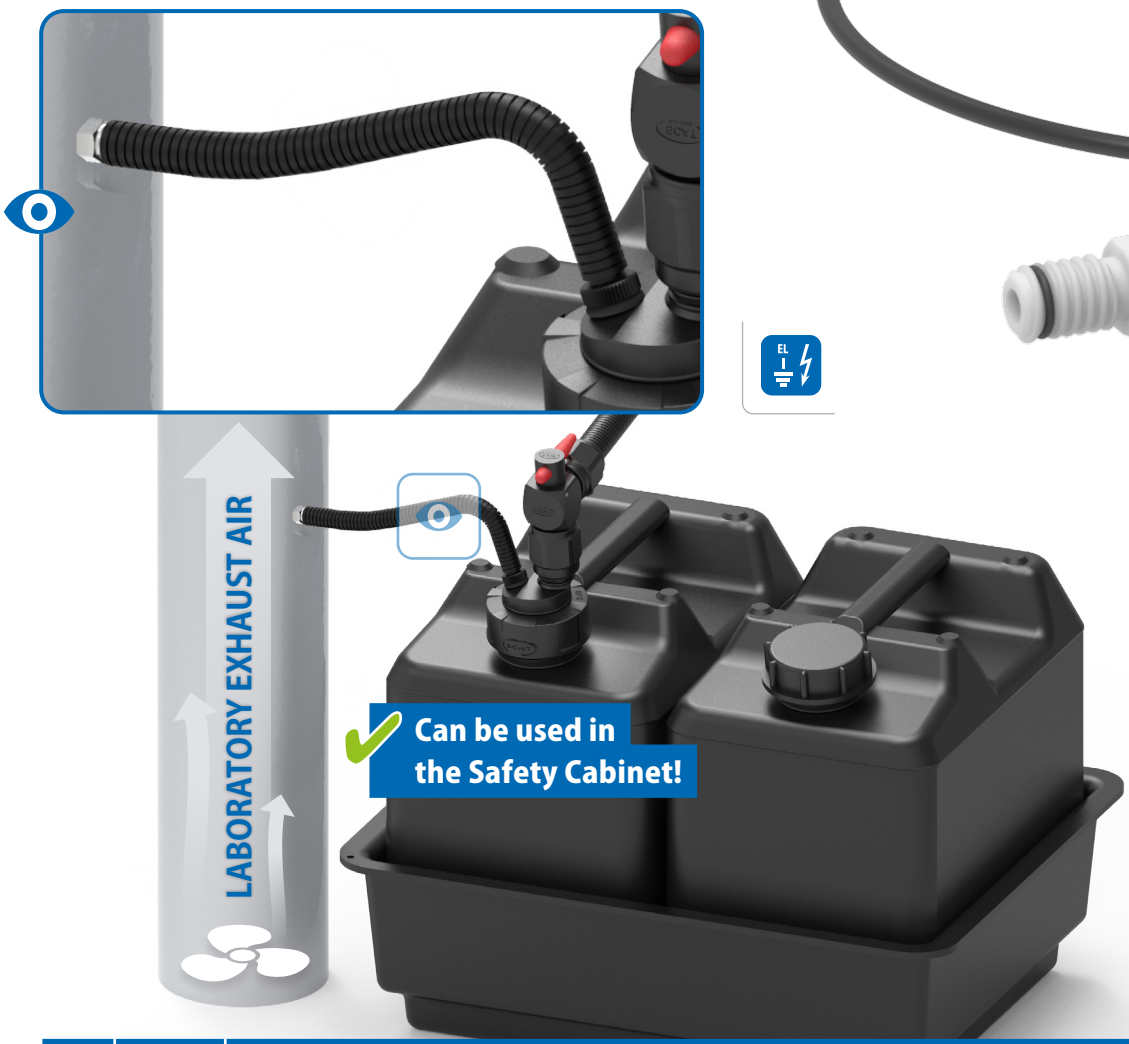


Fig.	Part No.	Description	Material
A	**106 490**	Ventilation tube, PE-HD electrostatic conductive	PE-HD-EL
B	**106 693**	Ventilation tube, with check valve	PTFE-EL
	106 677	Ventilation tube, without check valve	PTFE-EL

Safety Cabinets
Feedthroughs, Fire Protection

A 106 608

Cabinet feed-through, straight

- GL 25 (m) to GL 25 (m)
- ID = 10 mm
- For cabinet borehole of 28 mm and cabinet wall thickness of max. 120 mm
- PE-HD electrostatic conductive, incl. counter nut and two PE-EL washer

PE-HD

B 106 611

Cabinet feed-through

- Angled
- GL 25 (m) to GL 25 (m)
- ID = 10 mm
- For cabinet borehole of 28 mm and cabinet wall thickness of max. 120 mm
- PE-HD electrostatic conductive, incl. counter nut and two PE-EL washer

PE-HD

C 106 605

Fire protection package

- Mounting kit - Pipe- / Tube duct for max. 28 mm diameter
- Safety cabinet type 90 for ASECOS
- Dimensions (W x H x D): 182 x 104 x 48 mm

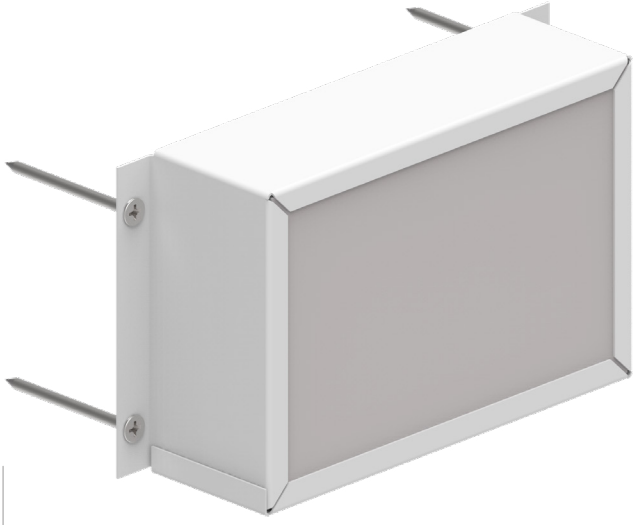


Fig.	Part No.	Description	Material
A	**106 608**	Cabinet feed-through, straight	PE-HD-EL
B	**106 611**	Cabinet feed-through	PE-HD-EL
C	**106 605**	Fire protection package	-

More helpful Information about our Products.

What should you consider when using our products? What type of thread should your new SCAT component have? Be guided by our tables, symbols and other useful tips.

www.scat-europe.com

Addendum

- Thread Identification
- Thread Types
- Resistance to Chemicals
- Safety Instructions
- GHS Hazard Symbols
- Terms & Conditions

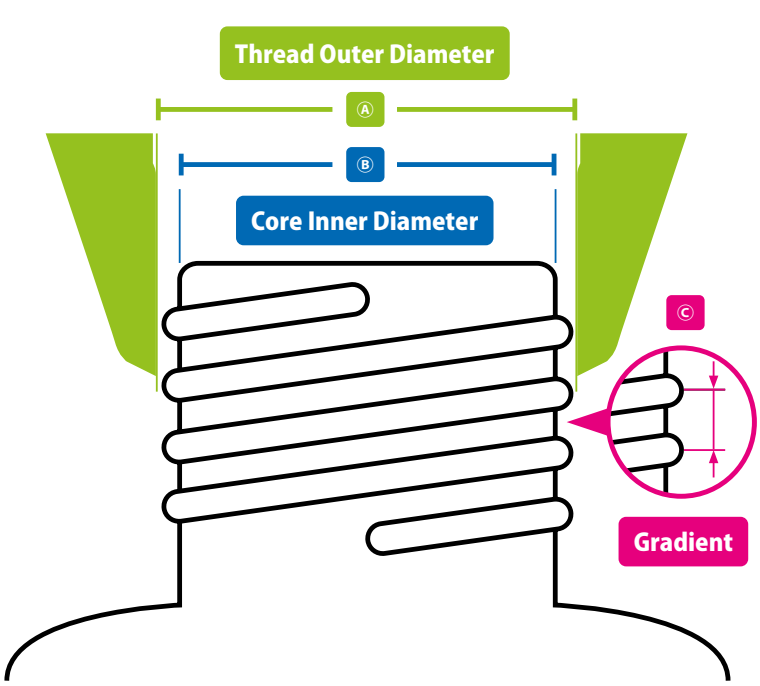
Thread Identification
Container Threads

Container Threads

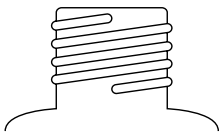
SCAT Safety Caps are available for a wide variety of differing container threads. On the following pages you will find tables for determining thread sizes, together with a helpful overview of typical thread types. It is best to use a slide gauge.

Instruction, identification of Threads

Use the measured distances below to determine the outer diameter of the thread Ⓐ or the core inner diameter of the container opening Ⓑ.

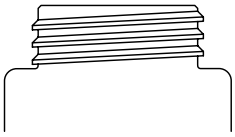


Round Thread, Example:



- Bottle thread (GL or GLS)
- Common standard for laboratory bottles

Saw Thread, Example:



- Canisters (S-Thread)
- Nalgene containers
- Barrels (Mauser, Trisure, BCS-Threads)
- GPI Standard (Glass Packaging Institute)
- Other plastic containers

Note: All the measurements and values given here can vary up to 0.5 mm, dependent upon the manufacturer involved (due to manufacturing tolerances). Brand names and trademarks are the property of the respective owners. The brand names and protected trademarks mentioned here are simply of descriptional nature.

⌀ Ⓐ Thread Outer Diameter		⌀ Ⓑ Core Diameter	Ⓒ Gradient			
mm max.	mm min.	mm max.	in mm	Norm	Thread	Norm Thread Comments (also re. brand names. trademarks)
28.00	27.50	25.98	3.00	DIN 168-1	GL 28	Chromsystems®, Recipe®, 500 ml Buffer from Sigma®
32.00	31.30	29.30	4.00	DIN 168-1	GL 32 (glass)	For containers of the brand Duran®
32.00	31.50	29.00	3.00		S 32 (plastic)	-
37.49	36.88	35.10	4.23	GPI / SPI	GL 38/ GPI 38-400 (glass) (short)	For containers of the brands Wheaton® and Nalgene®
38.00	37.50	35.00	3.00	DIN 6063-2	GL 38 short (foldable canister)	4 L BDH bottle, Fulltime® Reagents
38.00	37.50	35.00	3.00	DIN 6063-1	S 38 (plastic)	2.5 L canister from Recipe®, HPLC-P Water, 1 litre Biosolve®, Fresenius Kabi® 10 L
37.49	36.88	35.10	4.23	GPI / SPI	GPI 38-430 (glass) (long)	Wheaton®, Nalgene® 4-edge 500 ml plastic bottle
40.00	39.30	37.30	4.00	DIN 168-1	GL 40 (glass)	For containers of the brand Merck®
41.00	39.50	37.00	3.50	DIN 6063-1	S 40/41 (plastic)	Due to the tolerances involved, a GL 40 cap will often fit on to an S 40 container of the brand Metrohm® / Merck®
42.00	41.50	38.00	4.00		S 42	The designation DIN42 is often written on the cap, Agro Paris Tech 51, Polimoon™, Nalgene®
45.00	44.30	42.30	4.00	DIN 168-1	GL 45	The most common thread for laboratory glass bottles
45.00	44.30	41.00	4.00	DIN 6063-1 DIN 6063-2	S 45	Due to the tolerances involved, a GL 45 cap will fit on to an S 45 thread
44.30	39.70	40.80	4.00	DIN45	DIN45	-
50.00	49.30	46.00	4.00	DIN 6063-1	S 50	Space-saving canister
51.00	49.00	47.00	4.00		S 51	Almost identical to S 50, but the outer diameter of the container thread (OD=Ⓐ) is significantly different. The designation DIN50 is written on the cap.
54.00	53.50	47.50	6.35	53B	B 53	For containers of the brands Nalgene® and Polimoon™
53.80	53.20	49.50	5.00	DIN51	S 55	Designation 51 / DIN51 / HP51 is often written on the cap
60.00	59.20	54.00	6.00	DIN 6063-1	S 60/61	The designation 61, Mauser® 13, RPC Containers® C59PP / DIN61 is often written on the cap
62.51	61.62	60.12	4.23	GPI / SPI	B 63 / GPI 63-415	For containers of the brand Nalgene®
65.00	64.30	59.00	6.00		S 65	For containers of the brand Kautex® (round canisters)
71.00	69.30	65.00	6.00	DIN71	S 70/71	Designation 71, Rieke® 70 mm is often written on the cap
80.00	79.00	77.00	15P5	(DIN 168-1) short	GLS 80	Typical laboratory bottle with wide neck, short thread with 3 thread ends
89.18	88.29	79.00	12.70	83B	B 83	For containers of the brands Nalgene®, Kautex®, Foxx® and Carboy 80 mm
90.00	89.30	84.00	6.00		S 90	The designation D90 is often written on the cap
95.00	93.50	89.00	7.00		S 95	-
106.00	104.00	95.00	6.00		105x 6	Hünersdorff

Thread Types
NPT

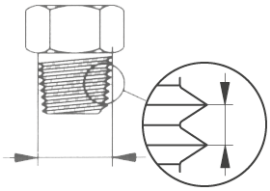
NPT (National Pipe Thread) Conical, American Tubular Thread

Very easily recognizable due to the conical outer and/or inner diameters, which are self-sealing. NPT is therefore also described as the “sealed thread” or as having a “sealed connection within the thread”.

Good to know!

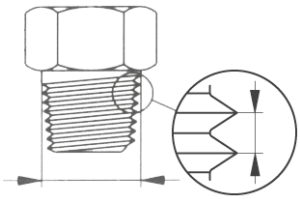
Drawings are of **scale 1:1**

NPT 1/8" – Outer-Ø = 9.9 mm



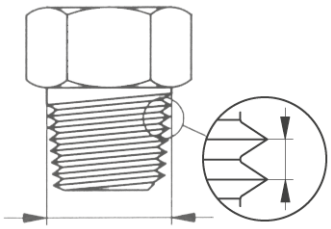
Gradient 27 on 1" = 0.94 mm

NPT 1/4" – Outer-Ø = 13.2 mm



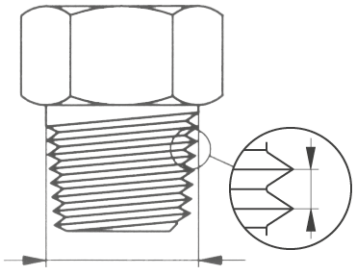
Gradient 18 on 1" = 1.41 mm

NPT 3/8" – Outer-Ø = 16.6 mm



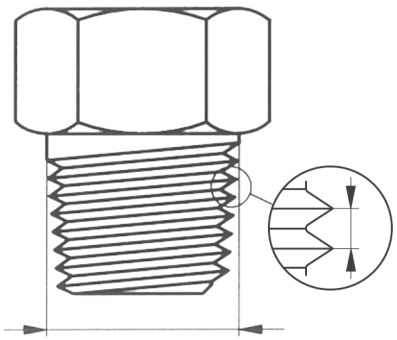
Gradient 18 on 1" = 1.41 mm

NPT 1/2" – Outer-Ø = 20.6 mm



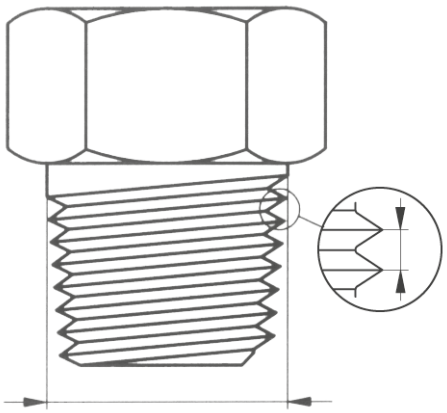
Gradient 14 on 1" = 1.81 mm

NPT 3/4" – Outer-Ø = 26 mm



Gradient 14 on 1" = 1.81 mm

NPT 1" – Outer-Ø = 32.5 mm



Gradient 11.5 on 1" = 2.21 mm

SCAT products with NPT 1/8" thread

NPT 1/8" - “tube connector” on Safety Waste Caps. Flexible like no other, with countless tube connections, dividers, collectors etc.

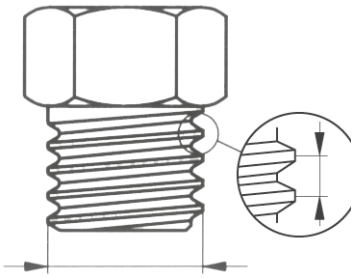
Thread Types
G; R; BSP

G or R (Whitworth Tubular Thread) and BSP (British Standard Pipe)

Cylindrical tubular threads are mainly used in english-speaking countries. The measurements, e.g. R 3/4", do not allow for recognition of diameters, the corresponding dimension must be obtained from tables.

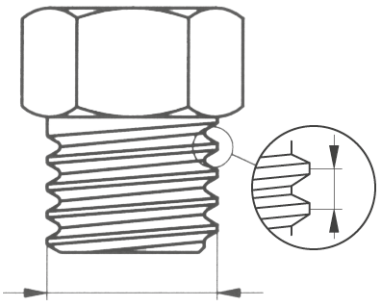
Good to know!
Drawings are of **scale 1:1**

G 1/2" – Outer-Ø = 20.8 mm



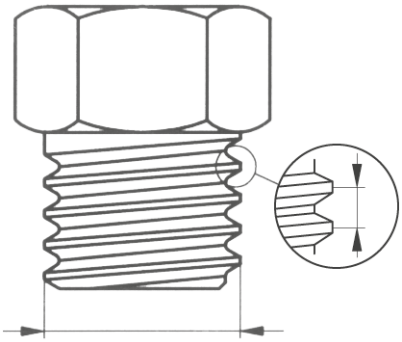
Gradient 14 on 1" = 1.81 mm

G 5/8" – Outer-Ø = 22.8 mm



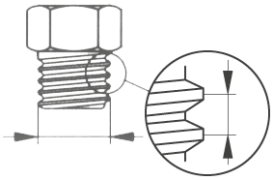
Gradient 14 on 1" = 1.81 mm

G 3/4" – Outer-Ø = 26.3 mm



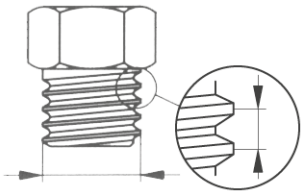
Gradient 14 on 1" = 1.81 mm

G 1/8" – Outer-Ø = 9.6 mm



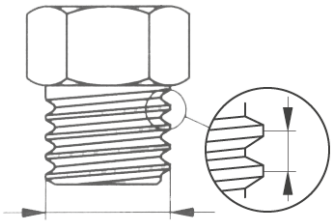
Gradient 28 on 1" = 0.91 mm

G 1/4" – Outer-Ø = 13 mm



Gradient 19 on 1" = 1.34 mm

G 3/8" – Outer-Ø = 16.5 mm



Gradient 19 on 1" = 1.34 mm

SCAT products with G thread
e.g. thread adapters

Thread Types
M

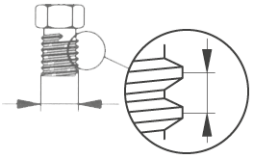
M (Metric ISO-Thread) - standard in the European Region

Cylindrical outer and inner diameters, accurate to the very millimeter. Forces are particularly well absorbed, due to the extremely small gradient of the metric thread. The designations begin with an "M", followed by the nominal diameter, e.g. M 10. If there is a gradient that differs from that of the norm, this is given in an addendum, e.g. M 10 x 0.75.

Good to know!

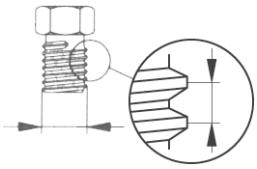
Drawings are of **scale 1:1**

M 5 – Outer-Ø = 5 mm



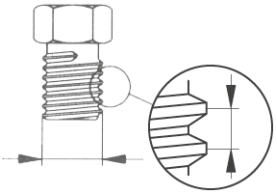
Gradient 0.80 mm

M 6 – Outer-Ø = 6 mm



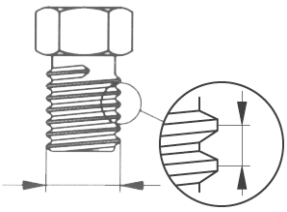
Gradient 1.00 mm

M 8 – Outer-Ø = 8 mm



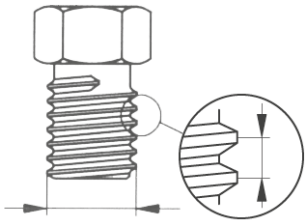
Gradient 1.25 mm

M 10 – Outer-Ø = 10 mm



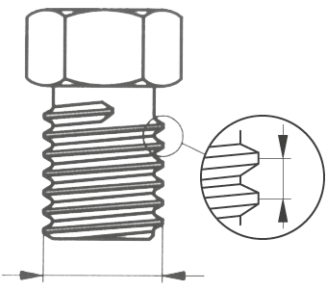
Gradient 1.50 mm

M 12 – Outer-Ø = 12 mm



Gradient 1.75 mm

M 16 – Outer-Ø = 16 mm



Gradient 2.00 mm

SCAT products with M thread

e.g. SymLine pipe connectors

Thread Types
UNF 1/4"-28G

UNF 1/4"-28G

From the USA. Mainly employed in chromotography/HPLC. Standard sizes are UNF 1/4”-28G and UNF 10-32G. The numbers 28G and 32G refer to the number of thread “steps” taken, over a vertical distance of one inch (25.4 mm).

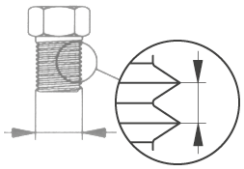
Good to know!

Drawings are of **scale 1:1**

UNF 1/4"-28G versus M 6

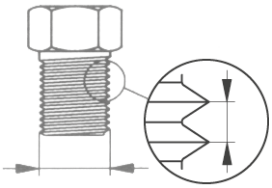
Our HPLC fittings are exclusively constructed with the most typically-used UNF 1/4"-28G HPLC-thread. There also exist fittings and dividers with the very similar thread M6. The two can only be differentiated by exact measurement of the outer diameter, or by using a special test ring or test cap. (It is e.g. therefore possible, to screw the one hollow screw type into the converse piece of the other thread type, at least for 2-3 revolutions). The UNF 1/4" thread has an outer diameter of 6.35 mm, the thread M6 has one of exactly 6.0 mm (production-related tolerances may apply). We recommend the exclusive use of the UNF thread 1/4"-28G, in order to avoid confusion, mistakes being made, or unnecessary double stocking.

UNF 1/4"-28G – Outer-Ø = 6.2 mm



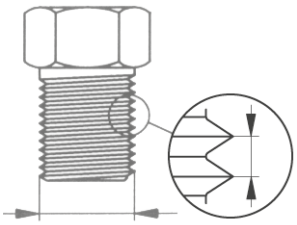
Gradient 28 on 1" = 0.91 mm

UNF 3/8"-28G – Outer-Ø = 9.4 mm



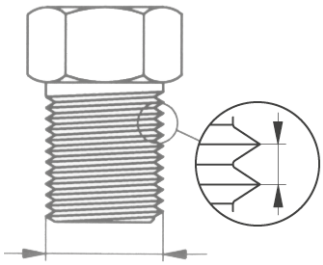
Gradient 24 on 1" = 1.06 mm

UNF 1/2"-28G – Outer-Ø = 12.6 mm



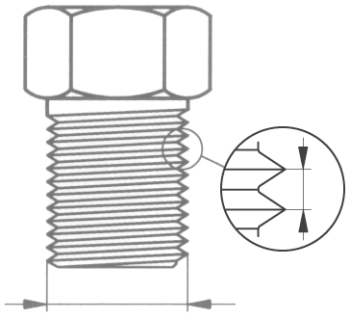
Gradient 20 on 1" = 1.27 mm

UNF 5/8"-18G – Outer-Ø = 15.7 mm



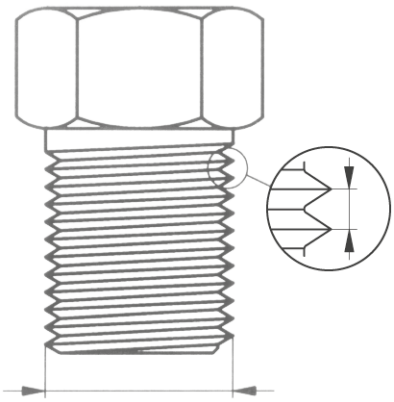
Gradient 18 on 1" = 1.41 mm

UNF 3/4"-16G – Outer-Ø = 18.9 mm



Gradient 16 on 1" = 1.59 mm

UNF 1"-12G – Outer-Ø = 25.2 mm



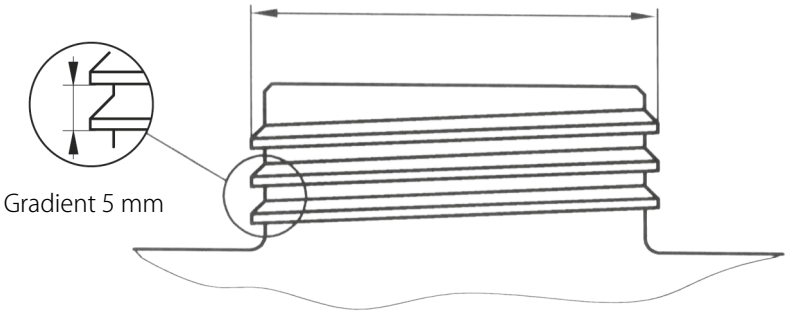
Gradient 12 on 1" = 2.12 mm

SCAT products with UNF 1/4"-28G thread

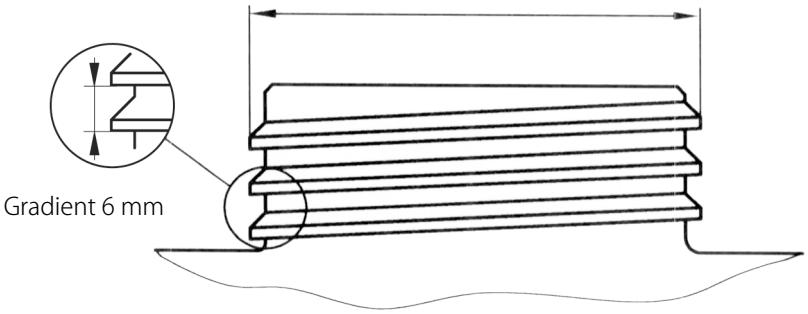
e.g. fittings, dividers, blind plugs and air valves

Thread Types
Canisters

S 55 – Outer-Ø = 53.5 mm



S 60 – Outer-Ø = 59.5 mm

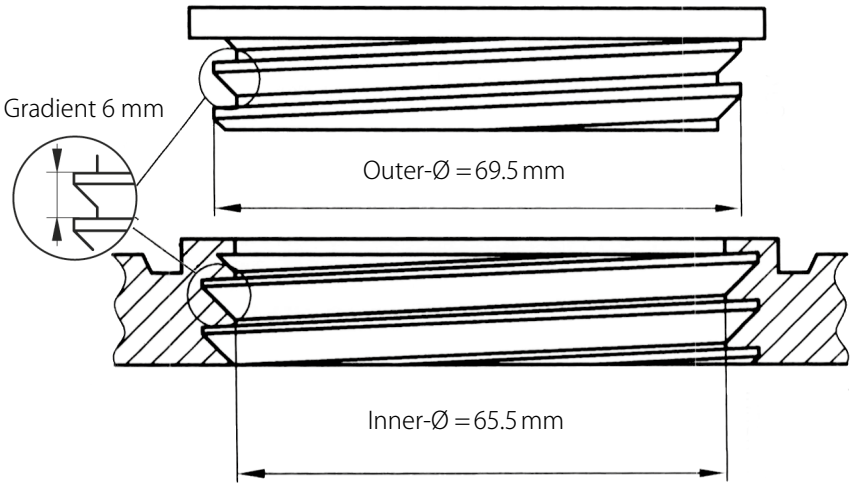


SCAT products with S thread

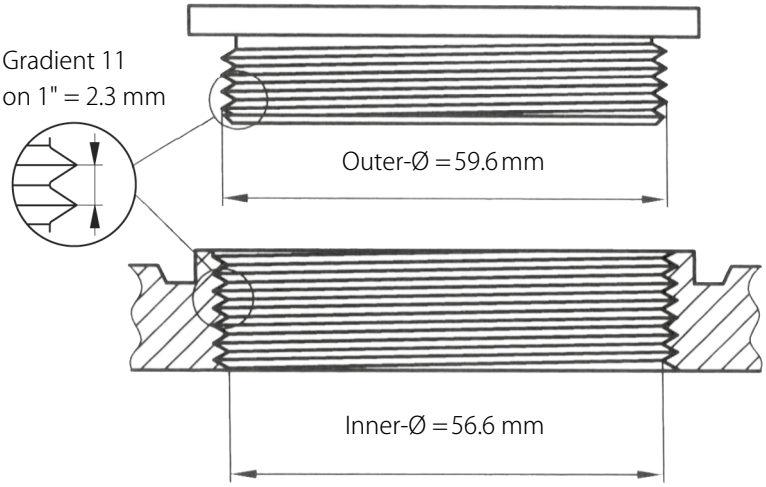
e.g. Safety Waste Caps

Thread Types
Barrels

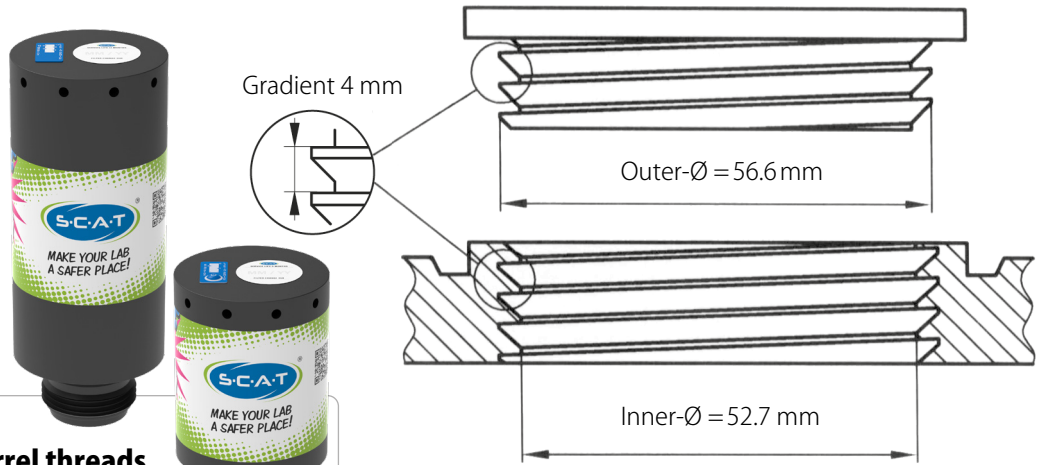
BCS 70 x 6 e.g. MAUSER® 2"



G2"/ R 2"/ BSP 2"



BCS 56 x 4 e.g. Tri Sure® 2"



SCAT products with barrel threads

e.g. exhaust filters for barrels

Thread Types
Glass Threads

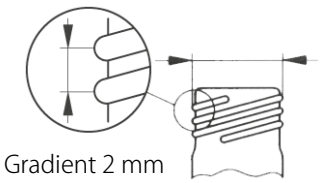
GL Threads

Glass threads are round threads, i.e. the surface of the thread lines is always rounded. The simple form and the rounded surface allow them to be easily constructed on glass bottle necks. The relatively large gradient and the wide edges give it great carrying capacity.

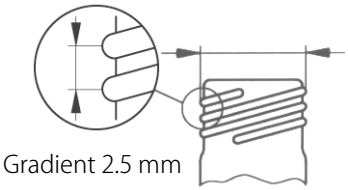
Good to know!

Drawings are of **scale 1:1**

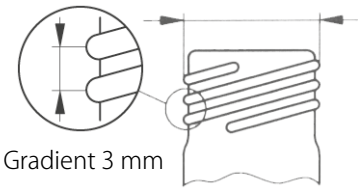
GL 12 – Outer-Ø = 12 mm



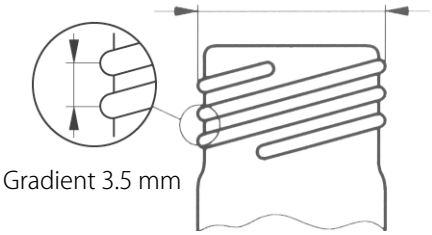
GL 14 – Outer-Ø = 14 mm



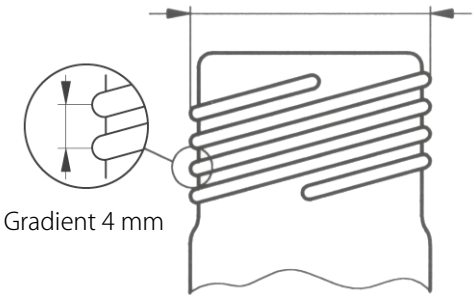
GL 18 – Outer-Ø = 18 mm



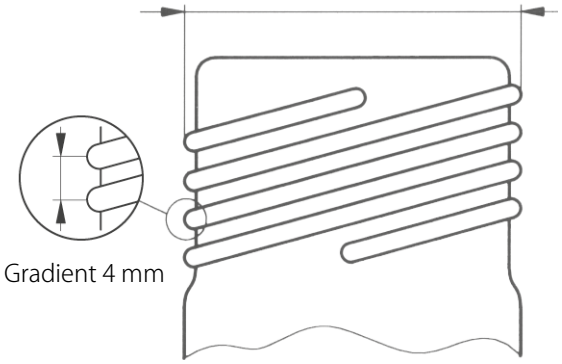
GL 25 – Outer-Ø = 25 mm



GL 32 – Outer-Ø = 32 mm



GL 45 – Outer-Ø = 45 mm

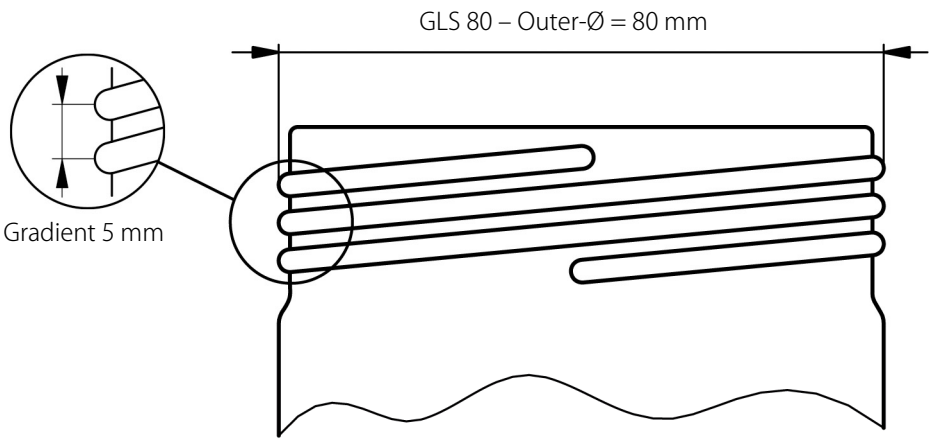


SCAT products with GL threads

GL 14 - "The Exhaust Filter Connection", e.g. for exhaust filters and blind plugs

GL 28, GL 38, GL 40, GL 45, SCAT Safety Cap and Safety Waste Cap threads

Thread Types
Glass Threads

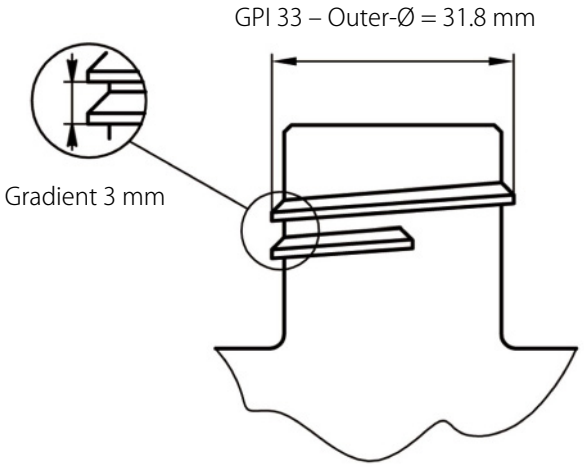


Good to know!

Drawings are of **scale 1:1**

GPI Thread

The abbreviation GPI stands for Glass Packaging Institute, in which the North American manufacturers of glass bottles of every type are represented. The GPI norms are voluntary standards, which serve as the basis for compatibility and exchange regarding glass receptacles and their caps.



Conversions: Inch - Millimeter / Millimeter - Inch

Inch - Millimeter

Inch Fractional Notation "	**Inch** Decimal Notation "	**Millimeter** 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

Millimeter - Inch

Millimeter mm	**Decimal Inch** 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

Resistance to Chemicals
Resistance Table

Resistance to Chemicals

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.

As per the most up-to-date information available, materials with best resistance have been selected for SCAT products, in particular with a view to satisfying the requirements of working with aggressive fluids.

You may obtain information regarding compatibility with specific substances from the manufacturer of your chemicals or other expert sources.

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.

SCAT 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 their abrasive effects.

Resistance to other available chemicals upon request.

Meaning of the Evaluations

Resistance	Meaning
A	Very good resistance after 30 days' exposure, none or only mild damage.
B	Conditional resistance: damage may occur after longer periods of exposure (e.g. hair cracks, mechanical stability affected, discoloration etc.)
C	Poor resistance: can lead to destruction, severe damage, deformation of plastic etc.
A/C	There is a risk of pitting corrosion or stress cracking.
-	Currently no information about chemical resistance available.

Substances (+20°)	Conc.	PTFE	PEHD	PP	PFA	V4A
Acetaldehyde	100,00 %	A	B	C	A	A
Acetamide	100,00 %	A	A	A	A	A
Acetic acid	100,00 %	A	C	B	A	A
Acetic acid	90,00 %	A	A	A	-	A
Acetic acid allyl ester	100,00 %	A	A	C	A	A
Acetic acid butyl ester	100,00 %	A	B	C	A	A
Acetic acid-2-pentyl	100,00 %	A	B	C	A	A
Acetic anhydride	100,00 %	A	C	B	A	A
Acetone	100,00 %	A	A	A	A	A
Acetonitrile	100,00 %	A	A	A	A	A
Acetophenone	100,00 %	A	C	B	A	A
Acetyl chloride	100,00 %	A	C	B	A	B
Acetyl chloride	100,00 %	A	C	C	-	A/C
Acrylonitrile	100,00 %	A	A	A	A	A
Adipic acid	100,00 %	A	A	A	A	B
Allyl acetate	100,00 %	A	A	B	-	A
Allyl chloride	100,00 %	A	B	C	A	B
Aminoacetic acid	10,00 %	A	A	A	-	B
Aminobenzene	100,00 %	A	A	A	A	A
Aminomethane	100,00 %	A	A	A	A	A
Ammonium hydroxide	25,00 %	A	A	A	A	A
Amyl acetate	100,00 %	A	A	B	A	A
Amyl alcohol	100,00 %	A	A	A	A	A
Aniline	100,00 %	A	A	A	A	A
Anisole	100,00 %	A	B	B	A	A
Aqua regia	100,00 %	A	C	C	-	C
Aviation fuel	100,00 %	A	C	B	A	A
Benzaldehyde	100,00 %	A	B	A	A	A
Benzene	100,00 %	A	B	B	A	A
Benzenesulfonic acid	100,00 %	A	A	A	A	A
Benzoic acid	100,00 %	A	A	A	A	A
Benzoyl chloride	100,00 %	A	C	C	A	B
Benzyl alcohol	100,00 %	A	A	A	-	A
Benzyl chloride	100,00 %	A	C	C	A	B
Boric acid	100,00 %	A	A	A	A	A
Buta-1,3-diene	100,00 %	A	C	C	A	A
Butan-2-one	100,00 %	A	C	C	A	A
Butanedioic acid	100,00 %	A	A	A	-	A
Butanol	100,00 %	A	A	A	A	A
Butenedioic acid	100,00 %	A	A	A	A	A
Buthylphenol, tert.	100,00 %	A	B	B	A	A

Resistance to Chemicals
Resistance Table

Substances (+20°)	Conc.	PTFE	PEHD	PP	PFA	V4A
Butyl acetate	100,00 %	A	C(B)	C	A	A
Butyl alcohol	100,00 %	A	A	A	A	A
Butyl ether	100,00 %	A	C	C	A	A
Butyric acid	100,00 %	A	C	A	A	A
Camphor	100,00 %	A	C	B	A	A
Carbolic acid	100,00 %	A	A	A	A	A
Carbon disulfide	100,00 %	A	C	C	A	A
Carbon tetrachloride	100,00 %	A	C	C	A	B
Caustic soda	85,00 %	A	A	A	A	A/B
Chloral hydrate	100,00 %	A	B	C	-	-
Chlorine	100,00 %	A	C	C	A	C
Chloroacetic acid	100,00 %	A	A	A	A	C
Chlorobenzene	100,00 %	A	C	C	A	A
Chloroethane	100,00 %	A	B	C	A	B
Chloroethanol-2	100,00 %	A	A	A	A	B
Chloroform (trichloromethane)	100,00 %	A	C	C	A	A
Chlorosulfuric acid	100,00 %	A	C	C	A	C
Chlorotoluene	100,00 %	A	C	B	A	A
Chromic acid	50,00 %	A	C	B	A	B
Chromic acid	<50,00%	A	B	B	A	B
Chromic sulfuric acid	100,00 %	A	C	C	A	B
Citric acid	10,00 %	A	A	A	A	A
Cumene	100,00 %	A	B	C	A	A
Cyclohexane	100,00 %	A	A	A	A	A
Cyclohexanol	100,00 %	A	A	A	A	A
Cyclohexanone	100,00 %	A	B	B	A	A
Decalin	100,00 %	A	B	C	A	A
Decane	100,00 %	A	C	B	A	A
Diacetone alcohol	100,00 %	A	A	A	A	A
Diaminoethane	100,00 %	A	A	A	A	A
Dibutyl ether	100,00 %	A	C	C	A	A
Dichloroacetic acid (also monochloro-)	100,00 %	A	A	A	A	-
Dichlorobenzene	100,00 %	A	B	C	A	-
Dichloroethanes	100,00 %	A	B	C	-	B
Dichloromethane (methylene chloride)	100,00 %	A	C	C	A	B
Diesel fuel	100,00 %	A	B	B	A	A

Substances (+20°)	Conc.	PTFE	PEHD	PP	PFA	V4A
Diethyl ether	100,00 %	A	C	C	A	A
Diethyl ketone	100,00 %	A	B	B	A	A
Diethylamine	100,00 %	A	C	A	A	A
Diethylene glycol	100,00 %	A	A	A	-	A
Diethylene oxide	100,00 %	A	A	C	A	-
Dihydroxybenzene-1,3	50,00 %	A	C	B	A	-
Diisobutylketone	100,00 %	A	B	B	A	A
Dimethylformamide	100,00 %	A	A	A	A	A
Dimethyl ether	100,00 %	A	C	C	A	A
Dimethyl sulfoxide (DMSO)	100,00 %	A	A	A	-	A
Dimethylamine	100,00 %	A	B	B	A	A
Dimethylbenzenes	100,00 %	A	C	C	A	A
Dioxane	100,00 %	A	A	B	A	A
Diphenyl ether	100,00 %	A	C	C	A	A
Dipropylene glycol	100,00 %	A	A	A	-	A
Disodium tetraborate	100,00 %	A	A	A	-	-
Ethanol (ethyl alcohol)	96,00 %	A	A	A	A	A
Ethereal oils	100,00 %	A	C	C	-	A
Ethyl acetate	100,00 %	A	B/C	B/C	A	A
Ethyl acrylate	100,00 %	A	C	C	A	A
Ethyl chloride	100,00 %	A	C	C	A	A/C
Ethylbenzene	100,00 %	A	B	C	A	A
Ethylene glycol	100,00 %	A	A	A	A	A
Ethylene oxide	100,00 %	A	B	B	A	A
Ethylene chlorohydrin	100,00 %	A	A	A	A	A/C
Ethylenediamine	100,00 %	A	A	A	A	A
Ethylmethylketone	100,00 %	A	C	C	A	A
Formaldehyde, Formalin	40,00 %	A	A	A	A	A
Formamide (Methanamide)	100,00 %	A	A	A	A	A
Formic acid	100,00 %	A	A	B	A	B
Fuel oils	100,00 %	A	B	B	A	A
Furfural	100,00 %	A	B	C	A	A
Gasoline, aromatic	100,00 %	A	B	B	A	B
Glycerine	100,00 %	A	A	A	-	A
Glycine	10,00 %	A	A	A	-	A
Glycol	100,00 %	A	A	A	A	A
Glycolic acid	100,00 %	A	A	A	A	A/B

Resistance to Chemicals
Resistance Table

Substances (+20°)	Conc.	PTFE	PEHD	PP	PFA	V4A
Heptane	100,00 %	A	B	B	A	A
Hexadecanol	100,00 %	A	A	A	A	A
Hexaflourosilicic acid	100,00 %	A	A	A	A	A
Hexan-1,2,6-triol	100,00 %	A	A	A	A	A
Hexane	100,00 %	A	B	B	A	A
Hexanedioic acid (Adipic acid)	100,00 %	A	A	A	A	A
Hexanol	100,00 %	A	A	A	A	A
Hydrazine hydrate	64,00 %	A	A	A	A	A/B
Hydrochloric acid	37,00 %	A	A	A	A	C
Hydrofluoric acid	45,00 %	A	A	A	A	C
Hydrogen peroxide	90,00 %	A	B	B	A	A
Hydrogen sulfide	100,00 %	A	A	A	A	A
Hydroxyacetic acid (Glycolic acid)	100,00 %	A	A	A	A	B
Isobutanol	100,00 %	A	A	A	A	A
Isooctane	100,00 %	A	B	B	A	A
Isopropanol	100,00 %	A	A	A	A	A
Isopropenyl acetate	100,00 %	A	A	A	A	-
Isopropyl acetate	100,00 %	A	A	B	-	A
Isopropyl ether	100,00 %	A	C	C	A	A
Isopropylbenzene	100,00 %	A	C	C	A	-
Kerosene	100,00 %	A	A	A	A	A
Lactic acid	90,00 %	A	A	A	A	A/B
Menthol	100,00 %	A	A	A	-	A
Methanol	100,00 %	A	A	A	A	A
Methoxybenzene	100,00 %	A	C	C	A	A
Methoxyethanol	100,00 %	A	A	C	A	A
Methyl acetate	100,00 %	A	A	A	A	A
Methyl bromide	100,00 %	A	C	C	A	A/C
Methyl ethyl ketone	100,00 %	A	B	B	A	A
Methyl isobutyl ketone	100,00 %	A	C	C	A	A
Methyl methacrylate	100,00 %	A	A	A	A	A
Methyl phenyl ether	100,00 %	A	C	C	A	A
Methylamine	100,00 %	A	A	A	A	A
Methylbenzene	100,00 %	A	C	C	A	A

Substances (+20°)	Conc.	PTFE	PEHD	PP	PFA	V4A
Methylcyanide	100,00 %	A	A	A	A	A
Methylene chloride	100,00 %	A	C	C	A	A/C
Methyloxirane	100,00 %	A	A	A	A	A
Methylpentanone	100,00 %	A	C	C	A	A
Methylphenylketone	100,00 %	A	C	C	A	A
Mineral oil	100,00 %	A	A	B	-	A
Nitric acid	65,00 %	A	B	C	A	B
Nitrobenzene	100,00 %	A	C	B	A	A
Octane	100,00 %	A	B	B	A	A
Oleic acid	100,00 %	A	C(B)	C(B)	A	A
Oleum	100,00 %	A	C	C	A	A
Oxalic acid	100,00 %	A	A	A	A	A/B
Pentan-1-ol	100,00 %	A	A	A	A	-
Pentan-3-on	100,00 %	A	A	A	A	A
Pentylacetate	100,00 %	A	A	C	A	A
Perchlorethylene	100,00 %	A	C	C	A	-
Perchloric acid	100,00 %	A	B	C	A	-
Petroleum	100,00 %	A	B	B	A	A
Phenol	100,00 %	A	A	A	A	A
Phenylamine	100,00 %	A	A	A	A	A
Phosphoric acid	85,00 %	A	B	A	A	A/B
Phosphorus trichloride	100,00 %	A	B	B	A	-
Potassium hydroxide	100,00 %	A	A	A	A	A
Potassium hypochlorite	20,00 %	A	B	B	A	B
Potassium perchlorate	25,00 %	A	A	A	A	A
Propan-2-ol	100,00 %	A	A	A	A	A
Propane-1,2-diol	100,00 %	A	A	A	A	A
Propionic acid	100,00 %	A	A	A	A	A
Propylene oxide	100,00 %	A	A	A	A	A
Pyridine	100,00 %	A	B	B	A	A
Resorcinol	50,00 %	A	B	A	A	-
Salicylic acid	100,00 %	A	A	A	A	A
Silicone oils	100,00 %	A	A	A	-	A
Silver acetate	100,00 %	A	A	A	-	-
Sodium hydroxide	85,00 %	A	A	A	A	A/B

Resistance to Chemicals
Resistance Table

Substances (+20°)	Conc.	PTFE	PEHD	PP	PFA	V4A
Sodium persulfate	25,00 %	A	A	B	A	A
Sodium persulfate	100,00 %	A	A	A	A	A
Styrene	100,00 %	A	C	C	A	A
Succinic acid	100,00 %	A	A	A	A	A
Sulfuric acid	80,00 %	A	A	A	A	B/C
Sulfuric acid, fuming	100,00 %	A	C	C	A	A
Tartaric acid	100,00 %	A	A	A	A	A
Tetrachlorethylene	100,00 %	A	C	C	A	-
Tetrachloroethane	100,00 %	A	B	C	A	-
Tetrahydrofuran (THF)	100,00 %	A	C	C	A	A
Tetrahydronaphthalene	100,00 %	A	C	C	A	A
Tetralin	100,00 %	A	C	C	A	A
Thionyl chloride	100,00 %	A	C	C	A	-
Toluene	100,00 %	A	C	C	A	A
Trichloroacetic acid	100,00 %	A	B	A	A	B
Trichlorobenzenes	100,00 %	A	C	C	A	-
Trichloroethylene	100,00 %	A	C	C	A	B
Triethanolamine	100,00 %	A	A	A	-	A
Triethylene glycol	100,00 %	A	A	A	A	A
Turpentine	100,00 %	A	B	C	A	A
Urea	100,00 %	A	A	A	A	A
Uric acid	100,00 %	A	A	A	-	A

Substances (+20°)	Conc.	PTFE	PEHD	PP	PFA	V4A
Vinyl acetate	100,00 %	A	A	B	A	A
Vinyl chloride	100,00 %	A	A	C	A	-
Vinyl cyanide	100,00 %	A	A	A	A	A
Vinylbenzene, Styrene	100,00 %	A	C	C	A	A
Vinylidene chloride	100,00 %	A	C	C	A	-
Waterglass	100,00 %	A	A	A	-	A
Xylenes	100,00 %	A	C	C	A	A

Addendum
Safety Instructions

Warranty/Safety of our Products

Strict quality control ensures you receive faultless, high-quality products from us. However, if a product is defective, we will, of course, replace it free of charge. Since these are technically sophisticated components, we cannot provide warranty for any articles which have been technically modified or damaged by the user.

Customised Products

The same applies to customized products which have been manufactured according to the specifications made by our customers. It is the responsibility of the user to check whether these products meet their technical requirements. We accept no liability for events or accidents caused by incorrect handling or technical modifications to our products by the user.

Health & Safety

Pay special attention to hazard pictograms (including H and P statements) on Safety Data Sheets (SDS) in your company and on the packaging of your chemicals. When handling substances labeled as hazardous, always wear personal protective equipment (PPE) as specified.

Chemical Compatibility

Due to the variety and different composition of solvents and substances available on the market, we cannot provide warranty for chemical compatibility. State-of-the-art resistant materials have been used for SCAT products, with special focus on requirements relating to work with aggressive liquids. You can obtain information on compatibility with specific substances from your chemical manufacturers or other specialist sources. We can provide support in selecting the appropriate for your application. However, the end user is responsible for the selection of chemicals used. SCAT does neither provide warranty for results nor does it assume any obligation or liability in connection with the use of such products as far as their chemical compatibility or abrasive effects are regarded.

A wide range of information is available for you to download from the SCAT online site. For example, the continuously updated table: 'Plastics – Chemical Resistance to Chemicals' or safety instructions relating to SCAT products. Visit us at: **www.scat-europe.com**

Grounding and Antistatics

Our products for safe grounding of containers and vessels are suitable for connection to current-free and zero potential installations. Connection to power-driven installations or live components must be executed by qualified electricians only!

Please observe the internal safety instructions of your company.

Addendum
GHS Hazard Symbols

GHS 01
Explosive

GHS 02
Flammable

GHS 03
Oxidising

GHS 04
Gas under pressure

GHS 05
Corrosive

GHS 06
Acute toxicity

GHS 07
Health hazard/
Hazardous to the ozone layer

GHS 08
Serious health hazard

GHS 09
Hazardous to the environment

Addendum
Terms & Conditions

§ 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.

§ 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 14 days without deductions, unless other payment terms have been agreed in written form. 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:

a) The identification that the customer receives when reporting a return shipment to us must be stated on the return documents and

b) 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):

a) 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.

b) The regulations of Section 5.4 apply to reporting, labeling and acceptance of return shipments.

c) 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.

Addendum
Terms & Conditions

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 to 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

a) provision and demonstration of a system which the customer can use to recognize and correct entry errors before the order is transmitted, and

b) provision of information in respect to

ba) the languages in which the contract can be concluded,

bb) the steps to be carried out for the contract to be concluded and

bc) storage of the contract text after conclusion of the contracts so that it is accessible by the customer.

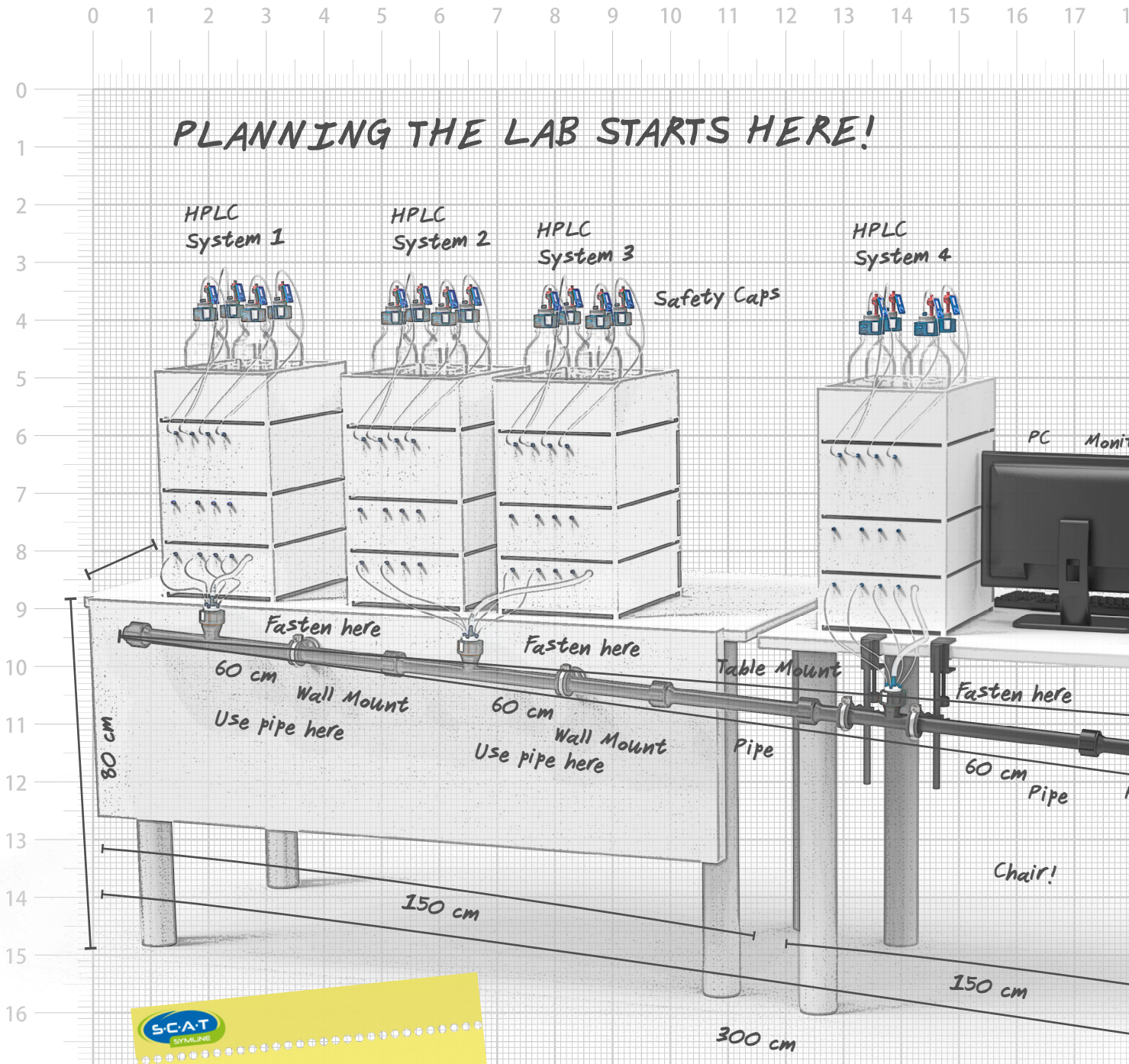
§ 13 Final provisions

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.

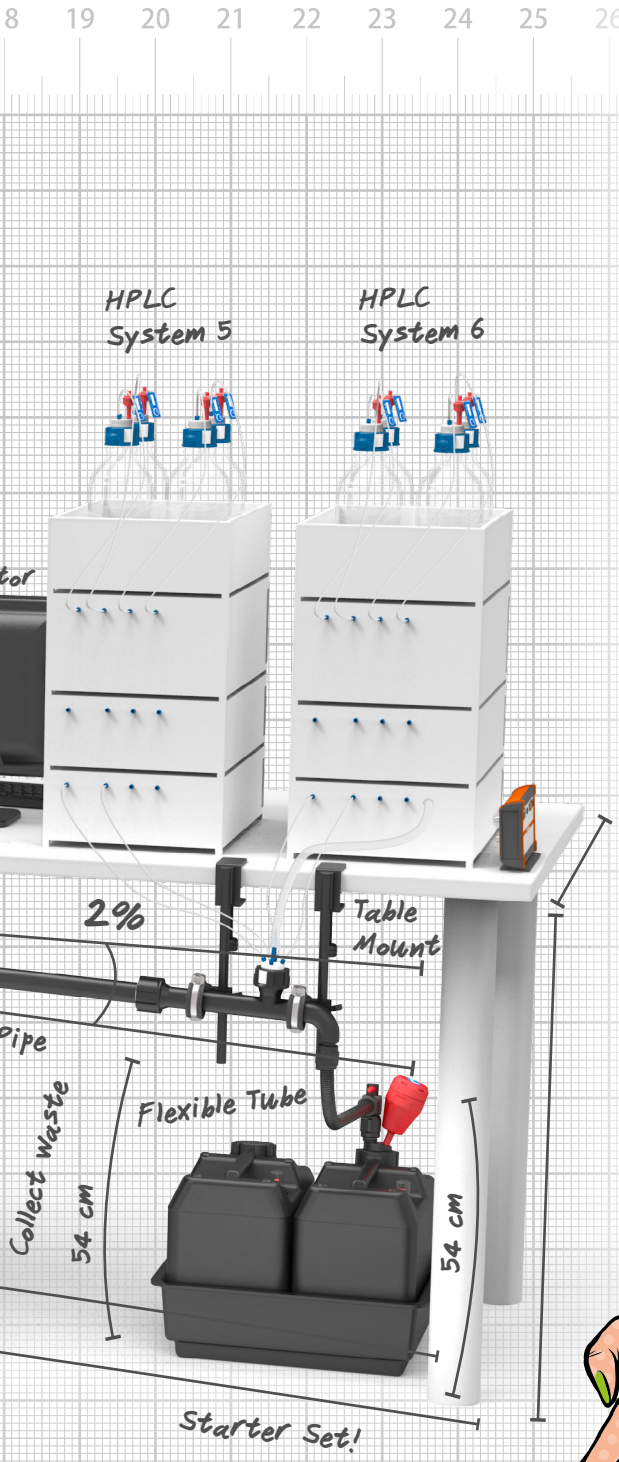
Status 01/2025. The continuously updated version of Terms and Conditions can be found at: **www.scat-europe.com**



S·C·A·T SYMLINE

We provide BIM data!

Building Information Modeling (BIM). We provide BIM data for your technical department. Contact our SymLine team for a download link.



You are in the planning phase?
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Ask your lab furniture manufacturer,
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+49 (0) 6105 305 586 0
info@scat-europe.com
www.scat-europe.com

SCAT - Europe GmbH

Waldecker Straße 7
64546 Mörfelden-Walldorf
Germany

+49 (0) 61 05 / 30 55 86 - 0
+49 (0) 61 05 / 30 55 86 - 99
info@scat-europe.com
www.scat-europe.com

SCAT Lab Safety

13530 Reese Blvd.E
Huntersville, NC 28078
USA

+1-800-454-1326
info@scatlabsafety.com
www.scatlabsafety.com

200013 / 14022025