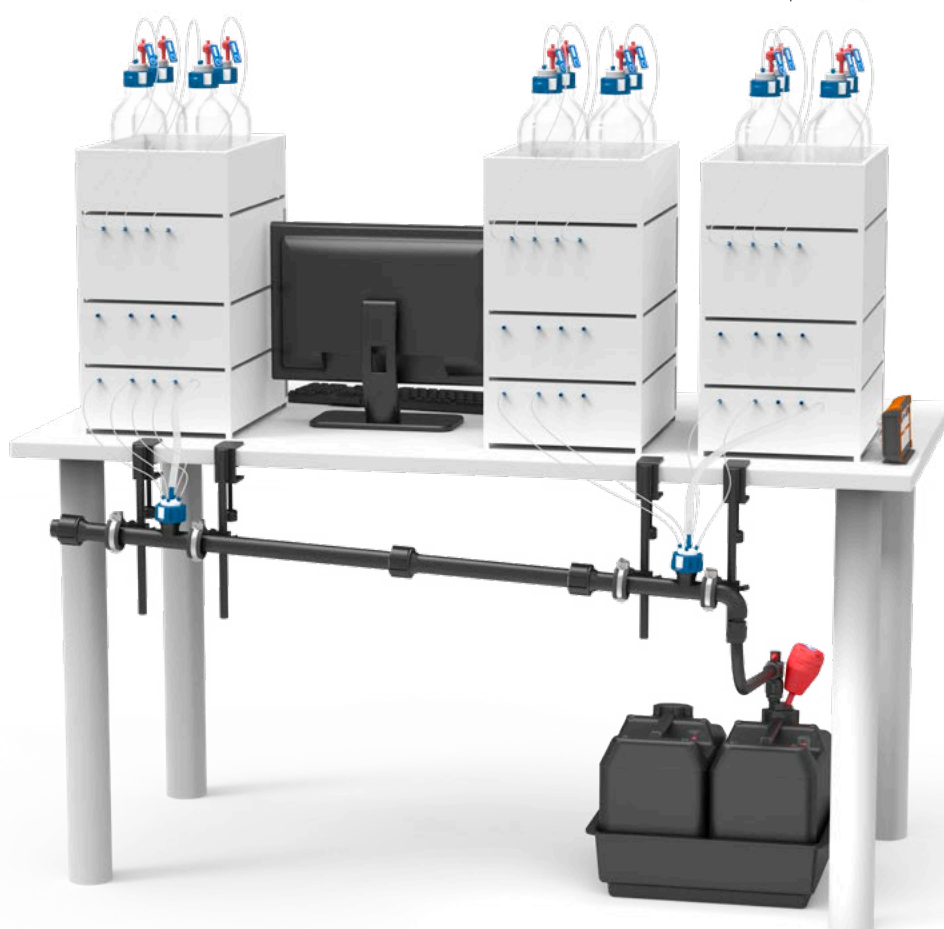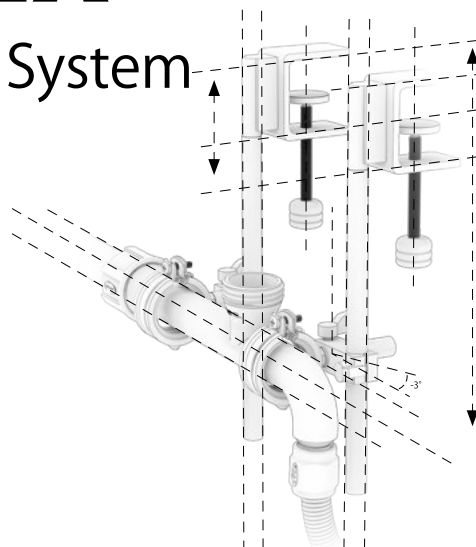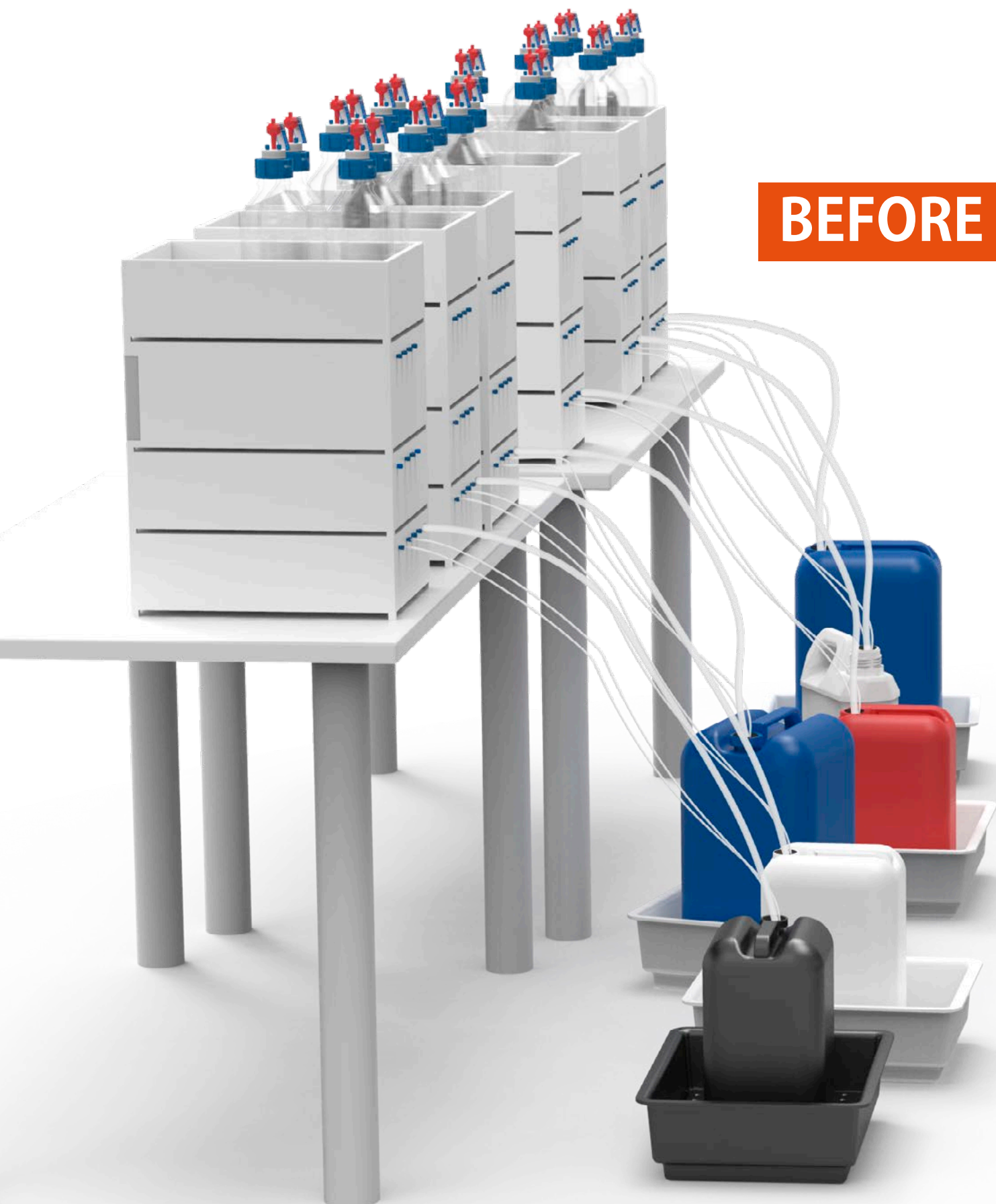SymLine®
Chemical Waste Systems

Sym*Line* FLEX

The Flexible Waste Disposal System for HPLC Work Stations.

✔ **Retrofit / Laboratory refit**

✔ **Simple installation**

✔ **Do-It-Yourself modular system**

www.symline.de

a brand of S·C·A·T

SymLine®
Chemical Waste Systems

BEFORE

![SymLine - Chemical Waste Systems]

AFTER

Intro

Filling Units

Pipe System

Disposal

Level Control

High Flow Solution

FLEX

Accessory

Sym*Line* ®
Chemical Waste Systems

✔ **Simple installation**

✔ **Do-It-Yourself modular system**

✔ **Can be flexibly adapted and integrated at any time**

✔ **Central collection point for solvent waste**

✔ **Anti-Static and resistant to solvents**

✔ **Closed system, suitable for both solvent feed and waste disposal**

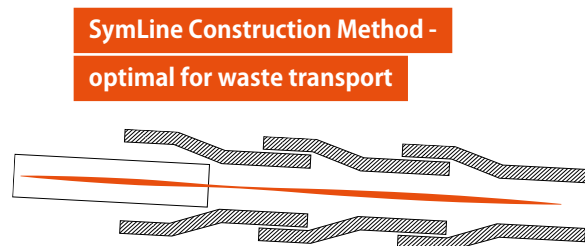SymLine FLEX I **The Flexible Waste Disposal System**
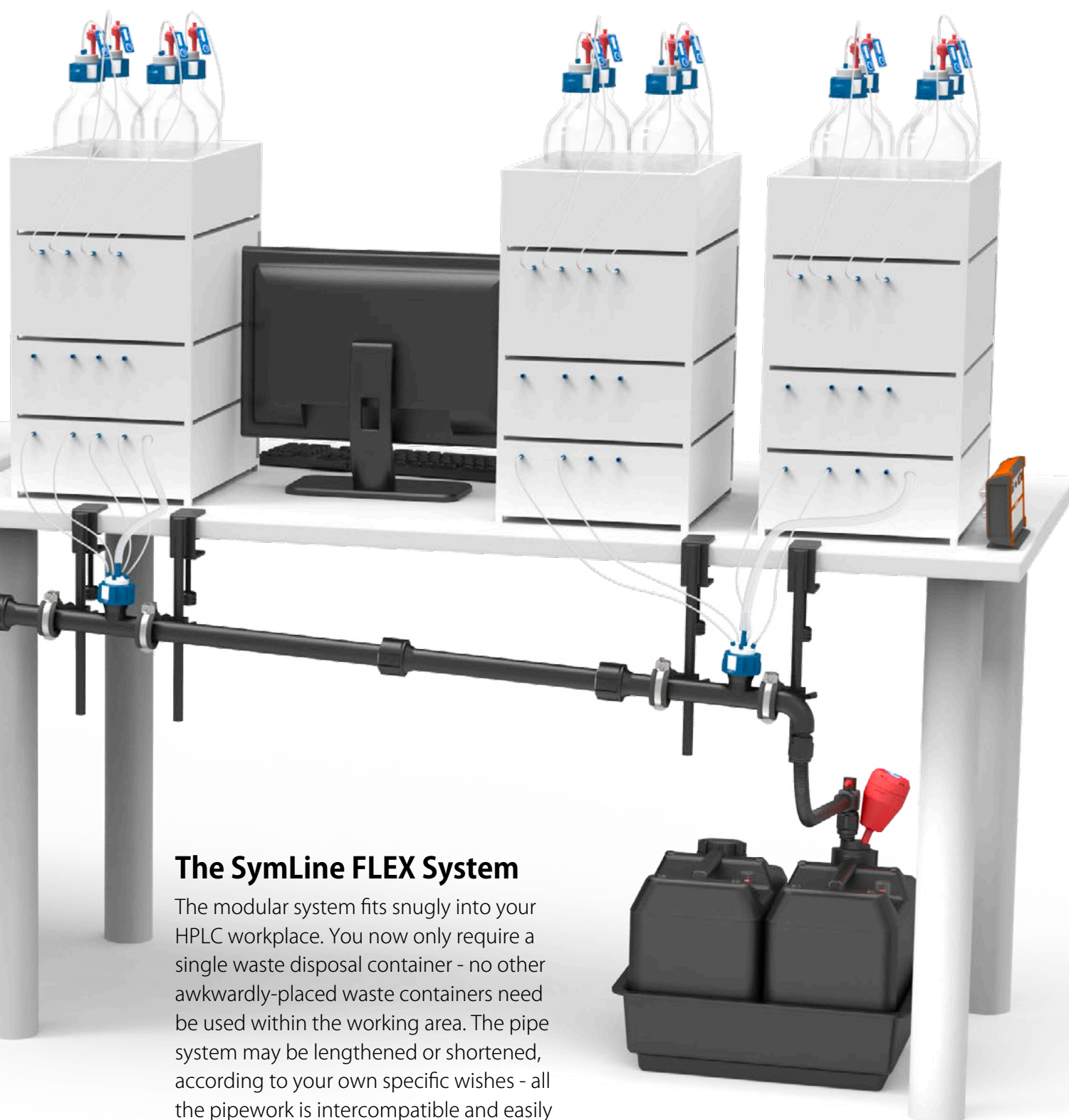
The SymLine FLEX System

The modular system fits snugly into your HPLC workplace. You now only require a single waste disposal container - no other awkwardly-placed waste containers need be used within the working area. The pipe system may be lengthened or shortened, according to your own specific wishes - all the pipework is intercompatible and easily interconnected.

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www.symline.de

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, the resulting connection will withstand a tensile force of 500 N. The system allows for optimum flow of waste liquids and prevents leakage.

Sealing Ring

Clamping Ring

Threaded Sleeve

SymLine Connecting Pipe with Welded Threaded End

SymLine Tubular Screw Connection:

✔ **High tensile strength**

✔ **100% fully sealed**

SymLine Construction Method -
optimal for waste transport

Competitive Products -
liable to leak!

Place of possible problem
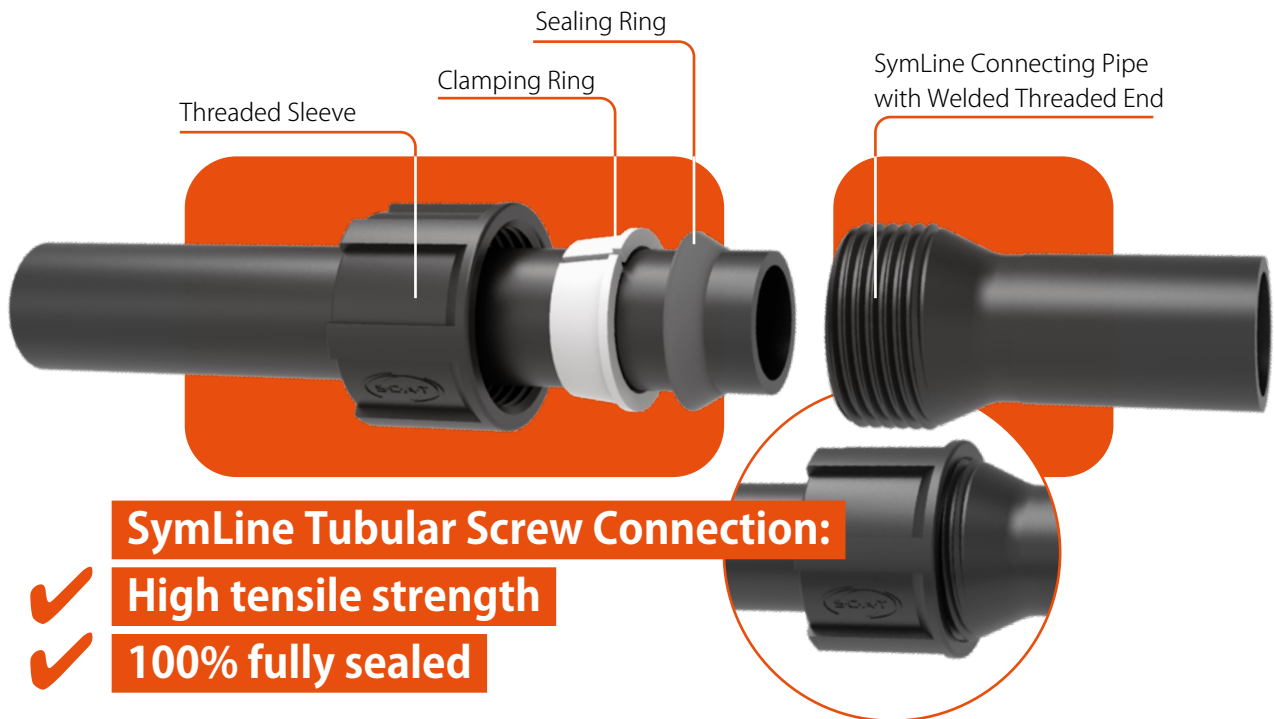
Symline construction, with optimum liquid flow. Liquids flow continually downwards, from the smooth pipe end, into the interconnected threaded one.
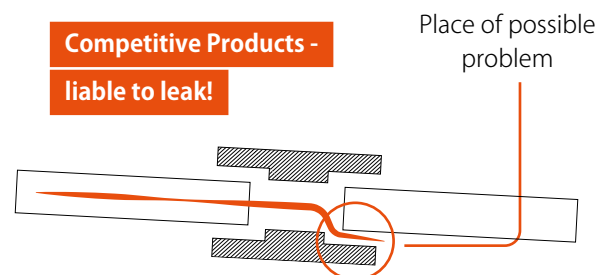
Typical construction principle employed by our competitors. Smooth pipe ends are interconnected, using connecting sleeves. This results in increased danger of leakage.

PE-HD

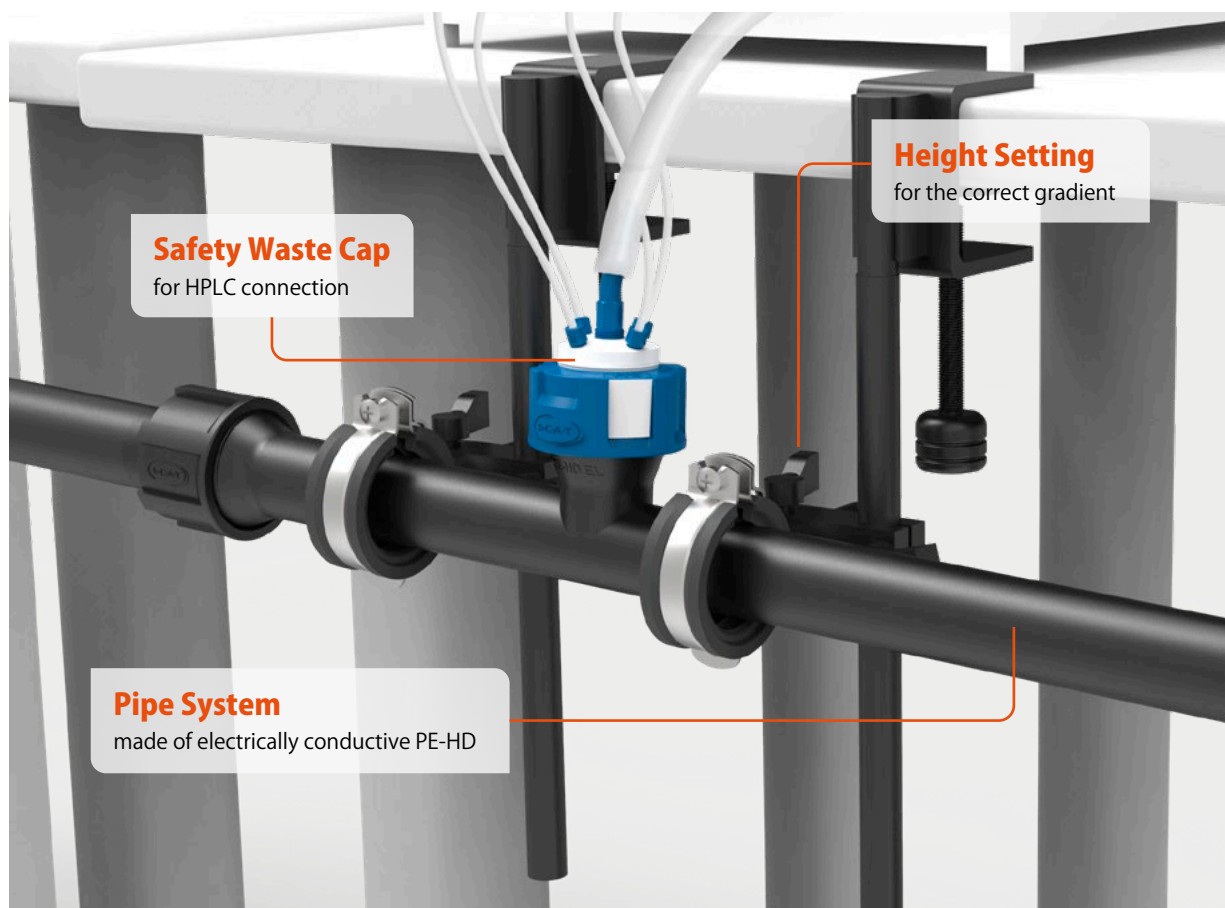## SymLine Material Properties

All components made of PE-HD EL can be earthed and are suitable for voltage equalization, as per TRGS 727. Electrically conductive PE-HD EL displays a discharge resistance against earth of $< 10^9\ \Omega$, 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 61340-5-1

✔ • GefStoffV Zone 0, 1 and 2
• EN 1127-1

✔ • DIN EN 60079-10-1
• DIN EN 60079-10-2

✔ • SEFA 3
• SEFA 8

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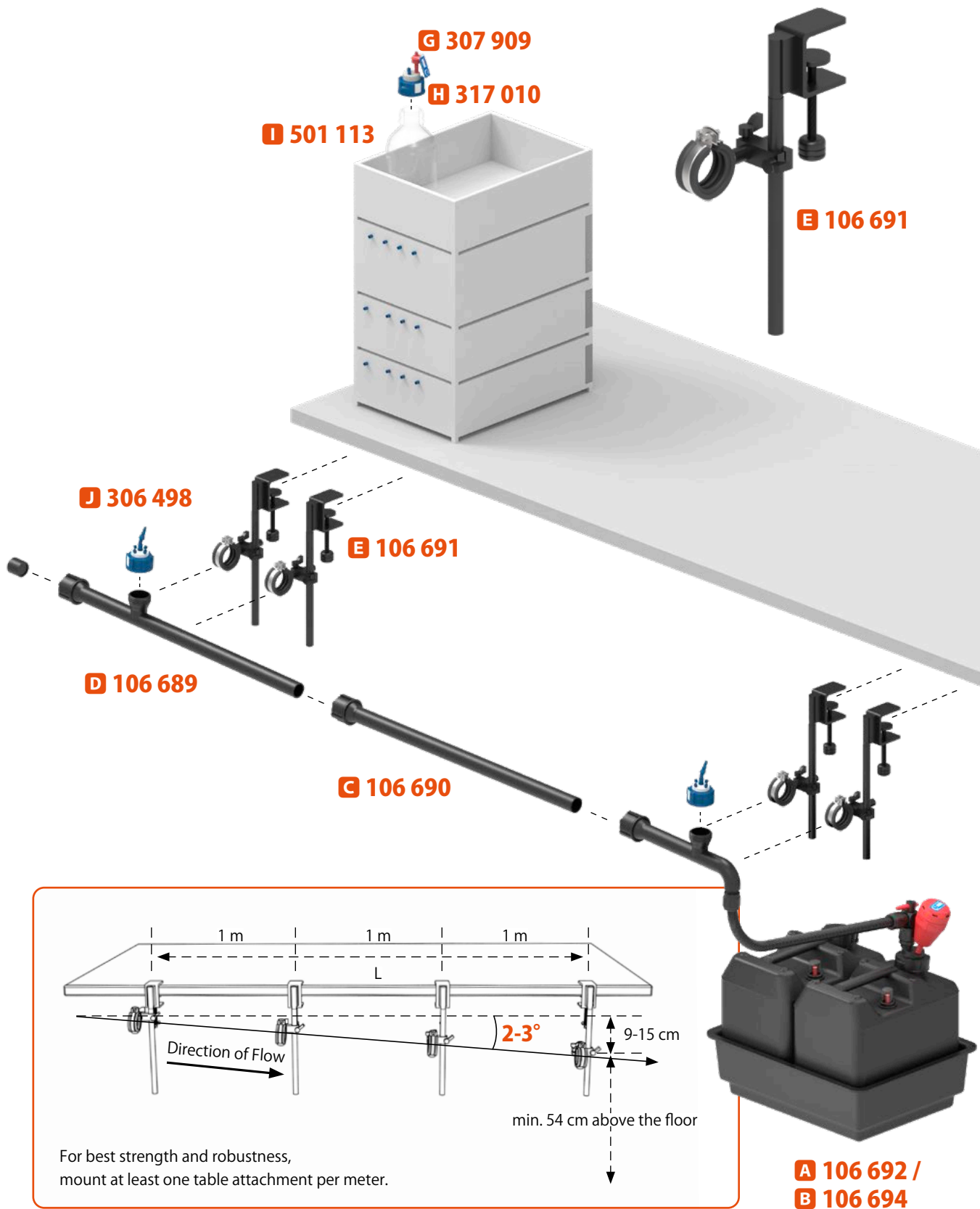FLEX

Accessory

Installation: Easy, flexible and safe.

The flexible table installation allows for connections to your equipment to be made at any desired place.
The resultant height then gives the required gradient - leading to a safe downward flow of liquid.

A table mounting is possible for various tabletop thicknesses, and the required attachments can be installed at the tabletop without the use of any tools.

Simple Installation
by means of flexible
table attachments

Height Setting
for the correct gradient

Safety Waste Cap
for HPLC connection

Pipe System
made of electrically conductive PE-HD

www.symline.de

G 307 909

H 317 010

I 501 113

E 106 691

J 306 498

E 106 691

D 106 689

C 106 690

2-3°

9-15 cm

1 m   1 m   1 m

L

Direction of Flow

min. 54 cm above the floor

For best strength and robustness,
mount at least one table attachment per meter.

A 106 692 /
B 106 694

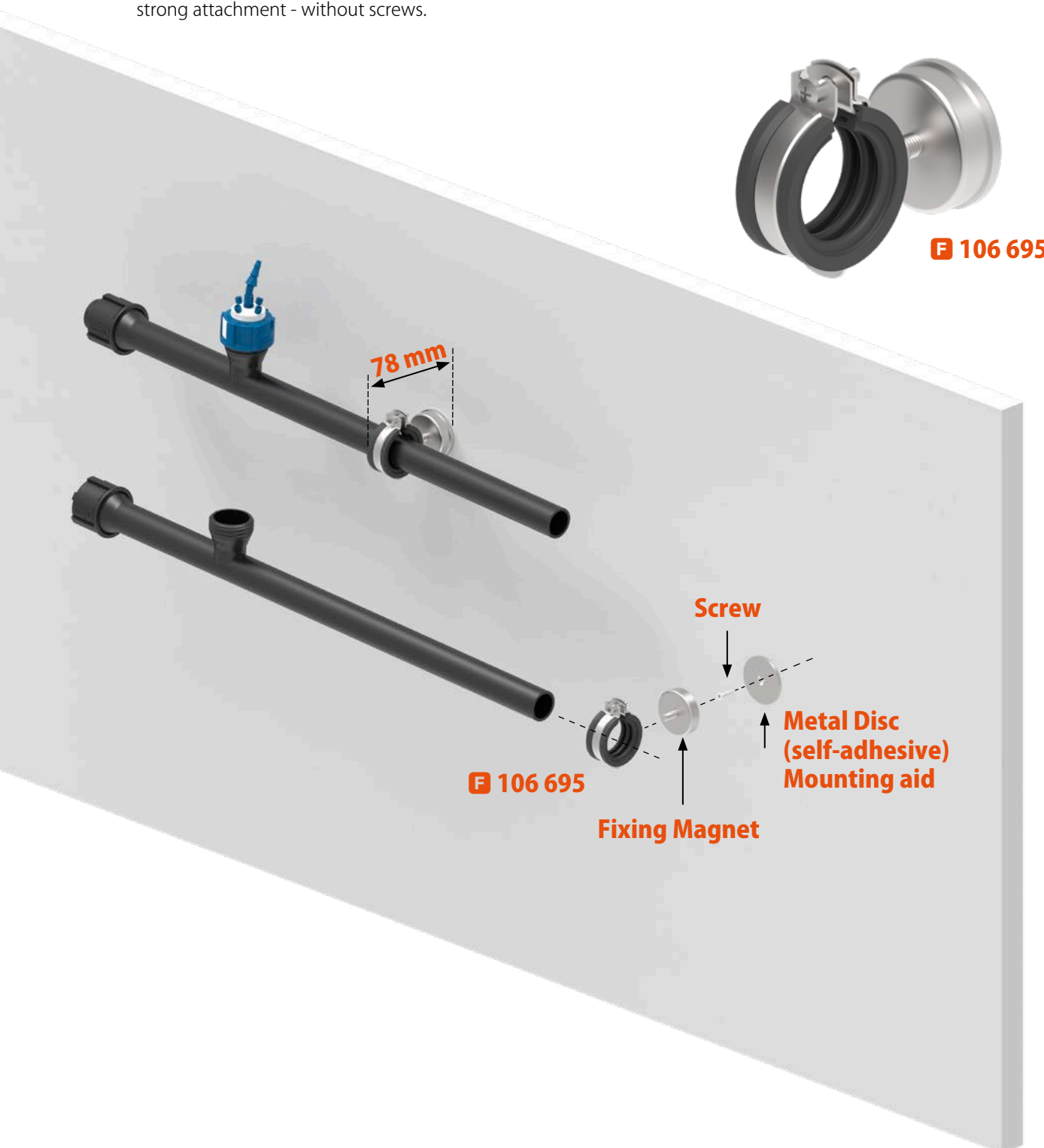| Incline (degr.)	corresponds to %	Height Difference per Metre	Max. Length for a Table Height of 89 cm
2°	3,49 %	3 cm	L = 687 cm
3°	5,24 %	5 cm	L = 457 cm

Flexible Wall Attachment

Screw fastening: suitable for wooden and synthetic surfaces.

Self-adhesive: non-destructive, suitable for almost all surface types.
We only recommend self-adhesive variants as an aid to attachment!

Magnetic: non-destructive, suitable for metal surfaces.
The strong fixing magnet provides for a suffciently
strong attachment - without screws.

**F** **106 695**

78 mm

Screw

F **106 695**

**Metal Disc
(self-adhesive)
Mounting aid**

Fixing Magnet

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FLEX

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SymLine®
Chemical Waste Systems

A
106 692
BASIC

- Ø 32 mm pipe
- 1 Connection for Safety Waste Cap **J**
- Flextube with shut-off valve
- 2x Canisters, 10 litres, with float
- 1x Exhaust filter
- Collection tray
- L1 = 310 mm
  L2 = 200 mm
  L3 = 110 mm
- Material: PE-HD EL
- Blind plug
- Grounding cable
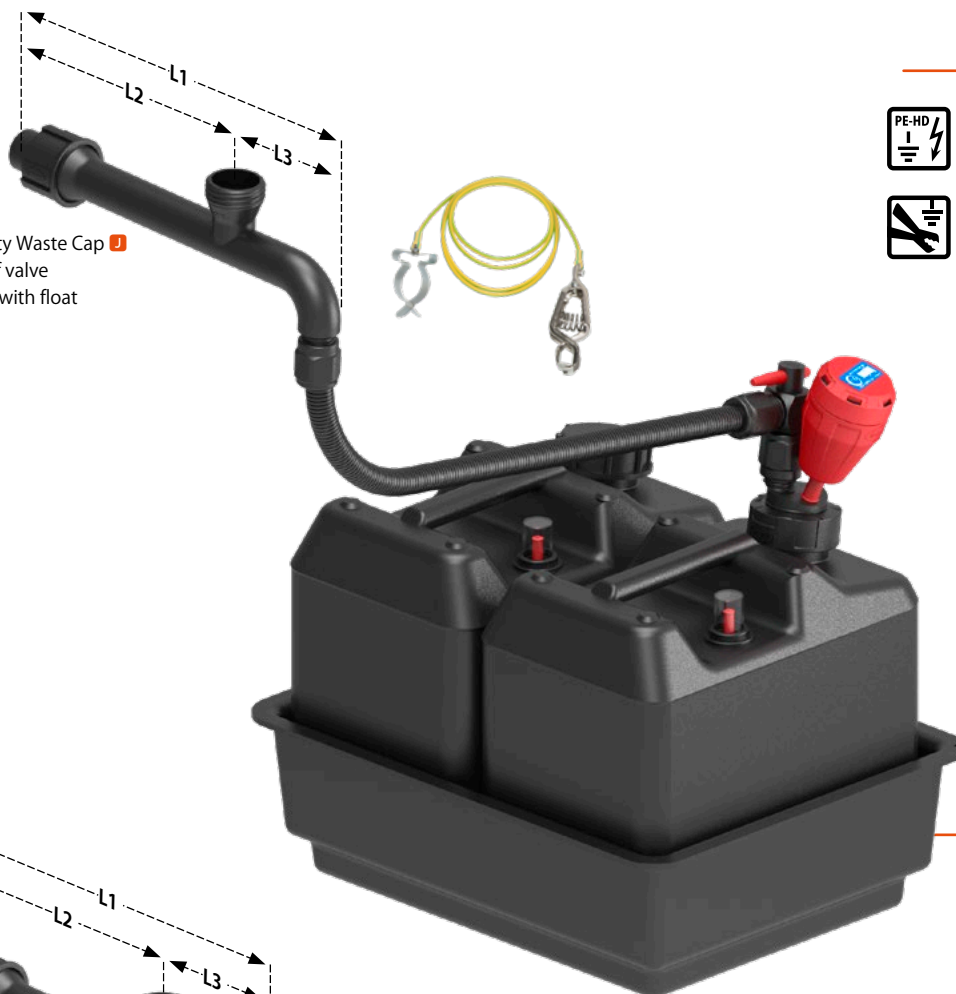
B
106 694
PREMIUM

- Ø 32 mm pipe
- 1 Connection for Safety Waste Cap **J**
- Flextube with shut-off valve
- 2x Canisters, 10 litres
- 1x Exhaust filter
- Collection tray
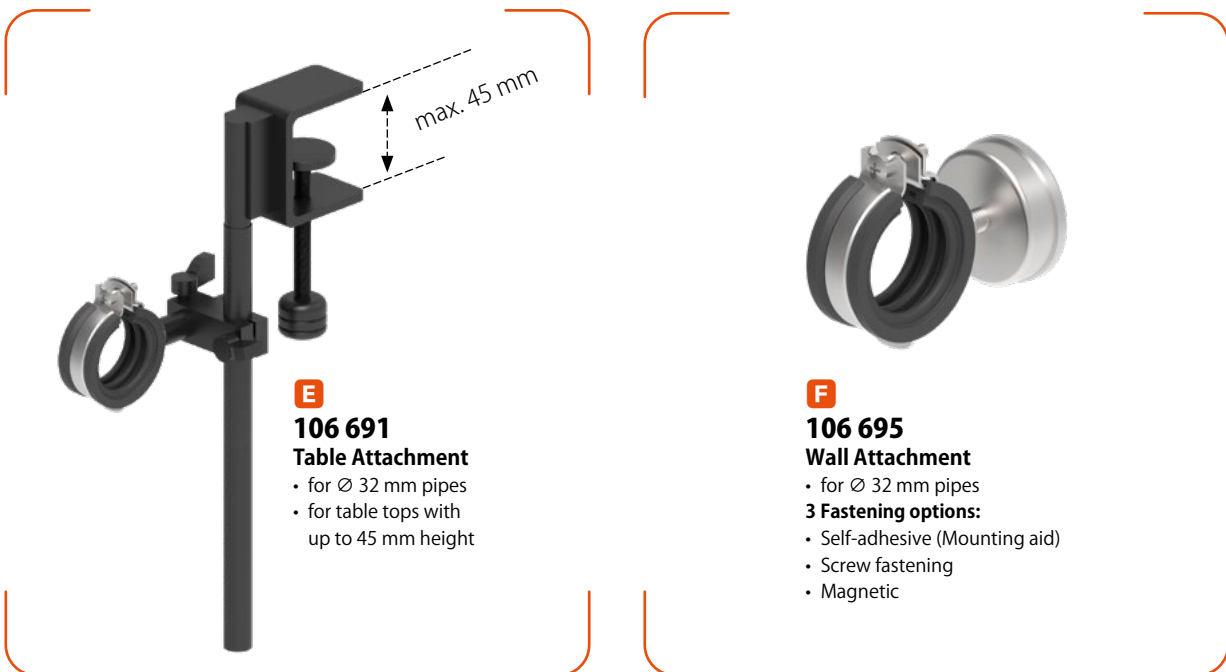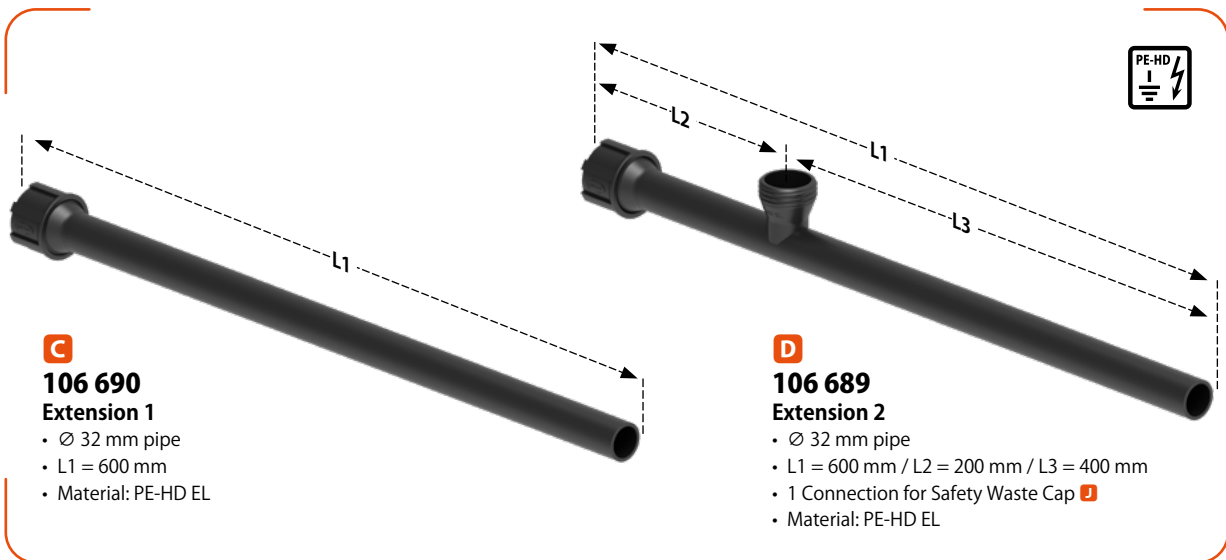- L1 = 310 mm
  L2 = 200 mm
  L3 = 110 mm
- **Electronic liquid level control with table signal box**
- Material: PE-HD EL
- Blind plug
- Grounding cable

![SymLine logo - Chemical Waste Systems]

PE-HD

C
106 690
Extension 1
• ∅ 32 mm pipe
• L1 = 600 mm
• Material: PE-HD EL

D
106 689
Extension 2
• ∅ 32 mm pipe
• L1 = 600 mm / L2 = 200 mm / L3 = 400 mm
• 1 Connection for Safety Waste Cap **J**
• Material: PE-HD EL

max. 45 mm

E
106 691
Table Attachment
• for ∅ 32 mm pipes
• for table tops with
  up to 45 mm height

F
106 695
Wall Attachment
• for ∅ 32 mm pipes
3 Fastening options:
• Self-adhesive (Mounting aid)
• Screw fastening
• Magnetic
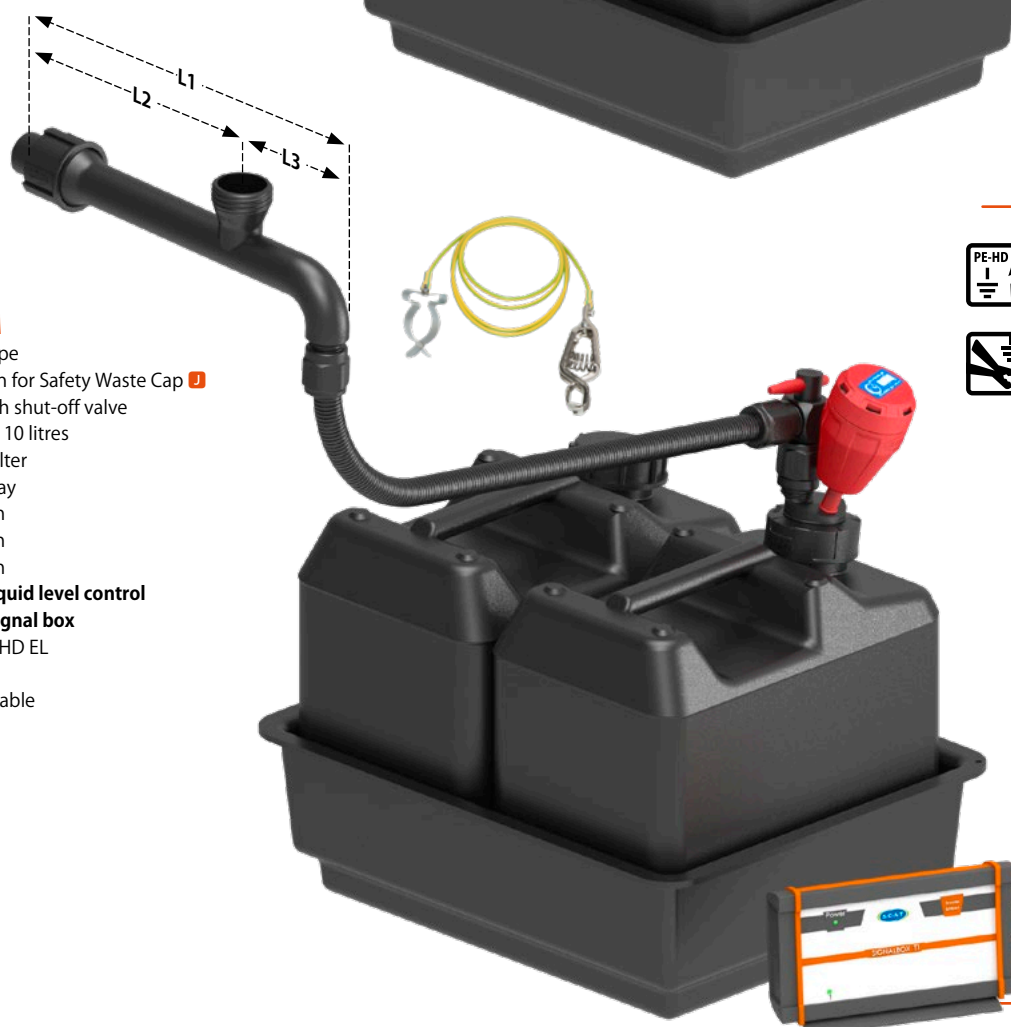
i Flexible Pipe Lengths
The specific pipe lengths required can be constructed,
using a suitable pipe cutter. Shorten the pipes to the
desired lengths, on their smooth sides.

Intro

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Pipe System

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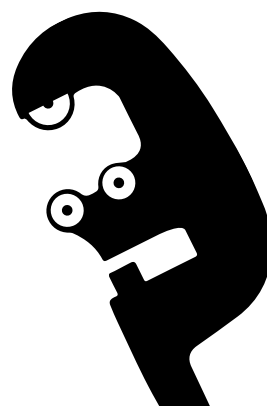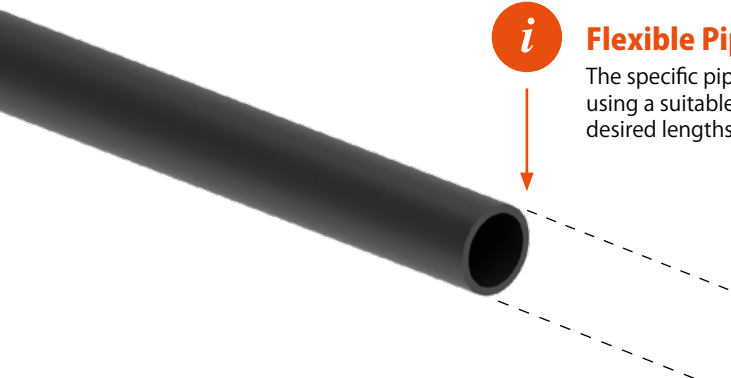
Safety Cap

Proven SCAT safety technology provides for optimum protection, both during the supply, and during the disposal, of solvents. Solvent vapours are blocked and filtered out. The system is therefore independent of other extraction systems within the laboratory.

SCAT safety caps ensure that your solvents are kept clean and remain stable. They protect users and the environment from the effects of solvent vapours, and enable a continual smooth operation of the HPLC facility.

Solvent

Air

Safety Caps
with air ventilation valve

H 317 010

G 307 909

A Safe Connection
for your solvent supply

I 501 113

SymLine FLEX I **Safe Disposal**

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Safety Waste Cap

The integrated exhaust filter allows for optimum safety at the point of collection. It provides for a safe equalization of pressure within the container, and solvent fumes are filtered out. The liquid level control ensures that containers cannot overfill, without it being noticed.

Filtered

Air

Exhaust Filter
with three types
of active carbon

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

3
2
1

Shut-Off Valve
for safe container exchange

Vapours

K **490 336**

Liquid Level Control
to prevent overfilling / spilling

Collection Container
constructed of electrically conductive PE-HD, thereby preventing the buildup of static charge

Collection Tray

SymLine®
Chemical Waste Systems

A
106 692
STARTER SET BASIC
- ⌀ 32 mm pipe
- 1 Connection for Safety Waste Cap **J**
- Flextube with shut-off valve
- 2x Canisters, 10 litres, with float
- 1x Exhaust filter
- Collection tray
- Material: PE-HD EL
- Blind plug
- Grounding cable

B
106 694
STARTER SET PREMIUM
- ⌀ 32 mm pipe
- 1 Connection for Safety Waste Cap **J**
- Flextube with shut-off valve
- 2x Canisters, 10 litres
- 1x Exhaust filter
- Collection tray
- **Electronic liquid level control with table signal box**
- Material: PE-HD EL
- Blind plug
- Grounding cable

C
106 690
Extension 1
- ⌀ 32 mm pipe
- Length: 600 mm
- Material: PE-HD EL

D
106 689
Extension 2
- ⌀ 32 mm pipe
- Length: 600 mm
- 1 Connection for Safety Waste Cap **J**
- Material: PE-HD EL

E
106 691
Table Attachment
- for ⌀ 32 mm pipes
- for table tops with up to 45 mm height

F
106 695
Wall Attachment
- for ⌀ 32 mm pipes
3 Fastening options:
- Self-adhesive (Mounting aid)
- Screw fastening
- Magnetic

Fig.	Part No.	Description
A	106 692	SymLine FLEX Starter Set BASIC
B	106 694	SymLine FLEX Starter Set PREMIUM with electronic liquid level control and table signal box
C	106 690	SymLine FLEX Extension 1, Length 600 mm
D	106 689	SymLine FLEX Extension 2, Length 600 mm, 1x Connection for Safety Waste Cap **J**
E	106 691	SymLine FLEX Table Attachment
F	106 695	SymLine FLEX Wall Attachment

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FLEX

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G
307 909
SCAT SafetyCap II (V2.0)
- For HPLC solvent supply
- With air ventilation valve
- 2 connections for
  ∅ 3.2 mm OD capillaries
- GL45 thread

H
317 010
SCAT Ventilation Valve (V2.0)
- For SCAT Safety Caps
- Lifetime: 6 months

I
501 113
Supply Bottle for Solvents
- 1 litre, clear glass
- GL 45 thread

J
306 498
SCAT Safety Waste Cap (V2.0)
- For HPLC waste tubes
- 4 connections
  for ∅ 2.3 / 3.2 mm OD capillaries
- 1 connection
  for ∅ 6.4 - 9 mm ID hose
- Includes blind plugs for unused connections
- Includes fittings and tube connections
- GL45 thread

K
490 336
SCAT Exhaust Filter (V3.0)
- For the collection unit
- 3 layers of active carbon
- Reserve pack
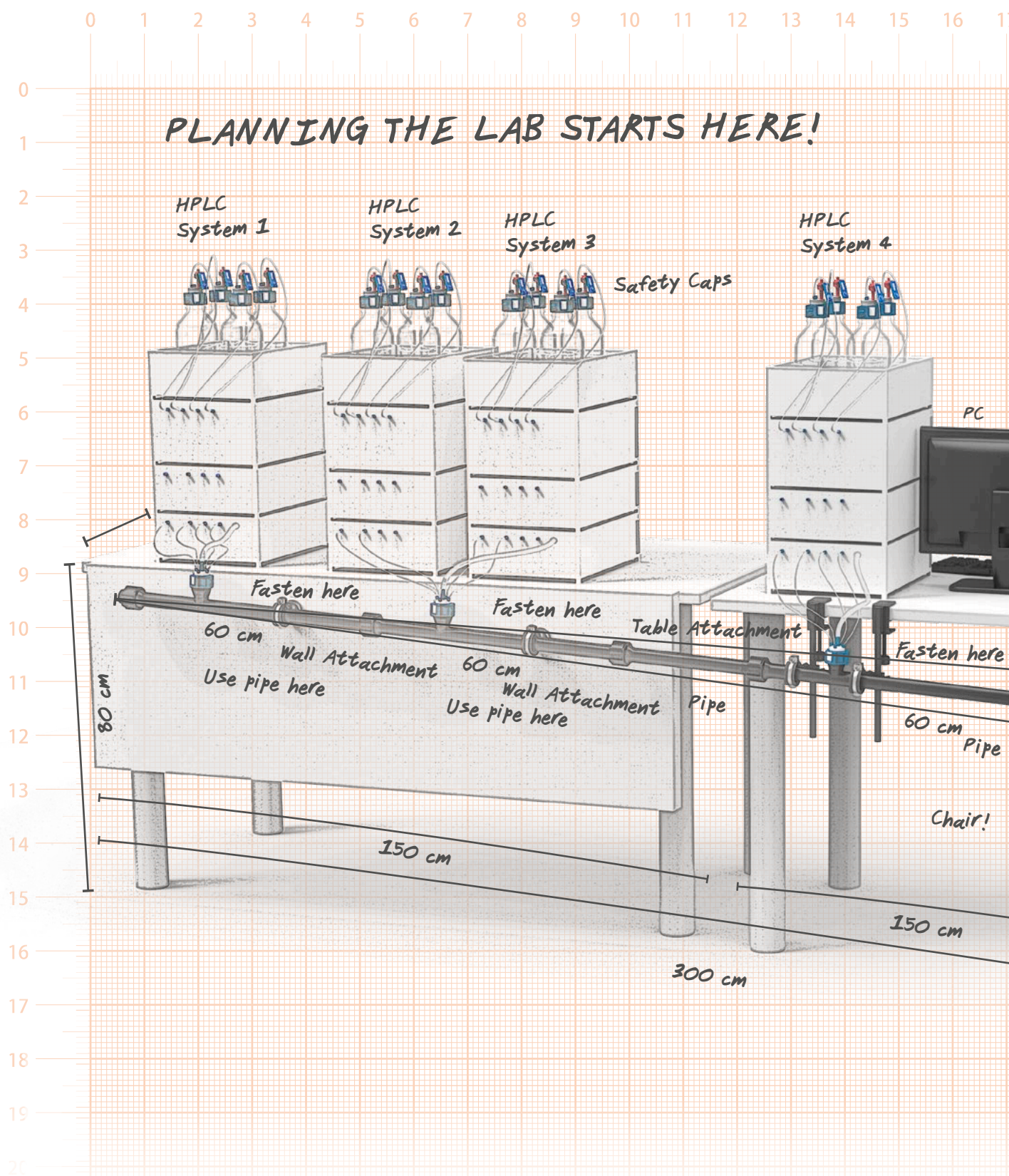- Lifetime: 2x 6 months

L
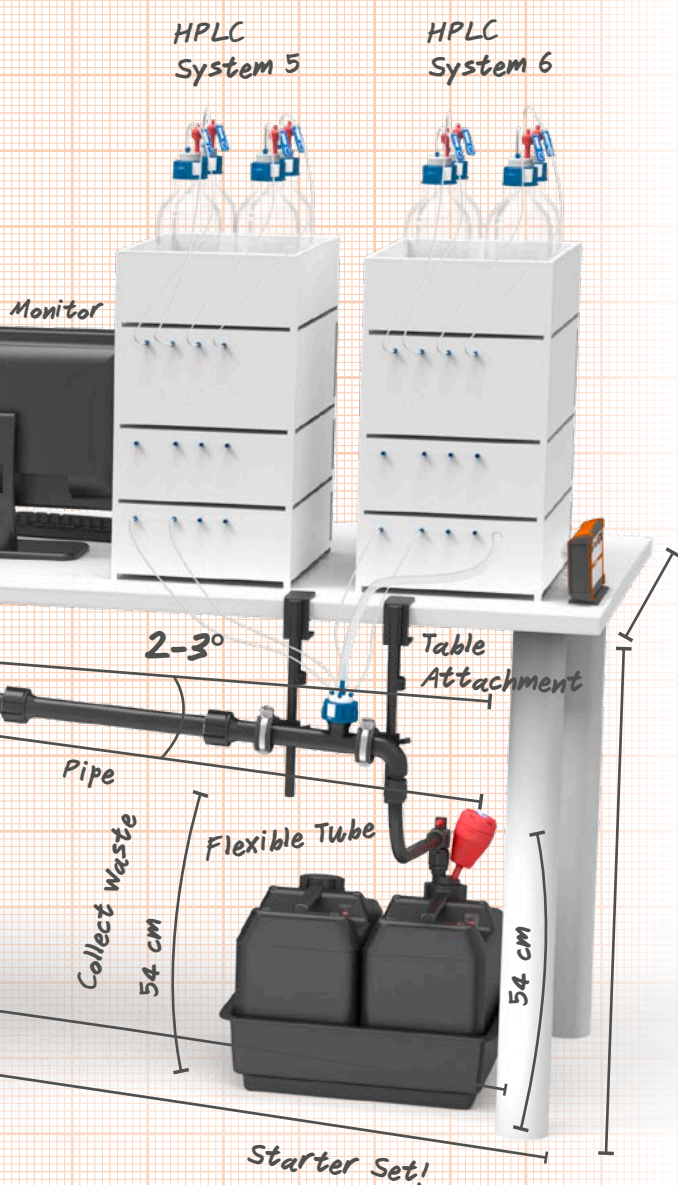**399 202**
HPLC Starter Kit 3, V2.0
- For HPLC solvent supply
- 4x SafetyCap III (V2.0)
  with air ventilation valve
- Each with 3 connections for
  ∅ 1.6 / 2.3 / 3.2 mm OD capillaries
- Includes blind plugs for unused connections
- GL45 thread

12x 12x 12x 8x   4x   4x   8x

Fig.	Part No.	Description
G	307 909	SCAT Safety Cap V2.0 with air ventilation valve and exchange indicator
H	317 010	SCAT air ventilation valve V2.0 with exchange indicator
I	501 113	Supply Bottle for Solventsl, 1 litre, clear glass, round
J	306 498	SCAT Safety Waste Cap
K	490 336	SCAT Exhaust Filter V3.0 reserve pack, with exchange indicator
L	399 202	HPLC Starter Kit 3

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PLANNING THE LAB STARTS HERE!

HPLC System 1

HPLC System 2

HPLC System 3

HPLC System 4

Safety Caps

PC

Fasten here

Fasten here

Table Attachment

Fasten here

60 cm

Wall Attachment

60 cm

Pipe

60 cm

Use pipe here

Wall Attachment

Pipe

80 cm

Use pipe here

Chair!

150 cm

150 cm

300 cm

18 19 20 21 22 23 24 25 26

HPLC
System 5

HPLC
System 6

Monitor

2-3°

Pipe

Collect Waste

54 cm

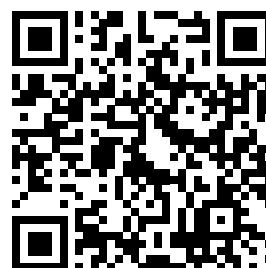Flexible Tube

Table
Attachment

54 cm

Starter Set!

You are in the planning phase?
We are ready to assist you!

Ask your lab furniture manufacturer, lab planner and us about SymLine products. You can find a free download of invitation to tender templates for your lab buildings projects at: www.SymLine.de

S·C·A·T   **SymLine**®
Chemical Waste Systems

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info@SymLine.de
www.SymLine.de

Configuration Assistance

Put together the components for your project yourself!
Our Configurator helps you to do this.
Try out here:

www.scat-europe.com/
en/symline/downloads/
configurator/

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