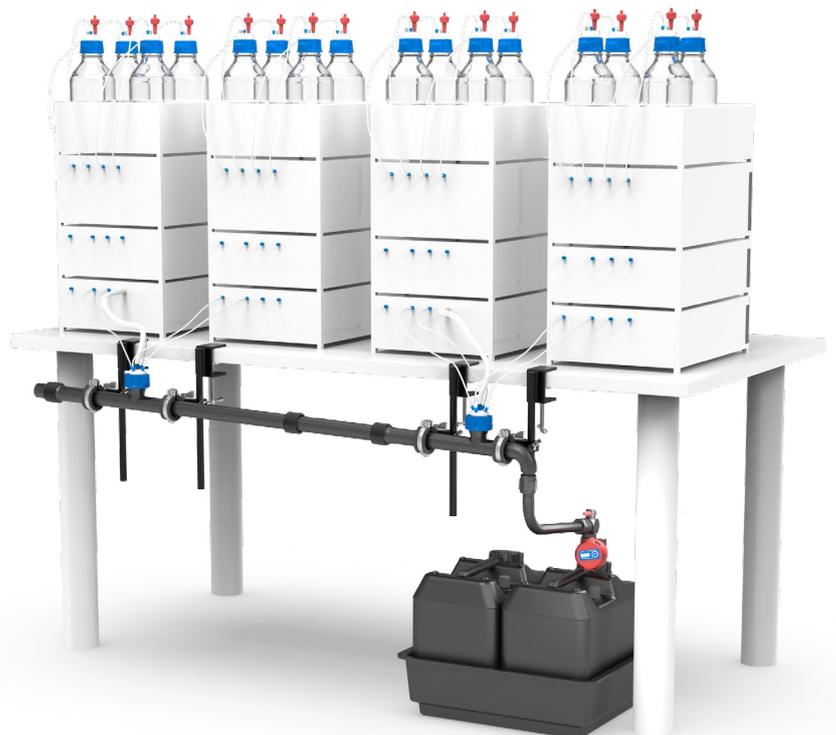
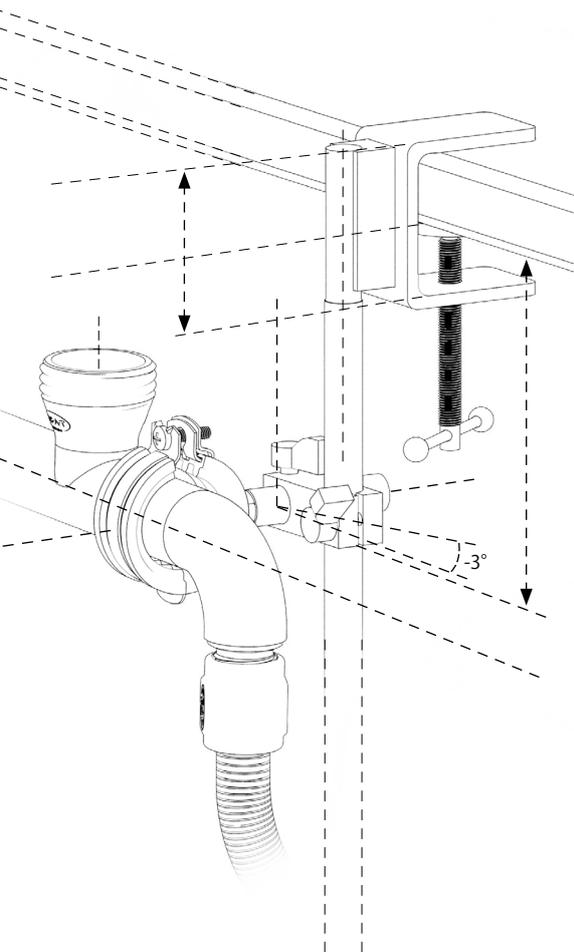


# SymLine<sup>®</sup> FLEX

The Flexible Waste Disposal System for HPLC Work Stations.

## Construction & Installation



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Thank you for ordering the **SymLine**<sup>®</sup> **FLEX** System. This flexible waste disposal system, designed for use with HPLC work stations, can easily be optimized to best suit your particular working conditions. Please pay attention to the steps described in these instructions, in order to achieve optimum functionality and safety for the system.

**The following illustrations show how the individual components are to be installed. The parts actually supplied are determined by what exactly you have ordered for your particular requirements.**

Should you have questions or require specific advice, please contact the **SymLine**<sup>®</sup> Service Team, who will then gladly assist you.

## Contact & Support

 **+49 (0) 61 05 / 30 55 86 - 47**

 **info@scat-europe.com**

 **www.symlines.de**



### Important Information for your Safety

Please ensure that all installation and construction work is only performed by appropriately qualified technical personnel. The applicable safety procedures and requirements of your company, as well as those pertaining to your particular job function, are to be complied with at all times.

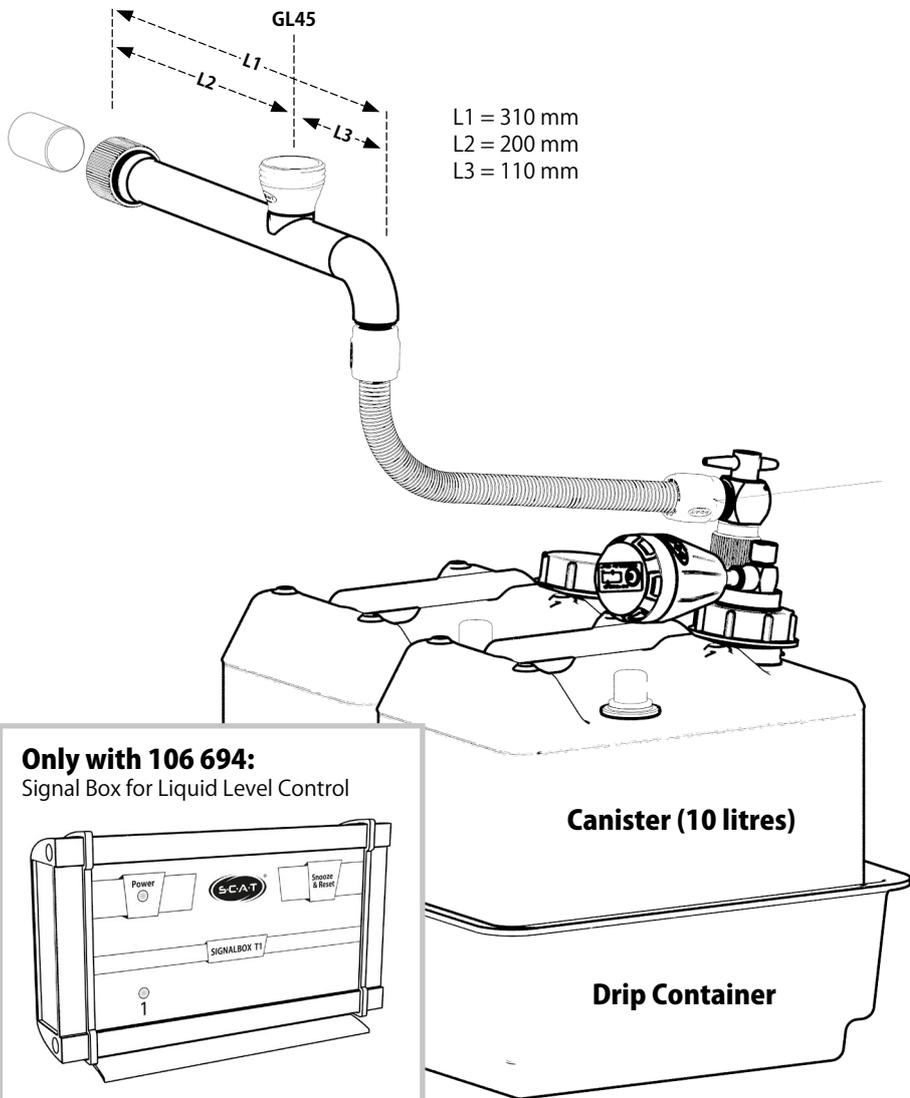
Work on electrical installations and components may only be performed by properly certified electricians. Please acquaint yourself in advance with the relevant rules and regulations, as they apply to the place at which this waste disposal system is to be installed.

S.C.A.T. Europe GmbH is not to be held liable for any resultant damage that may arise, either as a result of not following the applicable safety regulations, or as a result of incorrect construction and/or installation work.

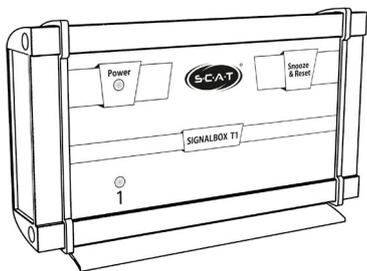
# 1. Overview: Components

**106 692 / 106 694**  
Starter Set Basic / Premium

**A**

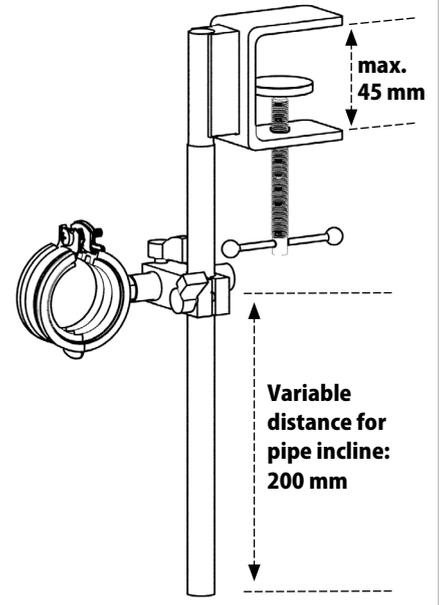


**Only with 106 694:**  
Signal Box for Liquid Level Control



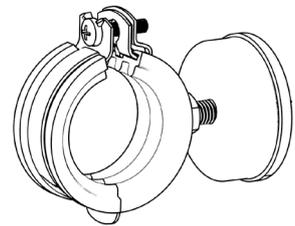
**106 691**  
Table Attachment

**B**



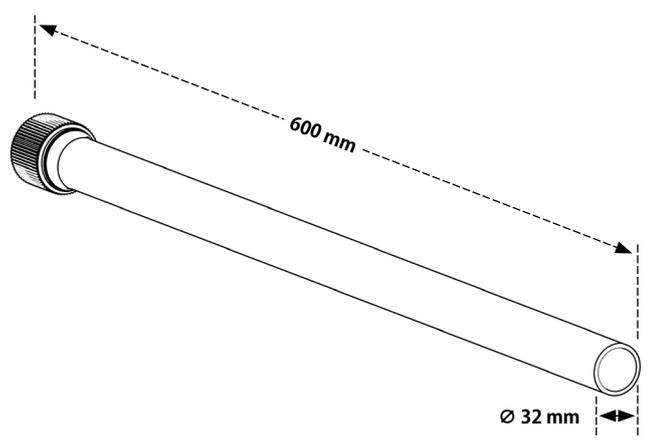
**106 695**  
Wall Attachment

**C**



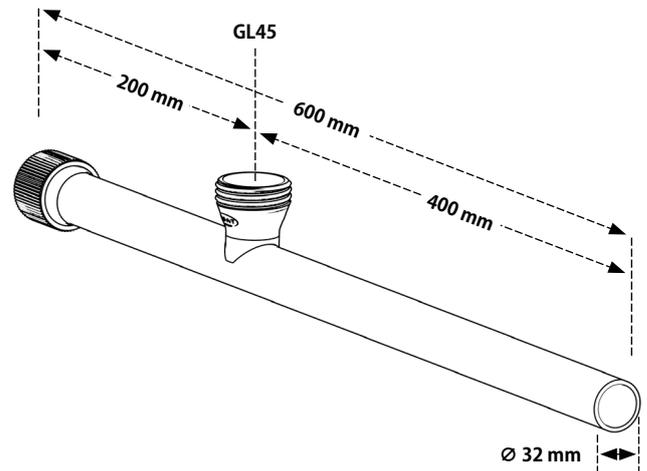
**106 690**  
Extension 1

**D**



**106 689**  
Extension 2

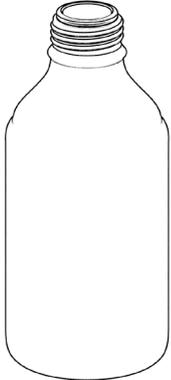
**E**



# 1. Overview: Components

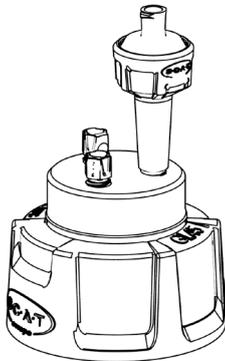
**501 113**  
Supply Bottle  
for Solvent  
1000 ml

**F**



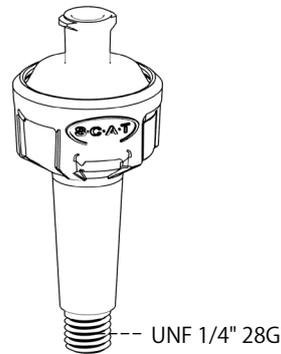
**307 909**  
SafetyCap II  
for Supply Bottle  
Screw Thread GL45

**G**



**317 010**  
Air Ventilation Valve  
for SafetyCap II

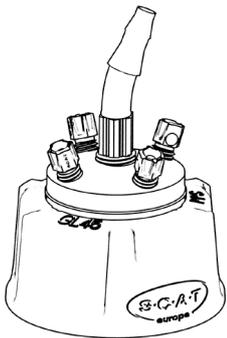
**H**



**For HPLC  
Supply**

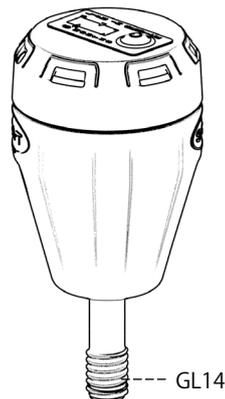
**306 498**  
SafetyWasteCap  
for Waste Tubing  
Screw Thread GL45

**I**



**390 336**  
Exhaust Filter for  
SafetyWasteCap

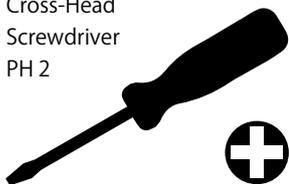
**J**



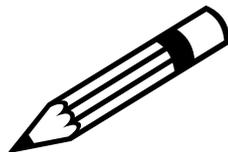
**For HPLC Waste Disposal**

## 2. Tools required

Cross-Head  
Screwdriver  
PH 2



Marking Pen / Pencil



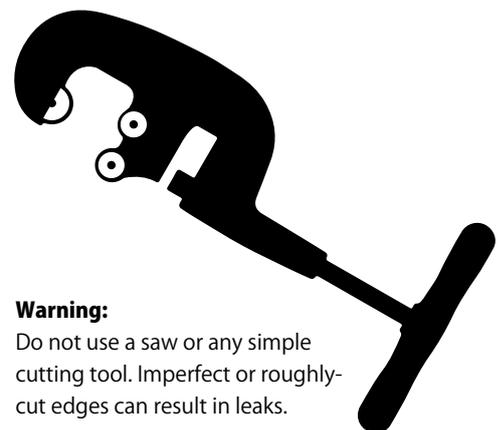
Ruler / Tape Measure



Spirit Level



Pipe Cutter

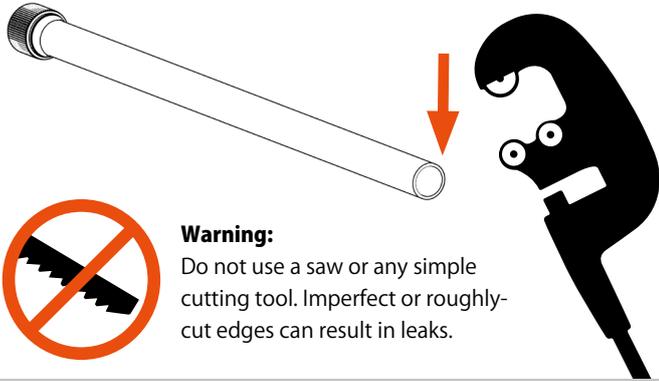


**Warning:**  
Do not use a saw or any simple  
cutting tool. Imperfect or roughly-  
cut edges can result in leaks.

### 3. Construction Example

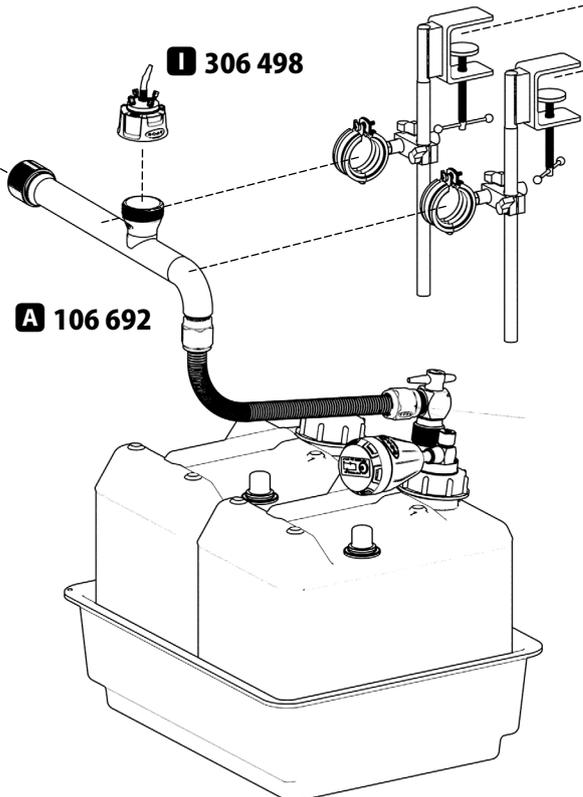
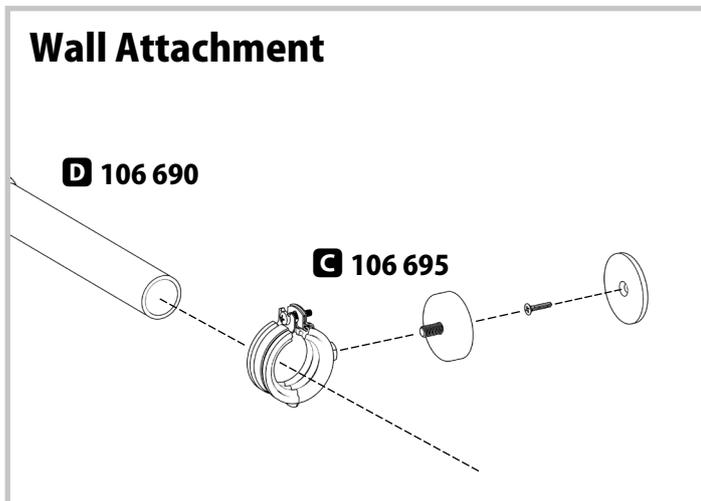
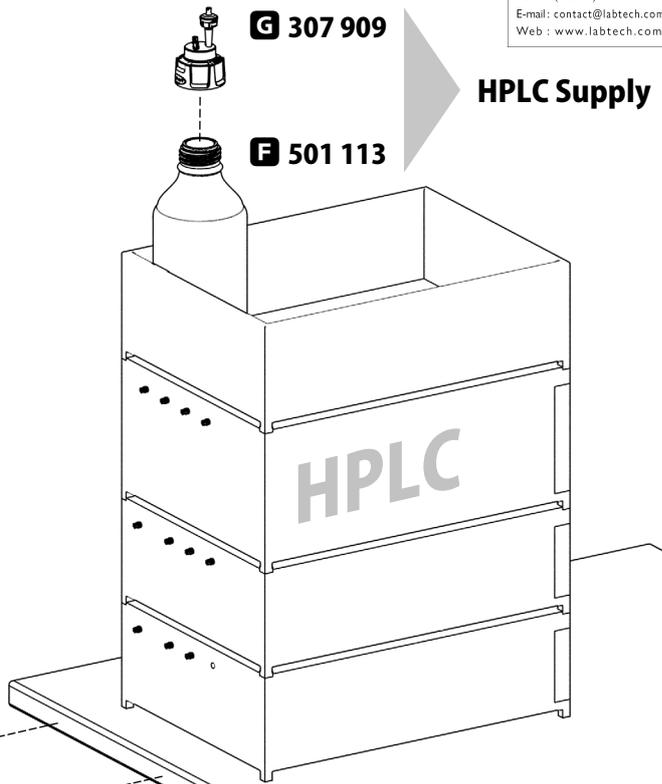
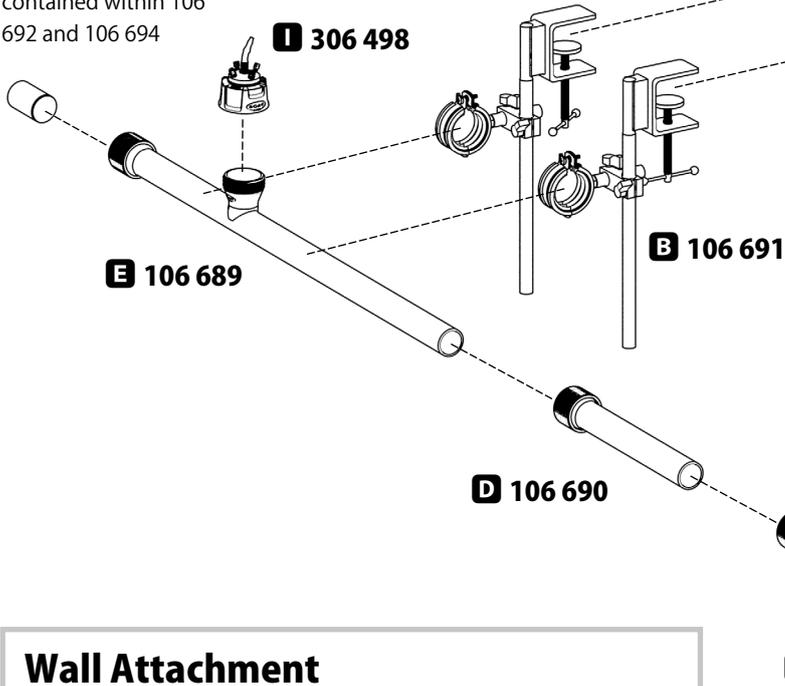


The extensions, "D" and "E", can be combined as desired. The pipe lengths can be suited to your specific requirements: shorten the pipes to the desired length on the smooth side. For this, use a suitable pipe cutter.

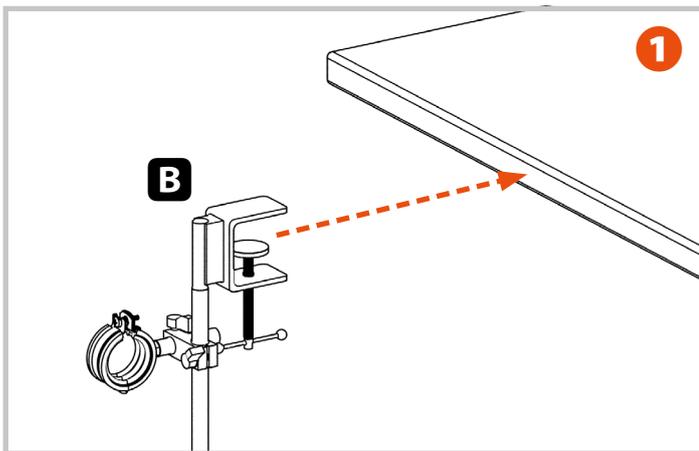


**Warning:**  
Do not use a saw or any simple cutting tool. Imperfect or roughly-cut edges can result in leaks.

Blind plugs are contained within 106 692 and 106 694



## 4. Mounting the Table Attachments

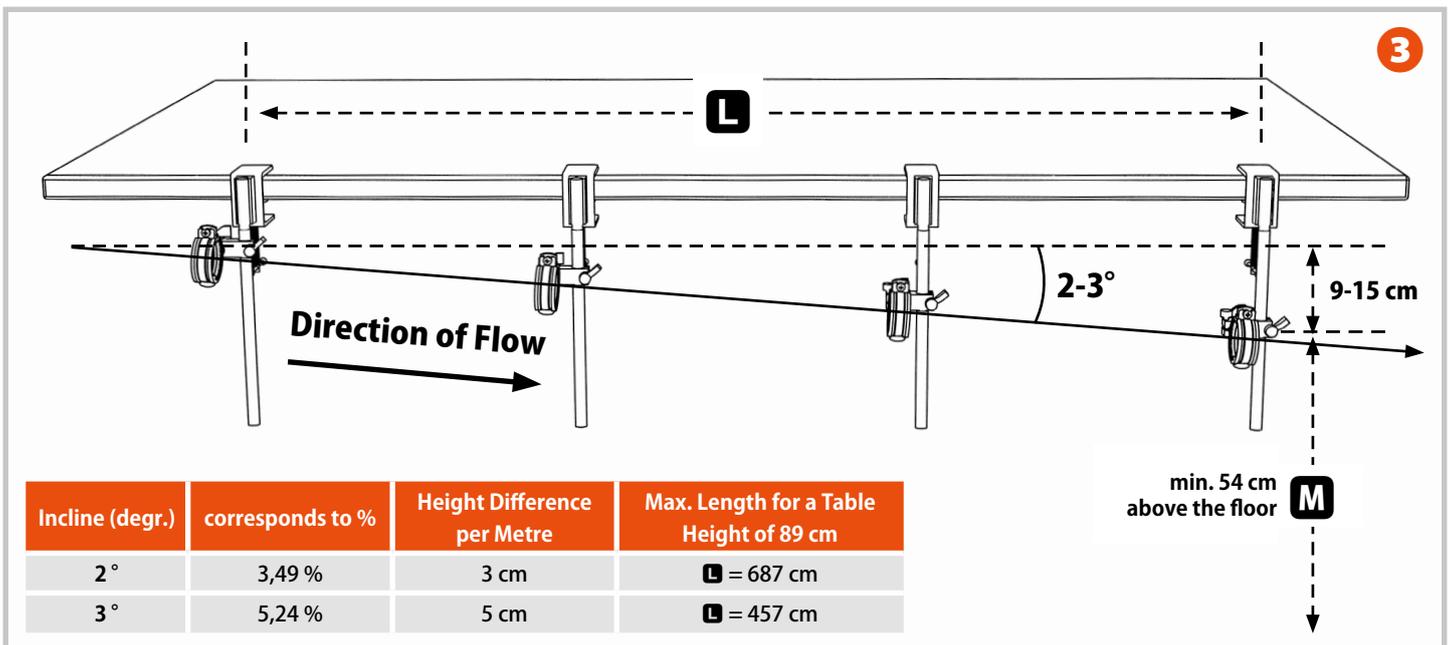
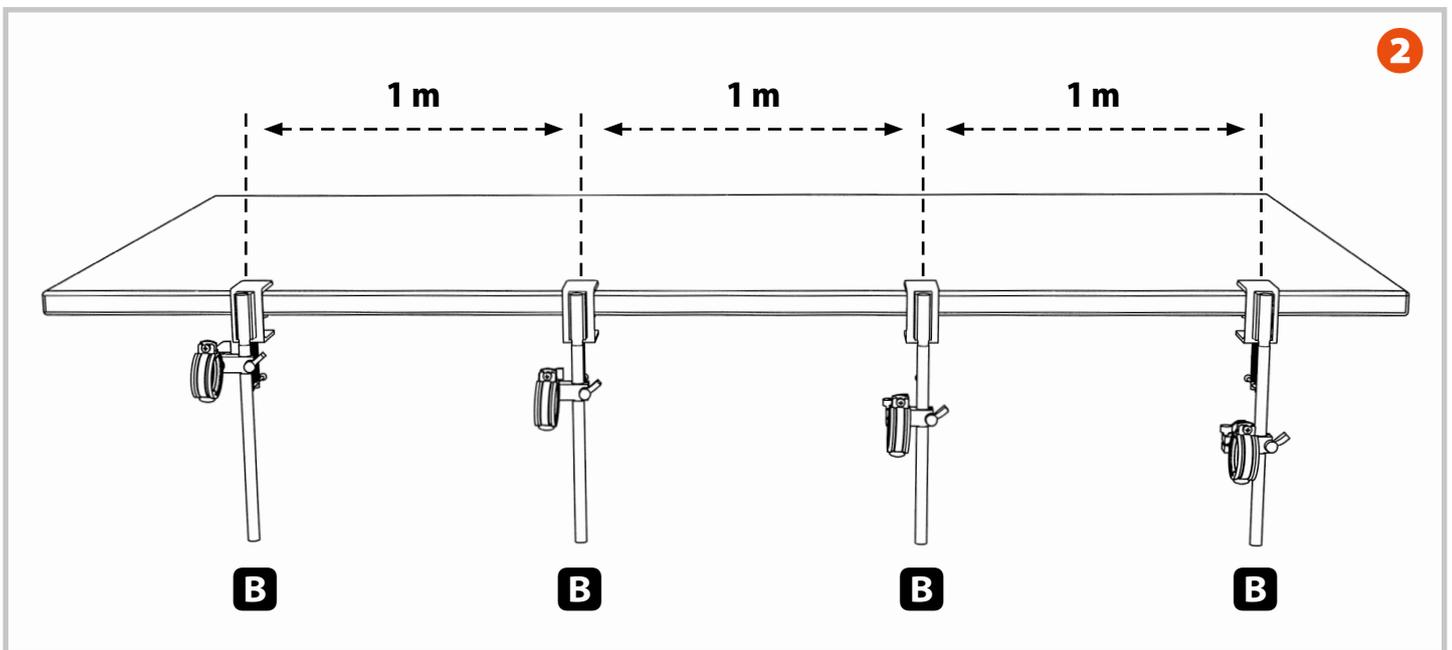


1 Mount the table attachments, "B", at the desired places.

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

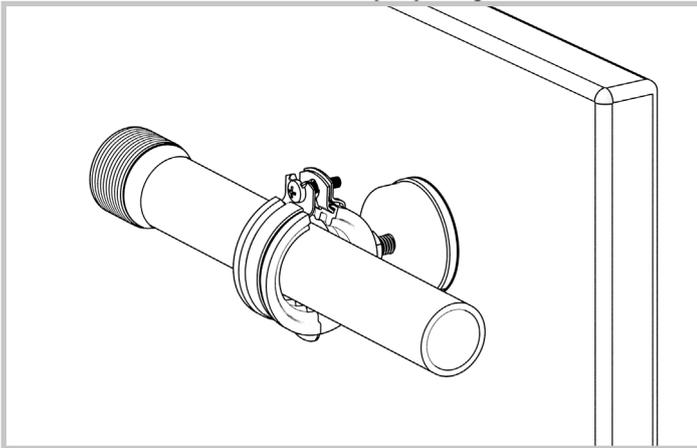
3 Install and tilt the tube clamps so that a downward incline, in the direction of flow, of c. 2° to 3° results.

Please note: the maximum possible length, "L", is dependent upon the given incline (see table). The minimum height, "M", of the last attachment is 54 cm above the floor, so allowing sufficient space for installation and connection of the collection unit.



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

## 5. Mounting the Wall Attachments

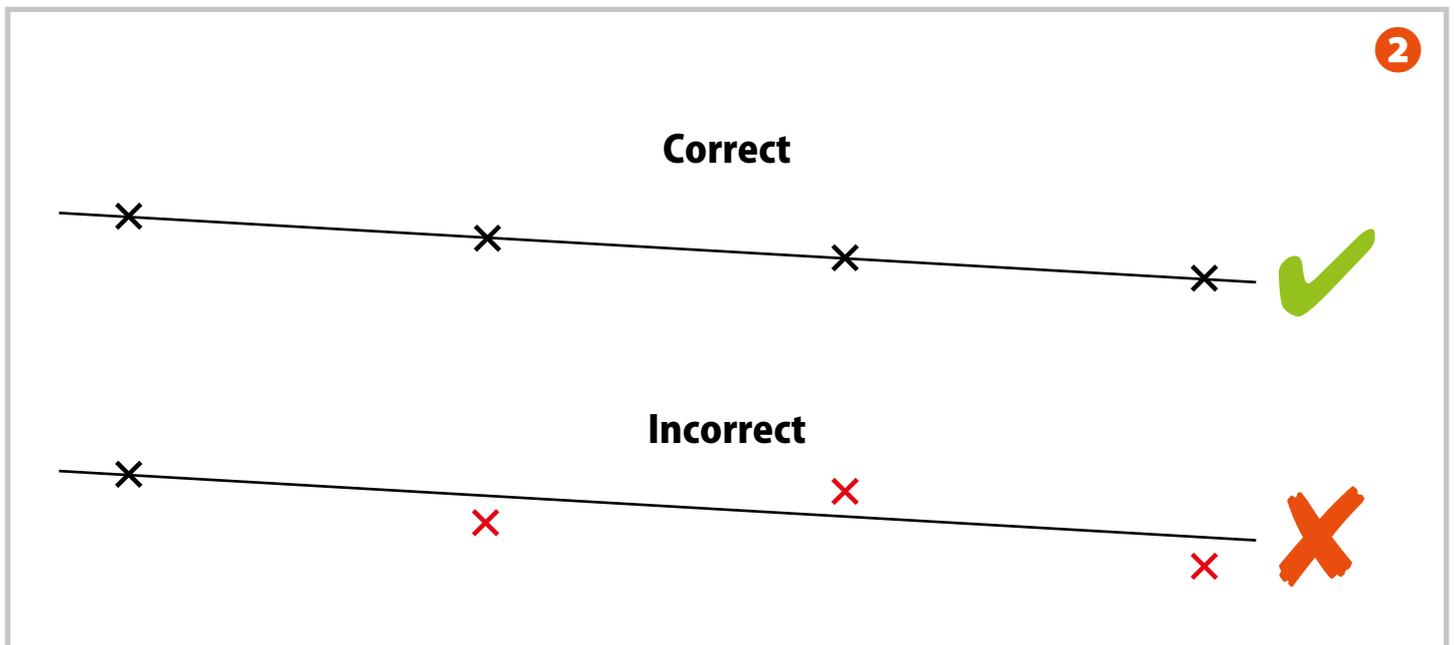
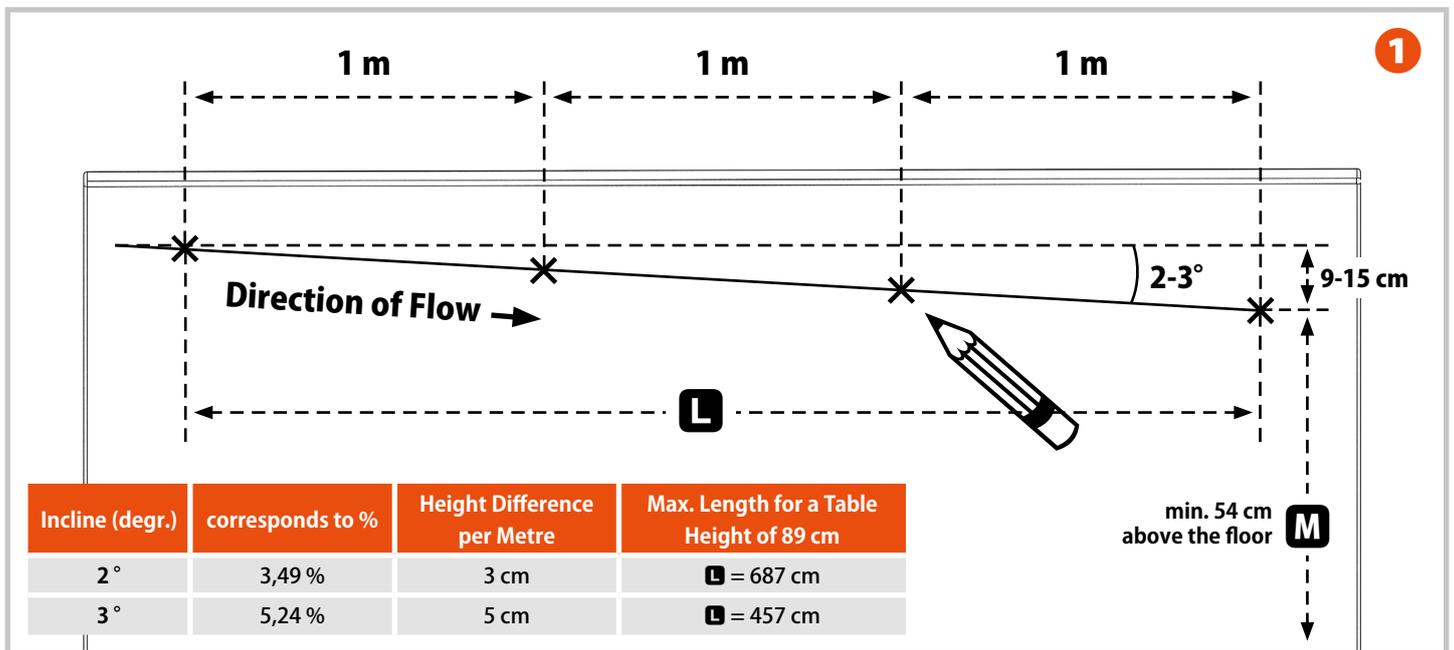


**1** Determine the **exact** positions of the wall attachments **in advance**. For best strength and robustness, mount at least one wall attachment per meter.

At the same time, take care that the wall attachments are so mounted, that a downward incline, in the direction of flow, of c. 2° to 3° results.

**Please note: the maximum possible length, "L", is dependent upon the given incline (see table). The minimum height, "M", of the last attachment is 54 cm above the floor, so allowing sufficient space for installation and connection of the collection unit.**

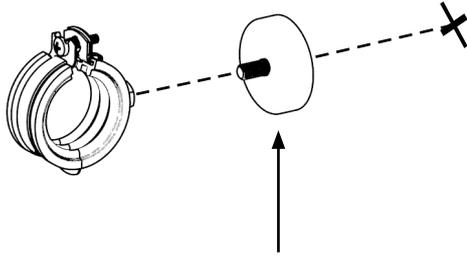
**2 Important: The places of mounting, when connected together, must result in a straight line, in order that the pipe system may be correctly installed.**



## 5. Mounting the Wall Attachments

### Magnetic

3



**Connecting Magnet**  
Connecting Strength: 45 kg

**3 different methods** of attachment are available. Wall attachments can be mounted **without inflicting any damage** (magnetically or using adhesive).

#### 5.1 Magnetic (for metal surfaces)

**3** Mount the tube clamp, together with the connecting magnet, at the desired place, and directly to the surface.

#### 5.2 Self-Adhering

Ensure that the surface is smooth, clean and free of grease.

**4** Remove the protective foil from the back of the metal disc.

**5** Stick the metal disc on to the previously-marked place.

**6** Mount the tube clamp, together with the connecting magnet, to the metal disc.

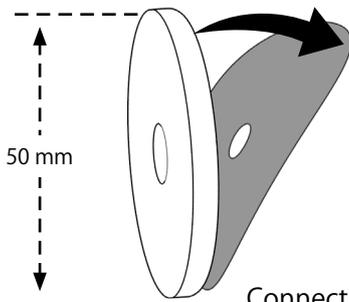
#### 5.3 Screw Connection

**7** Attach the metal disc at the desired place, using the supplied screw (do not remove the protective foil).

**8** Mount the tube clamp, together with the connecting magnet, on the metal disc.

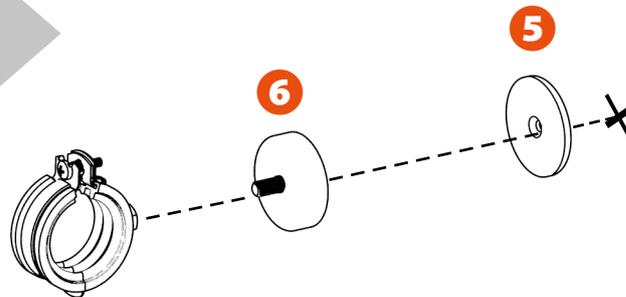
### Self-Adhering

4



50 mm

**Connecting Strength: 45 kg**

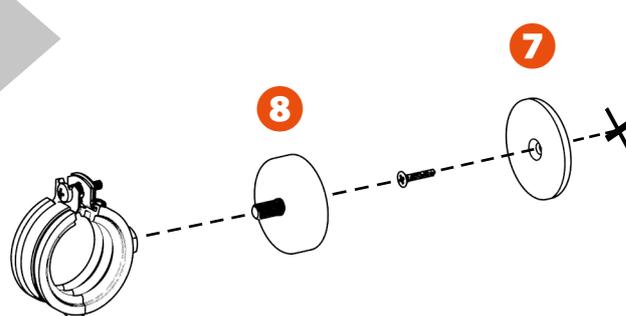
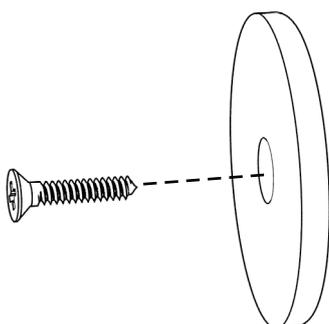


5

6

### Screw Connection

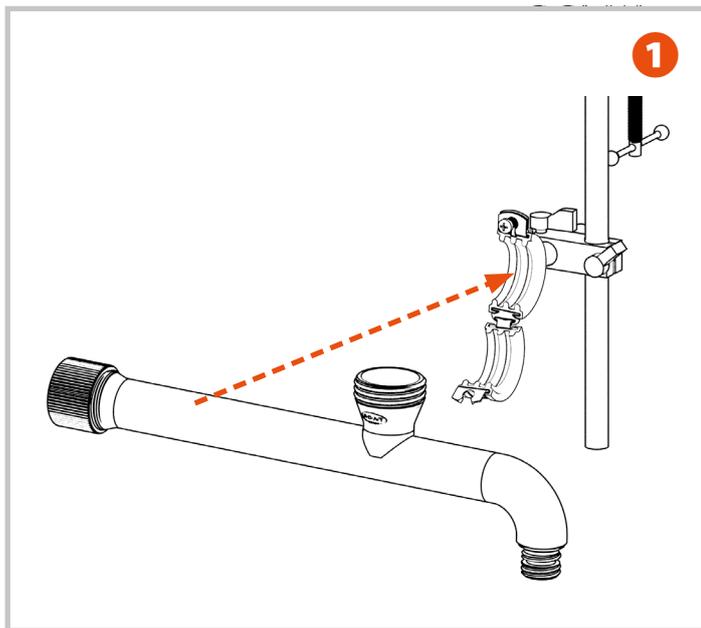
7



7

8

## 6. Installing the Main Pipe



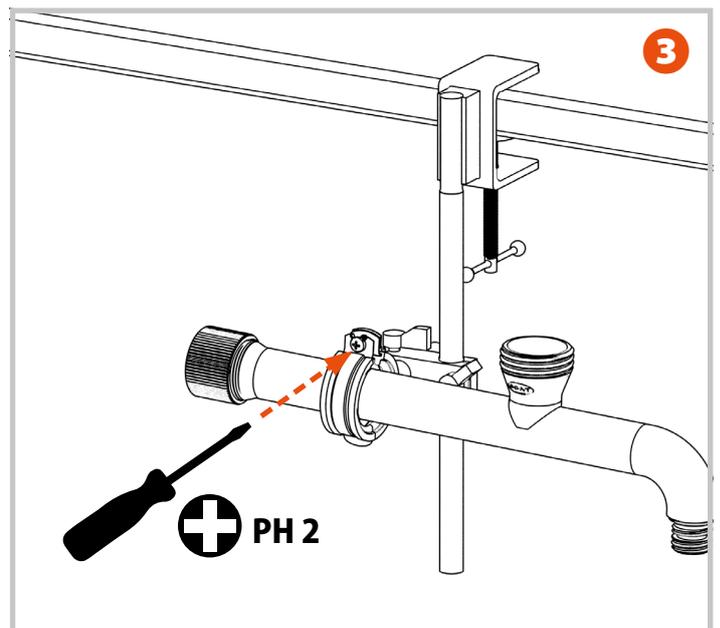
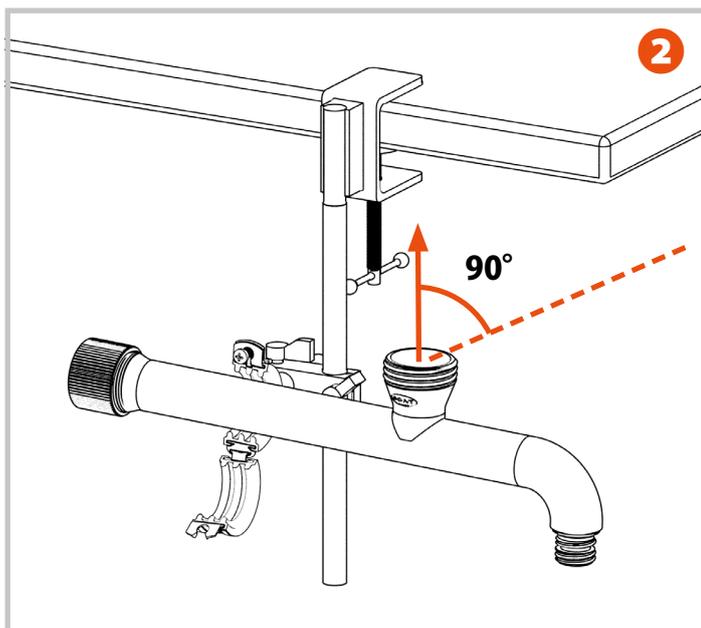
1 Place the main pipe into the pipe clamp.

2 Position the GL45 connection, so it is pointing upwards.

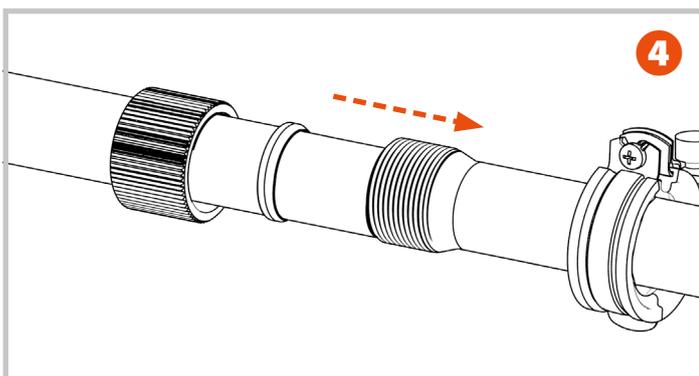
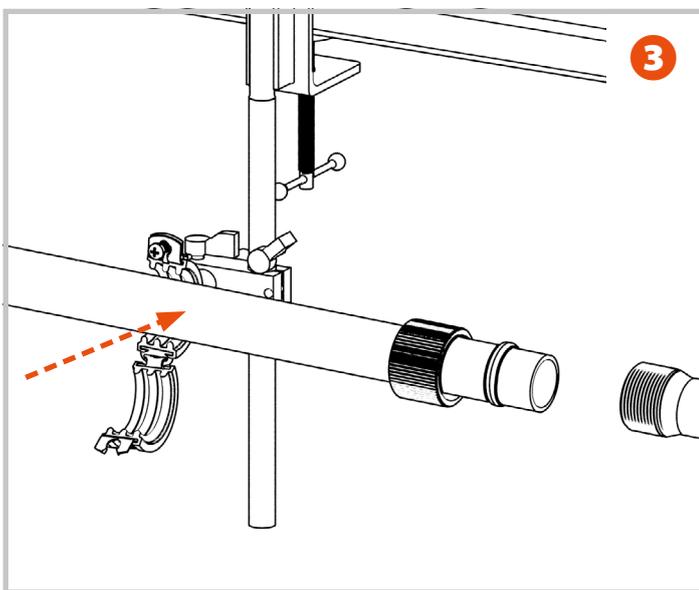
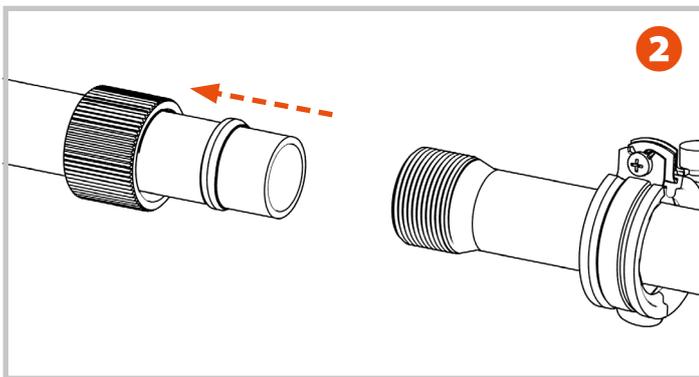
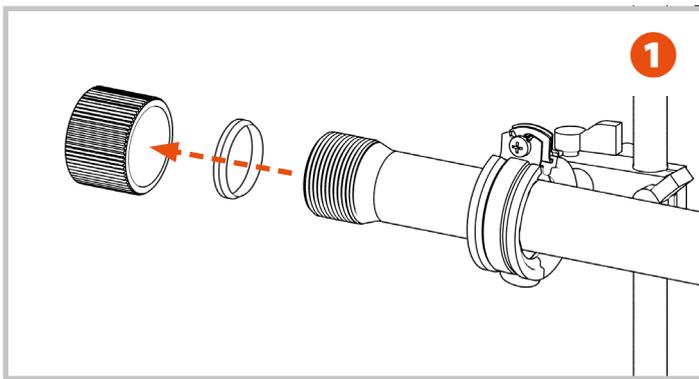
3 Fix the pipe in this position by tightening the pipe clamp. For this, use a cross-head screwdriver, Size PH 2.

Should you wish to connect **further** pipes, continue please with the notes in **Part 7 ("Installing the Extension Pipes")**.

Should you not require any further piping, please continue directly with **Part 8 ("Installing the Blind Plug")**.



## 7. Installing the Extension Pipes



**1** Unscrew the interconnecting sleeve at the end of the already-mounted pipe.

**2** Push the interconnecting sleeve and the compression ring over the smooth end of the extension pipe. Whilst doing this, pay attention to the correct positioning of the parts, as per the corresponding drawing.

**3** Place the extension into its corresponding pipe clamp.

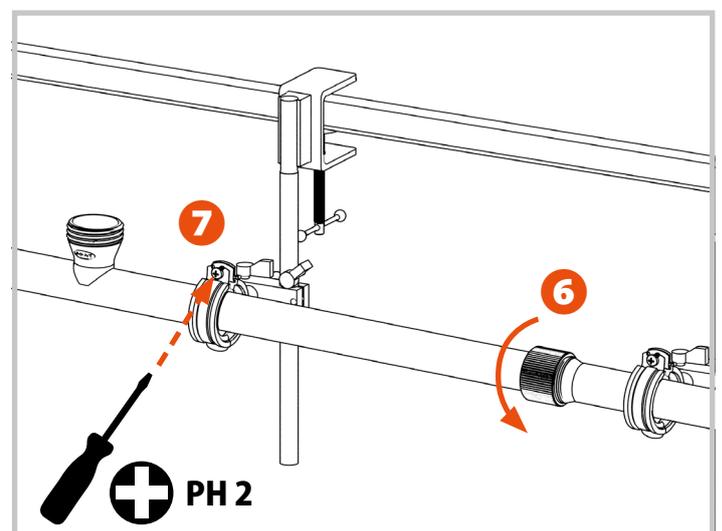
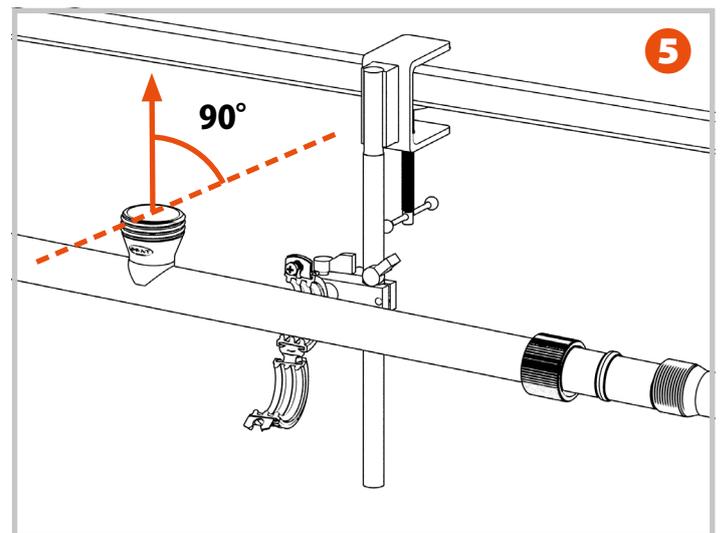
**4** Feed the extension into the already-mounted pipe, as far as is possible (up to the stop).

**5** Should your extension have a GL45 connection, turn it so it is then pointing upwards.

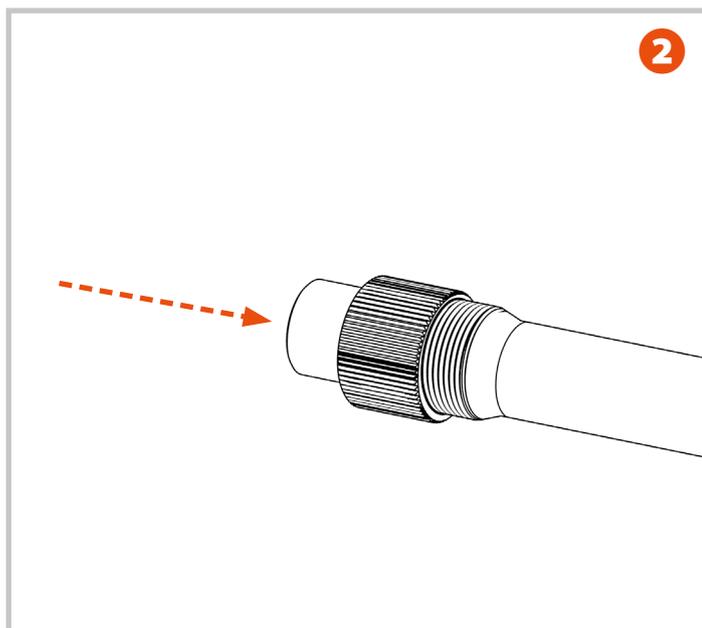
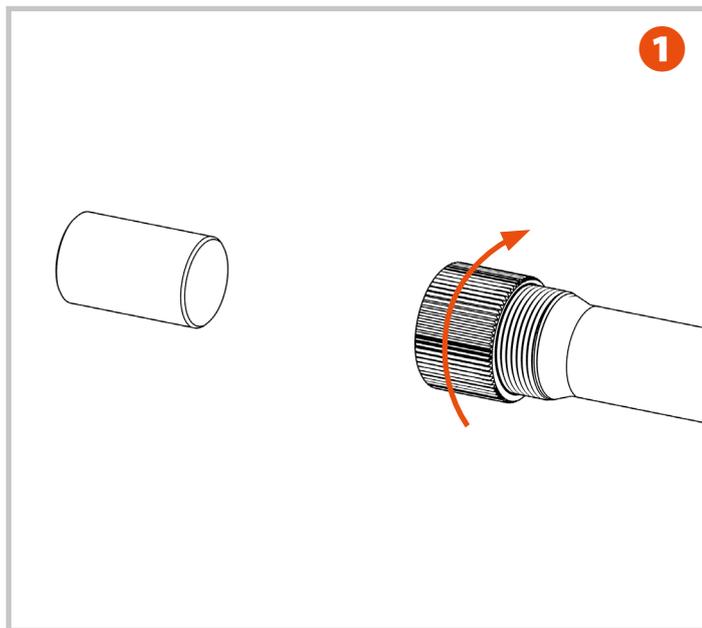
**6** Securely tighten the interconnecting sleeve on to the already-mounted pipe, by hand.

**7** Fix the pipe in this position, by tightening up the pipe clamp. For this, use a cross-head screwdriver, Size PH 2.

Should you wish to connect **further** piping, start again at **Step 1**. Should you **not need** to connect further piping, continue as from **Part 8** ("Installing the Blind Plug").



## 8. Installing the Blind Plug



**1** Slightly unscrew the interconnecting sleeve at the end of the last piece of piping of the pipe system, without actually removing it from the pipe.

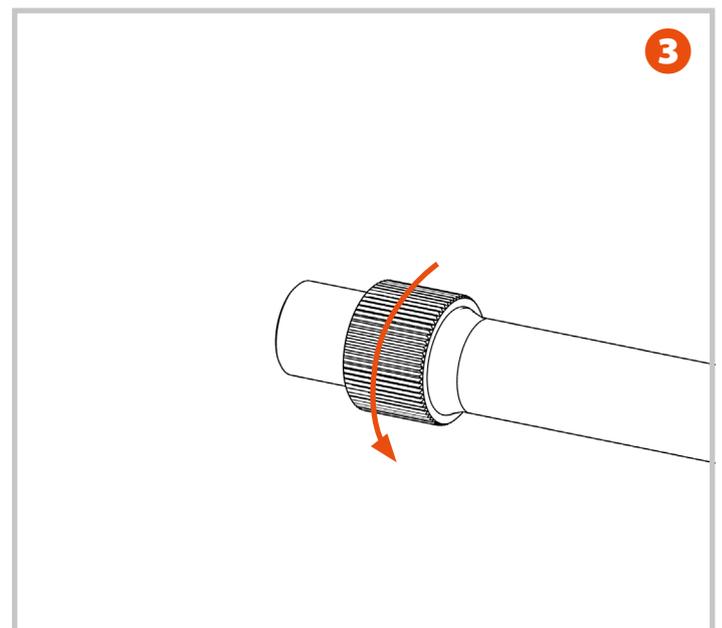
**2** Push the blind plug into the interconnecting sleeve, as far as is possible (up to the stop).

**3** Tighten up the interconnecting sleeve by hand.

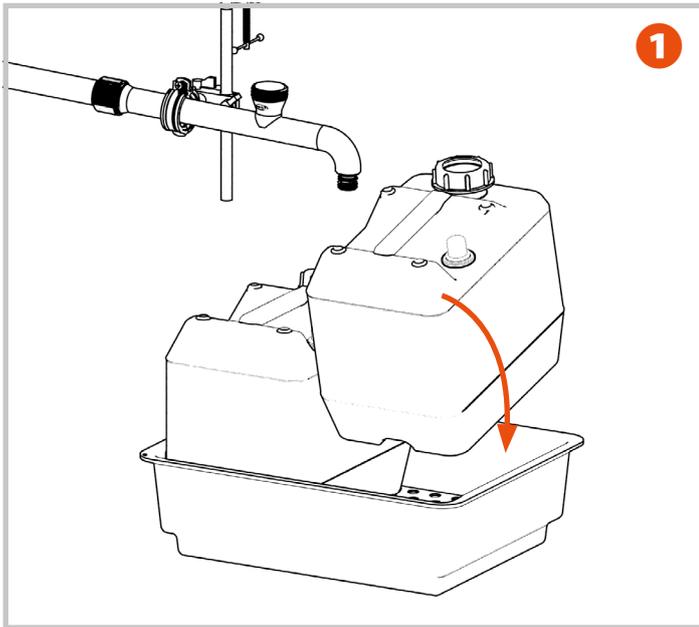


### Important Information for your Safety

Always close up the end of the pipe system with the blind plug (contained within the Starter Sets, 106 692 and 106 694). This ensures that no solvent or chemical vapours can be released.



## 9. Installing the Collection Unit



1

1 Put the drip container in the desired location, position it properly, and then place both canisters into it.

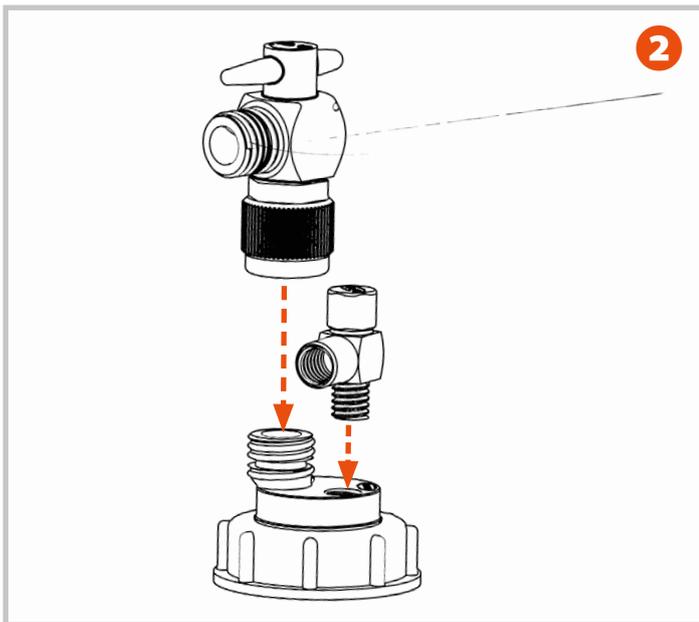
2 Connect the shut-off valve and the elbow adapter to the SafetyWasteCap.

3 Screw the exhaust filter into the elbow adapter.

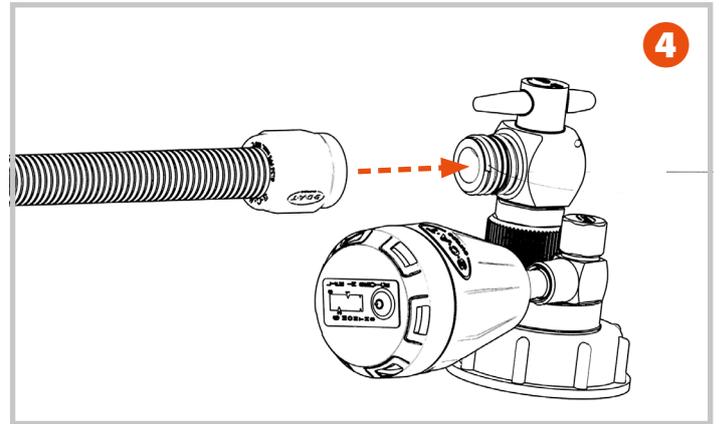
4 Connect the end of the Flextube to the shut-off valve.

5 Connect the other end of the Flextube to the main pipe.

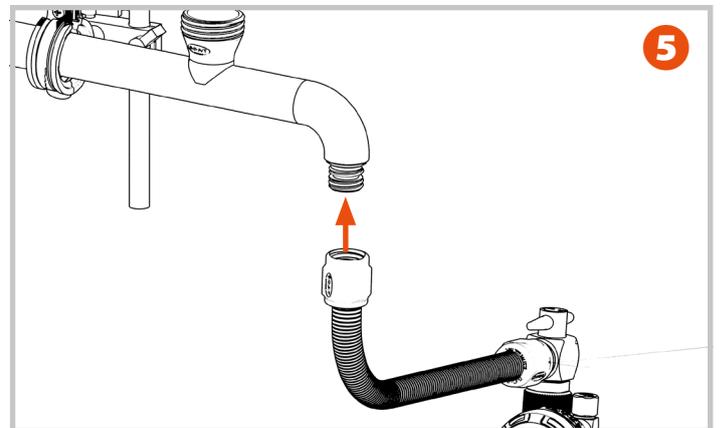
6 Connect the SafetyWasteCap to the canister.



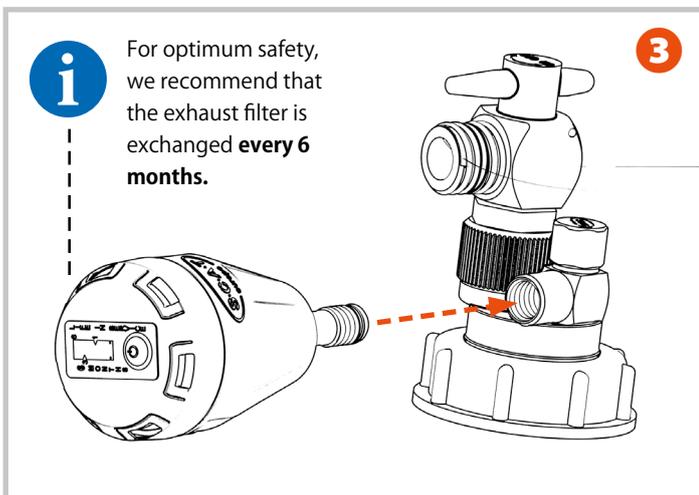
2



4

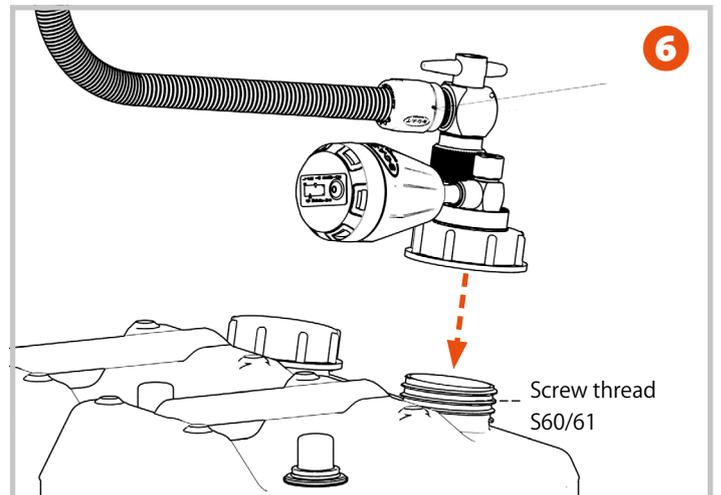


5



3

For optimum safety, we recommend that the exhaust filter is exchanged **every 6 months**.

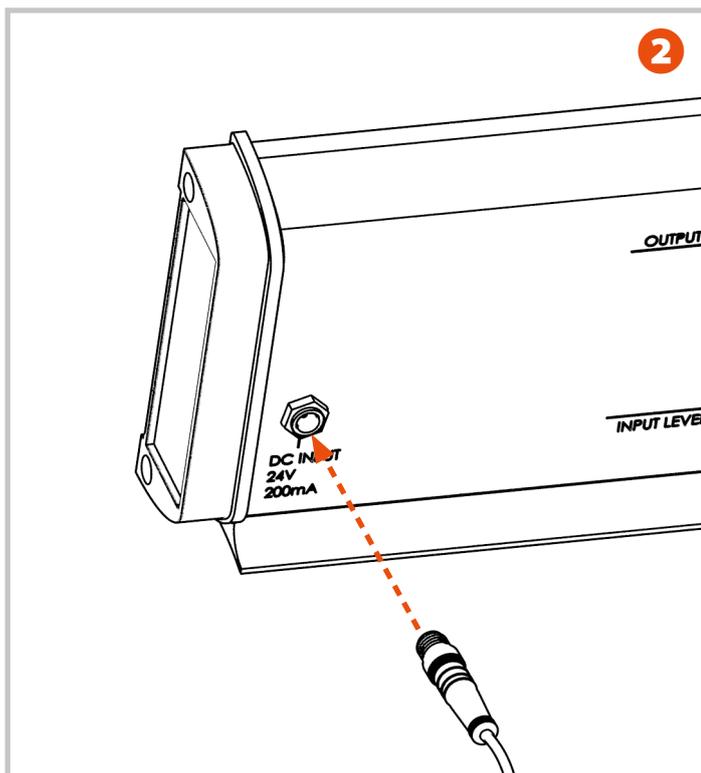
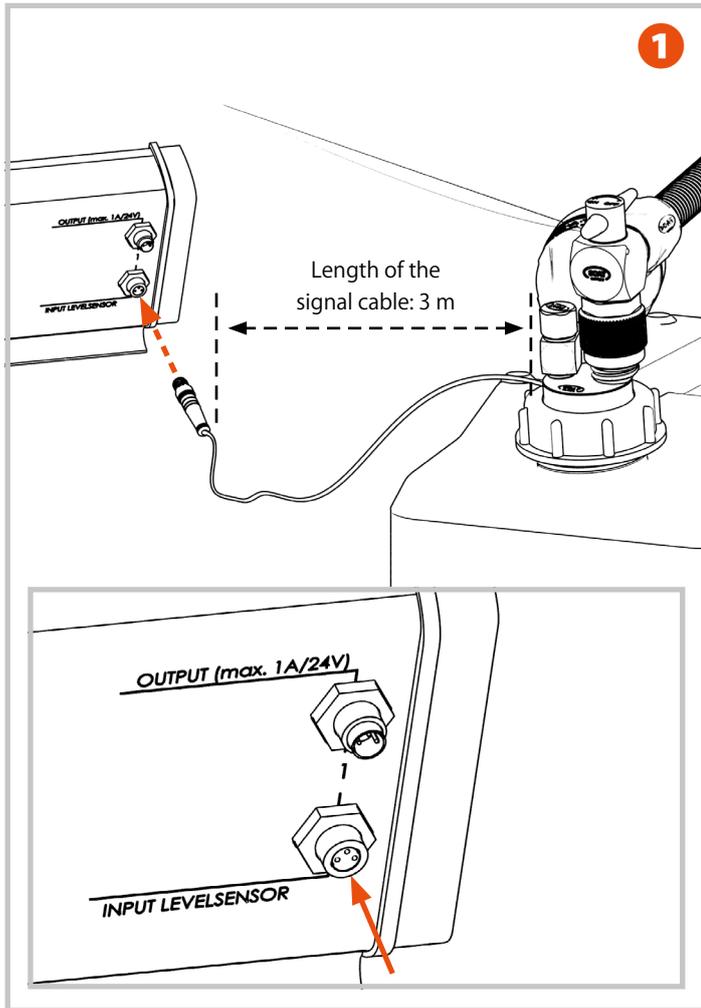


6

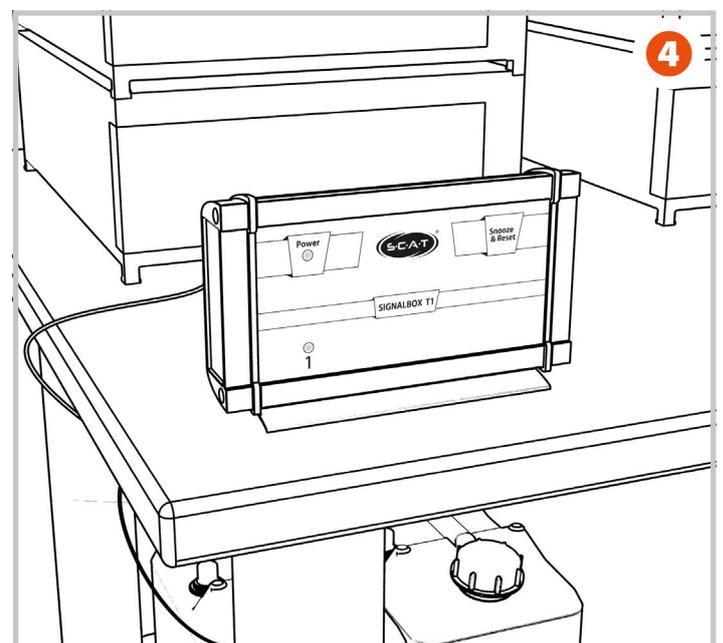
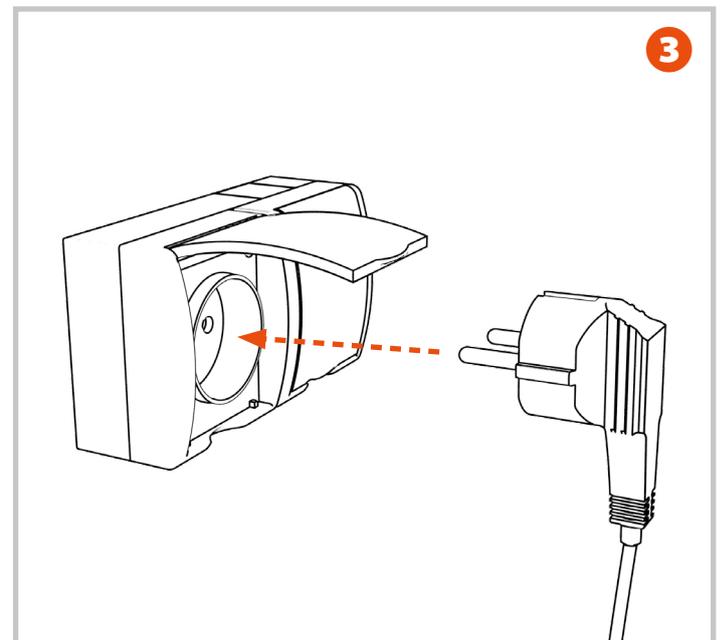
Screw thread  
S60/61

## 10. Connecting the Liquid Level Control

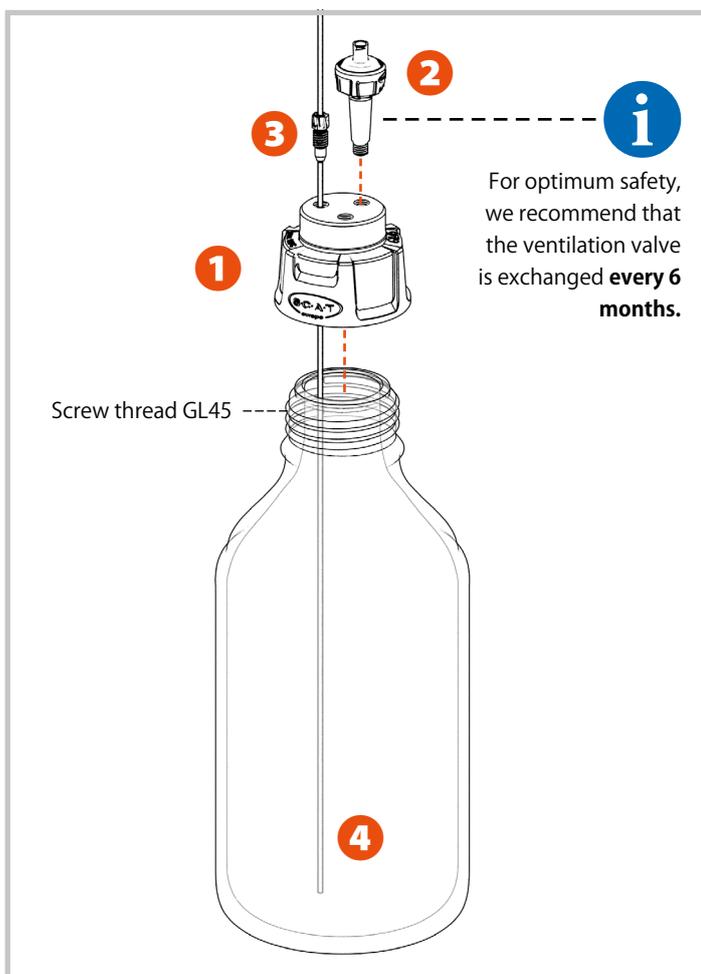
Only contained in the Premier Starter Set (106 694)



- 1 Connect the liquid level sensor to the signal entry point of the signal box.
- 2 Connect the mains supply cable to the mains cable socket of the signal box.
- 3 Connect the mains supply cable to the mains socket.
- 4 Place the signal box in a visible and easily accessible place, within your working area.



## 11. Connecting to the HPLC Unit

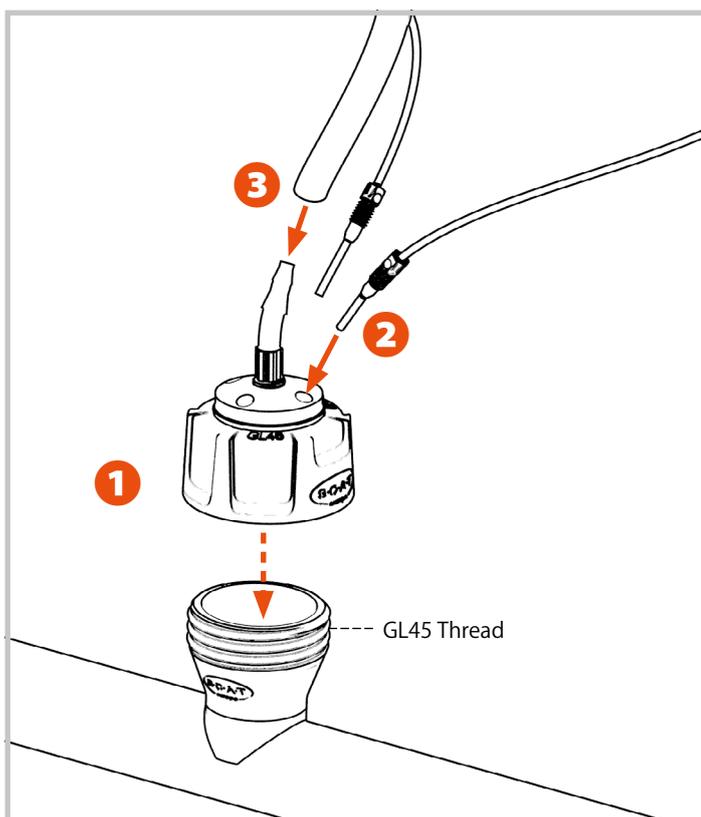
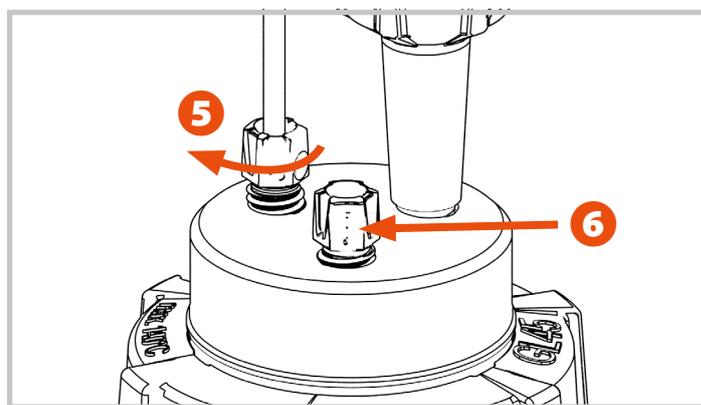


### 11.1 Solvent Supply

- 1 Screw the SafetyCap on to the supply bottle.
- 2 Screw the ventilation valve into a free connection on the SafetyCap.
- 3 Thread the capillary through its fitting, and then through a free connection on the SafetyCap.
- 4 Thread the capillary through to the bottom of the supply bottle.
- 5 Tighten up the fitting by hand.

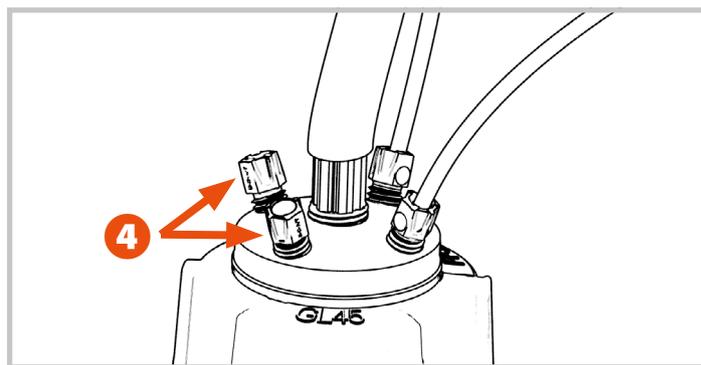
In order to connect further capillaries, repeat Steps 1-5.

- 6 Seal up any connections that are not required, using blind plugs. **This is important, in order to prevent solvent vapour from being released.**



### 11.2 Solvent Waste

- 1 Screw the SafetyWasteCap on to the GL45 connection of the pipe system.
- 2 For capillaries with an outer diameter of up to 3.2mm: thread the capillary through the fitting, and then through a free connection on the SafetyWasteCap. Tighten up the fitting by hand.
- 3 For tubing with an inner diameter of 6.4 to 9 mm: push the tubing as far as possible over the tube connection, until it sits firmly.
- 4 Seal up any connections that are not required, using blind plugs. **This is important, in order to prevent solvent vapour from being released.**



## 12. Installation completed

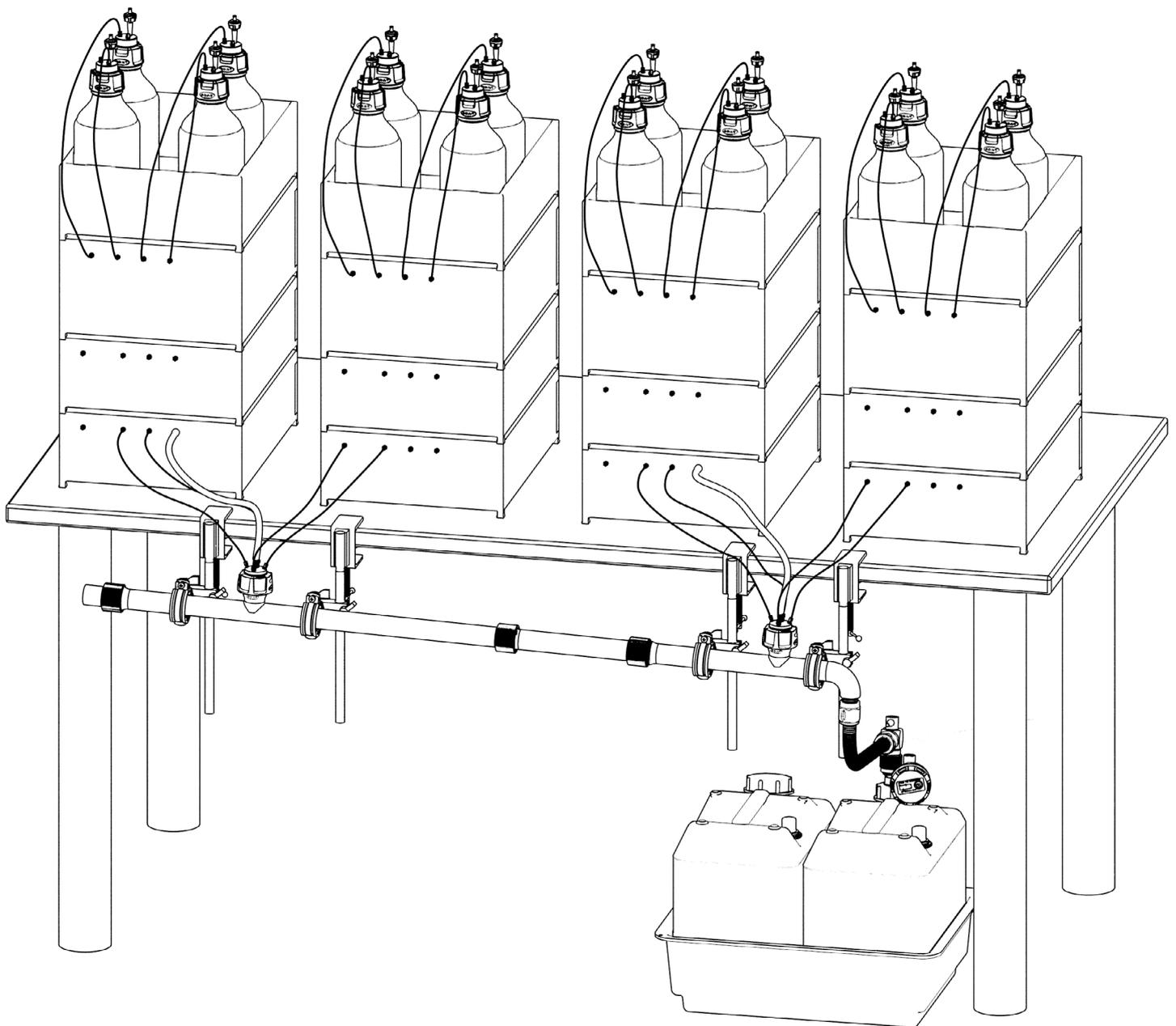
Congratulations! Your system is now ready to be used. Should you have any questions or require specific support, our **SymLine**® Service Team will be pleased to assist you further.

### Contact & Support

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