Level control

Disposing with care

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

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

The level control developed by S.C.A.T. gives warning through an optical and acoustic signal before the waste container overflows. In addition, connecting devices such as pumps and valves can be actuated via contact switches.

Depending on demand, the different containers can be equipped either with non-contact sensors for exterior attachment or with float-controlled mechanical/optical and electronic/optical sensors. With the appendand electronic signal boxes, up to 5 containers can be monitored at the same time.

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

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

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

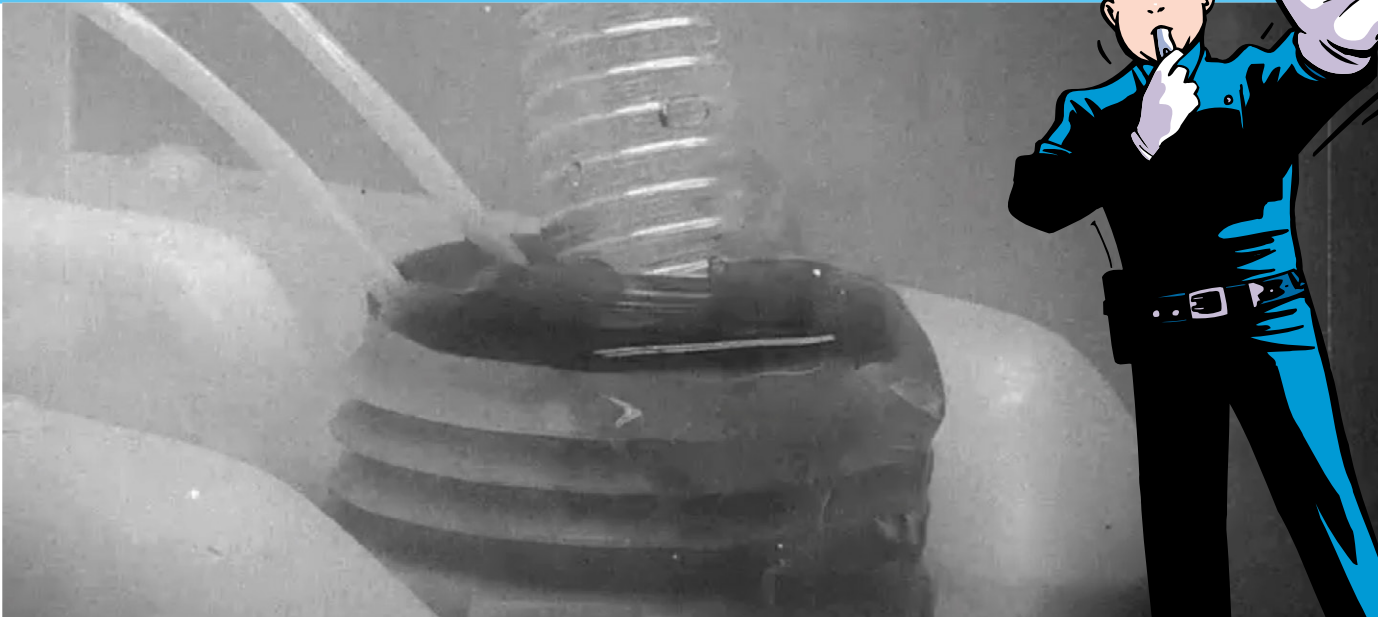**A video says more than a thousand words**
Many labs suffer from messy conditions when it comes to solvent and waste handling. The S.C.A.T. Europe team unveils the mistakes of the past and shows how to do it right.

Just scan QR Code and watch the Video.

or directly visit: **scat-europe.com/video**

Overflowing containers - harmful and dangerous!

Safety Solution - S.C.A.T. Europe level control systems

Level control

Level control with disc sensor

» **Simple installation - for all typical containers made of glass or non-conductive plastic**
» **Warning optionally at fill or low level**
» **Sensitivity can be adjusted to different wall strengths**

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

Disc sensor for fill and low level control you will find on page 80.

Level control with SafetyWasteCap

» **Connect SafetyWasteCaps with electronic level control directly to a Signalbox**
» **No additional sensor required**
» **For containers made of conductive platic and metal**
» **Many thread sizes available**

For containers made of conductive plastic or metal, the level control can be accomplished through the closure, there is no additional sensor required. The integrated floater transmits a signal to the connected Signalbox when the filling level has reached. All SafetyWasteCaps with the corresponding icon can be connected to our electronic signal boxes.

SafetyWasteCaps with electronic level control can be found starting from page 40.

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Electronic signal boxes T1 and T5

» **Works with disc sensor and SafetyWasteCaps with electronic level control**
» **Power and status LEDs, snooze and reset button, solid stand, space for labelling**
» **Contact switch - control external devices such as pumps or valves due to potential-free contacts**

Our electronic signal boxes alert through optical and acoustic warning signals about critical filling levels of your reservoirs and waste containers. Mute the alarm with the snooze and reset button, change the containers or fill up liquids, reset the signal box to reactivate the level control - you're done. Power and status LEDs inform you steadily about the operating state, the solid stand ensures safety at your laboratory work surface. Useful title blocks enable easy allocation of the connected containers.

The electronic Signalboxes for level control can be found starting from page 77.

Optical level control

» **Integrated optical level control**
» **Container with viewing strip or floater**
» **Made from electrostatic conductive PE-HD**
» **Canister with UN approval - permitted for transport of hazardous goods on roads and plant premises**

Safe collecting from liquid laboratory waste. The integrated floater or the viewing strip warn from critical filling levels and overflowing. Canisters in black are made from electrostatic conductive PE-HD. Our containers with viewing strip are additionally are UN approved and permitted for transport of hazardous goods on roads and plant premises.

Suitable SafetyWasteCaps for waste containers can be found starting from page 35. Grounding accessories for containers starting from page 115.

Canisters with integrated level control you will find starting from page 83.

A 108 087

B 108 088

Contact switch (potential-free contact)

For controlling external devices
such as pumps or valves.

Signalbox T1 and T5

- Power and status LEDs
- "Snooze" & Reset button
- Solid stand
- Contact switch
- Useful space for labelling

Contact switch 1-5 and „ALL" (potential-free contacts)

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

Compatible with switch amplifier

- Switch amplifier part no. 108 278
- Cable set part no. 108 219

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

S·C·A·T europe

SymLine®
Chemical Waste Systems

www.symline.de

NEW: Electronic built-in Signalbox²
Part No. 106 548

S.C.A.T. Europe's built-in series SymLine® offers an electronic Signalbox which can be included in to an allocated gap of your laboratory furniture front panel. Contact us or visit: www.SymLine.de

NEW AND IMPROVED DESIGN

- Touch control panel
- Level control through status LEDs, optical and acoustic alarm signals
- Compatible with switch amplifier, ATEX-compliant for use in explosion-endangered areas!

A **108 125**

1 x

| 1 x | 1 x | 1 x | 1 x |

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

» **The Signalbox T5 can observe up to 5 fill and low levels at the same time. Here you can find accessories for connection to your containers**

» **Disc sensors for fill and low level control**

» **Signal cable in several lengths: 3, 5 and 10 meters**

» **Velcro or DualLock closure for mounting the disc sensor on containers**

LEVEL CONTROL

A 108 048	**B** 108 050	**C** 900 108	**D** 108 051

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

LEVEL CONTROL

A 107 000

Electronic switchbox

Connected with the Signalbox T5 and the two
SafetyWasteCaps with electronic level control,
the box switches the 3-way ball tap via the
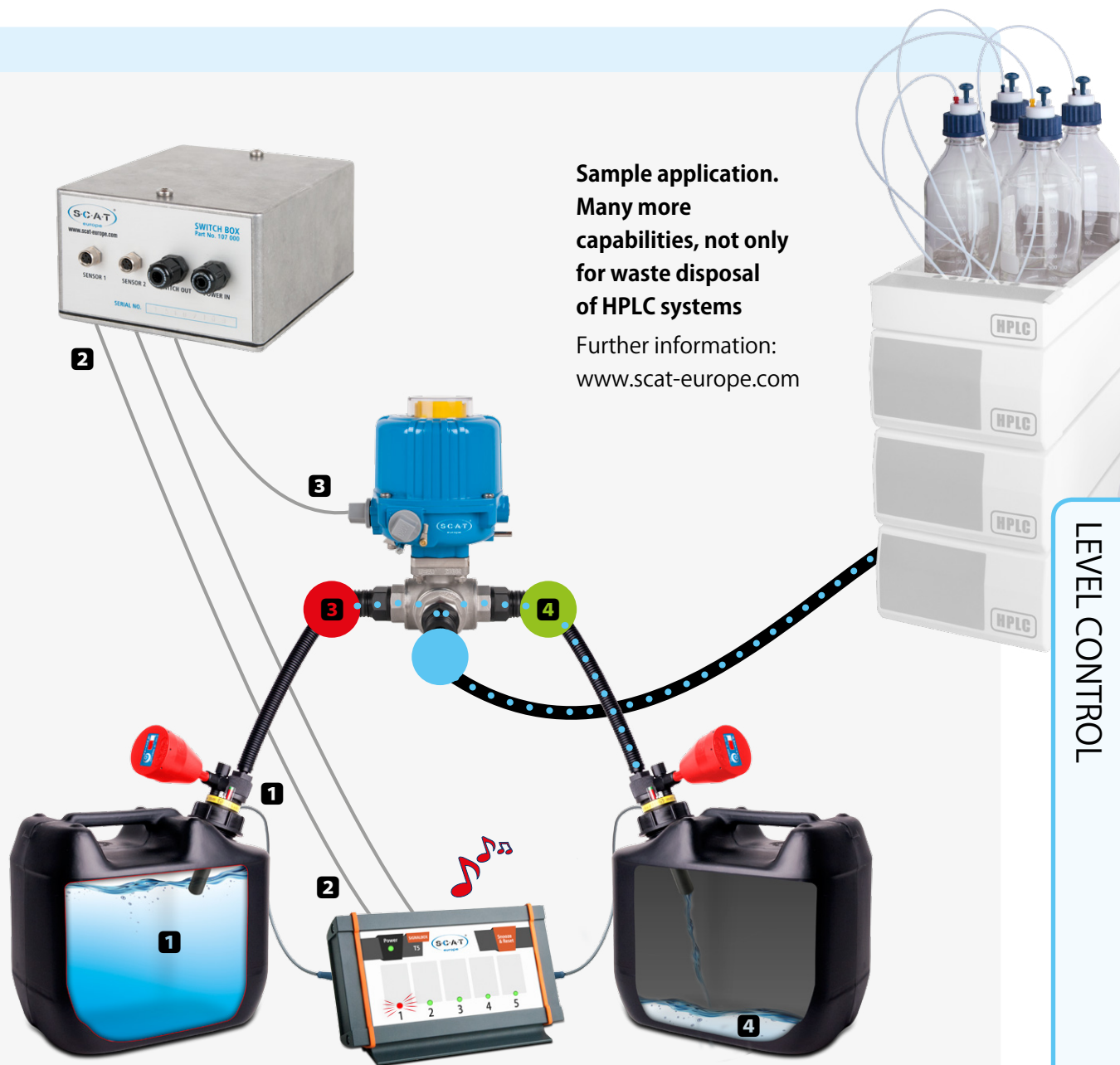output „switch out".

B 160 178

3-way ball tap, electronically controllable

Connected with the Switchbox, this 3-way ball tap
receives a signal to interrupt the influent flow to the
already filled container and to bypass to the empty
reserve container.

» **Long time secured from overflow with the reserve canister**

» **The disposal can run carefree over the night or the weekend, without emptying or
changing of the filled container**

» **Compatible with all S.C.A.T. SafetyCaps with electronic level control and disc sesnors**

» **Many more capabilities, not only for waste disposal of HPLC systems**

Fig.	Part No.	Description
A	107 000	Electronic Switchbox
B	160 178	3-way ball tap, electronically controllable

81

**Sample application.
Many more
capabilities, not only
for waste disposal
of HPLC systems**

Further information:
www.scat-europe.com

❶ Container filled

The SafetyWasteCap
with electronic level
control transfers
a signal to the
connected
Signalbox T5.

❷ Signalbox

The electronic
Signalbox transfers
the signal to the
connected Switchbox.

❸ Switchbox

The Switchbox
triggers the
connected 3-way
ball tap.

❹ Bypass

The 3-way ball tap closes
the influent flow of
liquid waste to the filled
container and bypass to
the connected reserve
canister.

Containers with integrated level control

A	108 945

S 50

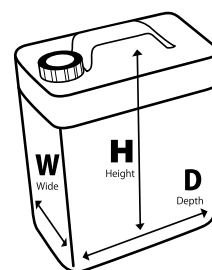| **B**	108 421

S 50

PE-HD

With viewing strip.
Level control without floater!
Our canisters with viewing strip are
UN-approved. They are permitted
for transport of hazardous goods
on roads and plant premises.

Have an eye on filling levels
Safely collect fluid laboratory
waste! The integrated floater
gives a warning in time to prevent
overfilling. Ideal for use with
S.C.A.T safety funnels
(starting from page 67).

Electrostatic conductive PE-HD
Canisters in black are made from
electrostatic conductive PE-HD.

W Wide   H Height   D Depth

Dimensions

Fig.	Part No.	Description	Contents	Material	Thread	W x H x D (mm)	UN approval
A	108 945	Space-saving canister with floater	5 liter	PP, white	S 50	65 x 405 x 330	-
B	108 421	Canister **with viewing strip**	10 liter	**PE-HD, black electrostatic conductive**	S 50	200 x 320 x 240	●
C	108 420	Canister **with viewing strip**	10 liter	**PE-HD, black electrostatic conductive**	S 90	195 x 400 x 195	●
D	108 042	Canister with floater	10 liter	**PE-HD, black electrostatic conductive**	S 60 / 61	185 x 280 x 290	-
E	108 043	Canister with floater	20 liter	**PE-HD, black electrostatic conductive**	S 60 / 61	185 x 515 x 290	-
-	107 740	Canister with floater	60 liter	**PE-HD, black electrostatic conductive**	S 70 / 71	330 x 690 x 395	-
F	199 013	Protective cage for floater (white)					-
-	199 005	Protective cage for floater (black)					-

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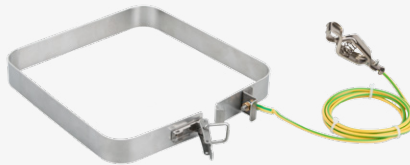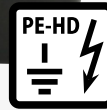**C** 108 420

S 90

D 108 042

S 60 / 61

E 108 043

S 60 / 61

PE-HD

PE-HD

PE-HD

F 199 013

Protective cage
against damages to
the viewing glass.

Ground strap for S90 canister with viewing strip

This canister has to be grounded by the ground strap for canisters.
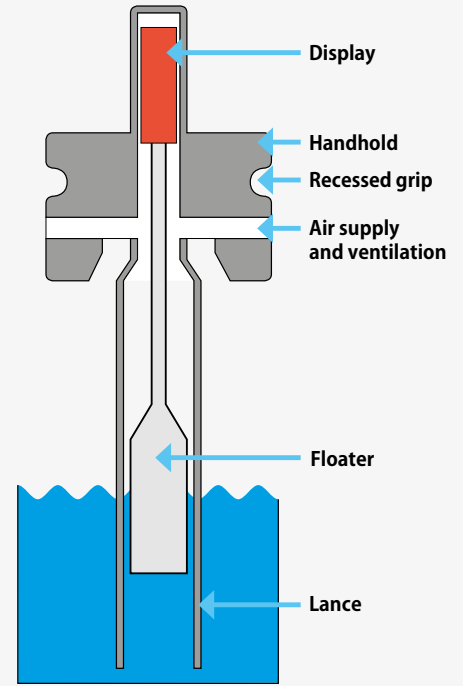Canister strap and further grounding accessories on page 116.

Level control
for barrels

Level control for barrels.

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

Exhaust filters for barrels you will find on page 60 and 103.

Display

Handhold

Recessed grip

Air supply
and ventilation

Floater

Lance

A   107 885

**Thread adapter
with level control.**

Adapter for funnel with mechanical level control, available in several thread sizes (see chart) with M12x1 connection for mechanical level control, conductive, bicoloured red/green, with knurled handle.

Fig.	Part No.	Description
A	107 885	Double thread R 2" BSP/G2 + 2" Tri-Sure (m) to GL 45 (m)
-	107 886	2" Mauser (m) to GL 45 (m)
-	107 889	S 60 (f) to GL 45 (m)

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| **B** 100 703 | **C** 107 880 | **D** 107 881 | **E** 107 883 |

For all openings from 50 mm diameter **For 3/4" thread**

XXL level control

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

Fig.	Part No.	Description	Lance length	Lance diameter	Material
B	100 703	Level control for barrels **with milk pipe thread**	250 mm	31 mm	Lance: PE-HD, black Floater: PE-HD, black Display: ETFE, red
C	107 880	Level control for barrels (fits all openings from ⌀ 50 mm) (up to max. ⌀ 100 mm)	250 mm	50 mm	Lance: PE-HD, black Floater: PE-HD, black Display: ETFE, red
D	107 881	Level control for barrels (fits all openings from ⌀ 50 mm) (up to max. ⌀ 100 mm)	250 mm	50 mm	Lance: PTFE, white Floater: PFA, white Display: ETFE, red
E	107 883	Level control for barrels Thread G3/4"	86 mm	18 mm	PE-HD **electrostatic conductive**
-	107 882	Level control for barrels Thread G3/4"	86 mm	18 mm	PE-HD
-	107 884	Level control for barrels Thread G3/4"	150 mm	18 mm	Lance: PTFE, white Floater: PFA, white Display: PE, red