

Liquid level sensor (699908 / 699909)

Safety information!

Use the level sensors 699908 and 699909 only in combination with VACUUBRAND vacuum controller CVC 3000 or VNC 2 (connection only possible to VACUUBRAND VACUU•BUS system).

Remove all packing material, remove the product from its packing-box and inspect the equipment. **Do not use the equipment if it is damaged.**

Use the components only for the **intended use**, i. e. to monitor the fluid level inside a VACUUBRAND catchpot from outside:

- Level sensor 699908 for catchpot 500 ml (cat. no.: 638497)
- Level sensor 699909 for condensate flask 1000 ml (cat. no.: 638877)

Do not immerse the level sensor into liquid.

Comply with all relevant **safety requirements** (regulations and guidelines) and adopt suitable **safety measures**.

Comply with all applicable **national safety regulations**.

Pay attention to the maximal permitted ambient temperature.

Use only **genuine spare parts and accessories**. Otherwise safety and performance of the equipment might be reduced. Ensure that maintenance is done only by suitable trained and supervised technicians.

As laid down in the statutory regulations (occupational, health and safety regulations and regulations for environmental protection), equipment returned to the manufacturer can be repaired only under certain conditions.

Use and operation

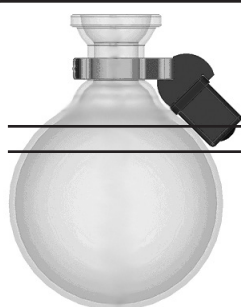
The level sensor is intended to be assembled at the bottleneck of a VACUUBRAND catchpot 500 ml (cat. no.: 638497) or at a condensate flask 1000 ml (cat. no.: 638877) recommended at the catchpot of an exhaust waste vapour condenser.



Important: Assemble the sensor as close as possible to the catchpot.

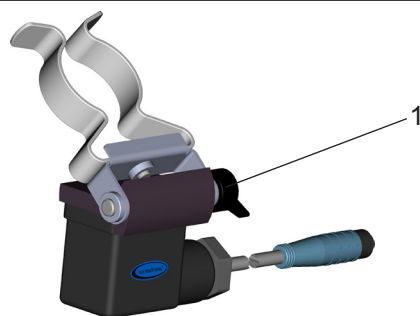
Assembling the level sensor at the catchpot 500 ml

- Assemble the level sensor to the bottleneck.
- Loosen the adjustment screw (1) at the sensor.
- Adjust the sensor as close as possible to the condensate flask.
- Screw adjustment screw.



liquid level to detect nonpolar liquids (e. g. toluene)

liquid level to detect polar liquids (e. g. water)

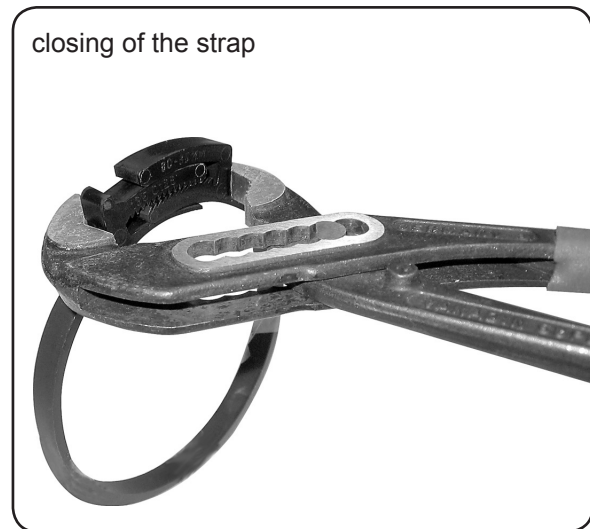
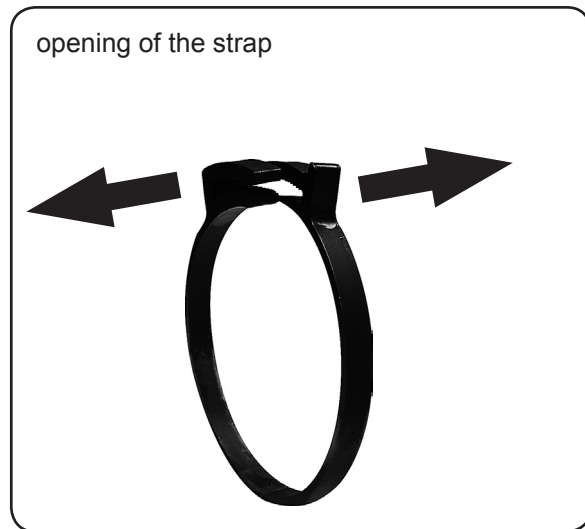


Disassembling the level sensor from the mounting plate

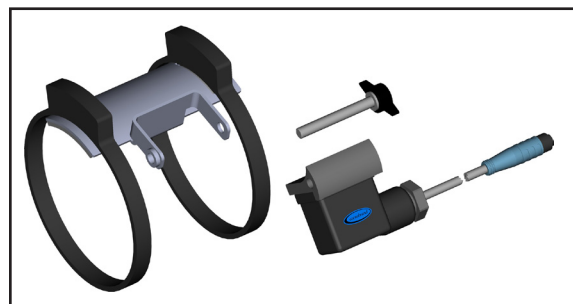
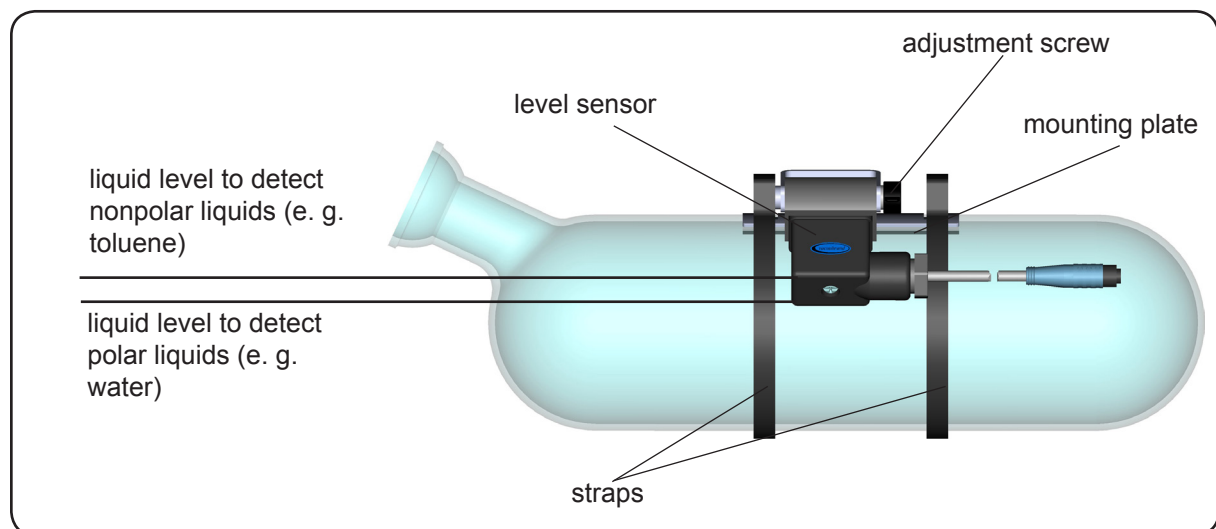
(e. g. to empty the condensate flask)

Remove clip with sensor from the bottleneck. When reassembling ensure that the sensor is positioned as close as possible to the condensate flask.

Assembling the level sensor at the condensate flask 1000 ml



- ➔ Attach both straps on the condensate flask.
- ➔ Position mounting plate under the straps. Assemble the liquid level sensor in a way that the sensor becomes activated at the desired maximum liquid level.
- ➔ Close straps.
- ➔ Loosen the adjustment screw at the sensor.
- ➔ Adjust the sensor as close as possible to the condensate flask.
- ➔ Screw adjustment screw.



Disassembling the level sensor from the mounting plate

(e. g. to empty the condensate flask)

Unscrew adjustment screw at the level sensor and remove sensor.

Reassemble the sensor in the original position.

When reassembling ensure that the sensor is positioned as close as possible to the condensate flask.

Connecting to a controller

Plug in the connection cable of the level sensor on a switched-off VACUUBRAND vacuum controller CVC 3000 or VNC 2 (use Y adapter VACUU•BUS (VACUUBRAND cat. no: 636656) if necessary).

When switching on the controller the level sensor is detected automatically. The display shows a symbol for the sensor only if the sensor alarms or in case of an error.

When coming near hands or objects the release of an unintentional message is possible.

The sensitivity of the sensor is adjusted at the factory in a way to detect also nonpolar liquids.

Disconnecting the sensor plug from a switched-on controller leads to an error message.

Individual positioning of the level sensor at the condensate flask 1000 ml

- Fill solvent into the condensate flask until the desired liquid level is achieved.
- Connect level sensor to controller and switch on controller.
- Assemble the liquid level sensor loosely at the top of the condensate flask.
- Bring the sensor close to the liquid surface until the sensor becomes activated.
- Fix level sensor by closing the straps.

Level sensor alarm

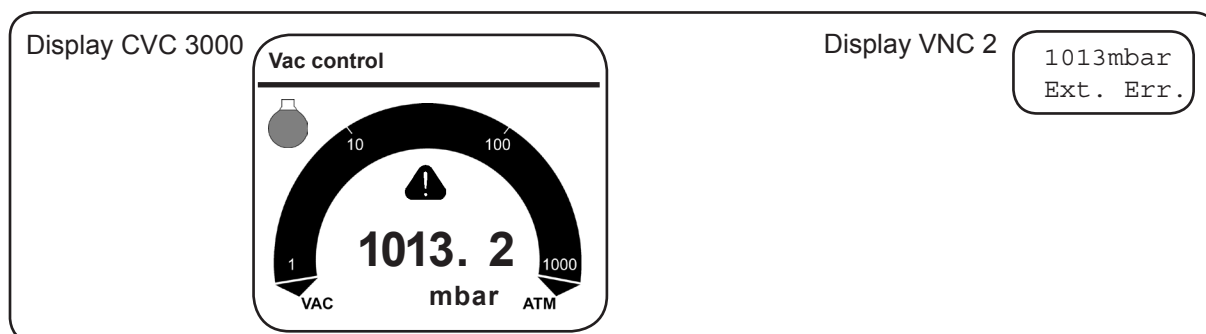
The level sensor becomes activated if the liquid level in the catchpot reaches the position of the sensor.

An acoustic signal is given only if "Sound On" is selected at the controller.

Controller CVC 3000: Display of a flashing catchpot and a warning triangle and flashing display (10 blips).

Controller VNC 2: Display "Ext. F." and flashing display (9 blips).

Note: Strong electromagnetic fields may influence the alarm level of the capacitive measurement element.



If the sensor alarms the controllers VNC 2 and CVC 3000 until software version 2.12 stop an active process at once to avoid an overflow of the catchpot. The CVC 3000 with software version 2.13 stops an active process after 30 minutes and from software version 2.14 after 5 minutes.

If a process stop may lead to a dangerous situation take appropriate safety measures.

Attention: The error message "full catchpot" has to be quit by pressing key on/off at the controller CVC 3000 (obey reset time), at the controller VNC 2 the error message disappears automatically when the fault is eliminated. A reset of the error message if the sensor has been removed is only possible by choosing the factory set configuration.

After draining the catchpot (obey regulations for disposal) the process has to be restarted by pressing key Start/Stop (CVC 3000) or pressing key "Enter" (VNC 2).

We recommend to check the function of the level sensor after first assembly and than regularly (depending on operation conditions): Fill the catchpot with liquid, the level sensor must alarm. The release time is 10 seconds.

In case of false alarm (empty catchpot) it might be necessary to adjust the sensor using the individual catchpot.

Adjustment

The level sensor is adjusted at the factory on a coated VACUUBRAND catchpot 500 ml. Readjustment of the level sensor might be necessary using an individual catchpot.

Fix the sensor on an empty (VACUUBRAND) catchpot as close as possible.

Controller CVC 3000: Choose "Defaults On".

Controller VNC 2: Press key "Esc" while switching on and choose a factory set configuration.

The readjustment is then made automatically for both controllers. Attention: When choosing a factory set configuration all individual settings are reset to factory set values.

Technical data

Type	699908 / 699909
Measuring principle	capacitive sensor with digital evaluation
Adjustment	at the factory on a coated VACUUBRAND catchpot 500 ml (cat.-no.: 638497)
Sensitivity	adjusted to liquids with a dielectric coefficient $\epsilon_r > 1.8$
Integration time until release	10 s
Reset time	2.5 s
Power supply	8V DC to 30V DC, typical 24V DC
Current draw	< 5 mA
Output signal	VACUU•BUS
Max. permitted ambient temperature at operation / storage	+10°C to +40°C / -10°C to +60°C
Max. permitted relative atmospheric moisture during operation	30 to 85%, no condensation
Degree of protection according to IEC 529	IP 65
Connection cable	approx. 2m, VACUU•BUS
Dimensions housing L x W x H (without cable, clip, mounting plate)	50 mm x 50 mm x 30 mm
Weight approx.	0.1 kg
Materials	PA / PP / TPE / PE coated spring steel

We reserve the right for technical modification without prior note!

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-Technology for vacuum systems-

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