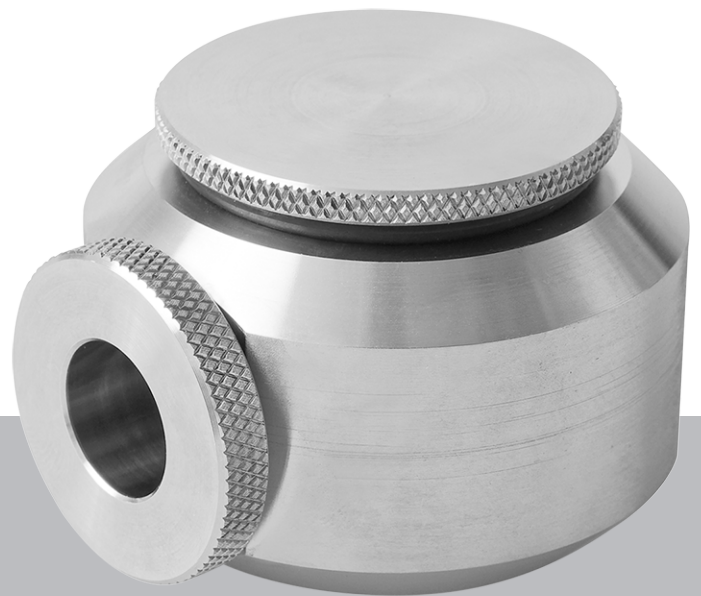


**EN**

**OPERATING MANUAL**  
CALIBRATION CHAMBER



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**Notes regarding the operating manual**

**Symbols**



**Warning**

This signal word indicates a hazard with an average risk level which, if not avoided, can result in serious injury or death.



**Caution**

This signal word indicates a hazard with a low risk level which, if not avoided, can result in minor or moderate injury.

**Note**

This signal word indicates important information (e.g. material damage), but does not indicate hazards.



**Info**

Information marked with this symbol helps you to carry out your tasks quickly and safely.



**Follow the manual**

Information marked with this symbol indicates that the operating manual must be observed.

You can download the current version of the operating manual and the EU declaration of conformity via the following link:



<https://hub.trotec.com/?id=44886>

**Safety**

**Read this manual carefully before starting or using the device. Always store the manual in the immediate vicinity of the device or its site of use.**



**Warning**

**Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and / or serious injury. **Save all warnings and instructions for future reference.**

- Do not use the device in potentially explosive rooms or areas and do not install it there.
- Do not use the device in aggressive atmosphere.
- Protect the device from permanent direct sunlight.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Do not open the device with a tool.

**Intended use**

To use the device for its intended use, only use accessories and spare parts which have been approved by Trotec.

Only use the device for calibration and adjustment of hygrometers with a sensor diameter of 10–12 mm using the separately available salt solutions. Observe and comply with the technical data.

**Foreseeable misuse**

Any unauthorised modifications, alterations or structural changes to the device are forbidden.

Any other use than the one described in the chapter "Intended use" is regarded as reasonably foreseeable misuse.

**Personnel qualifications**

People who use this device must:

- have read and understood the operating manual, especially the Safety chapter.
- have read and understood the operating manual of the device to be calibrated, especially the Safety chapter.

## Residual risks



### Warning

Risk of suffocation!

Do not leave the packaging lying around. Children may use it as a dangerous toy.



### Warning

The device is not a toy and does not belong in the hands of children.



### Warning

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way! Observe the personnel qualifications!



### Caution

Keep a sufficient distance from heat sources.

### Note

To prevent damages to the device, do not expose it to extreme temperatures, extreme humidity or moisture.

### Note

Do not use abrasive cleaners or solvents to clean the device.

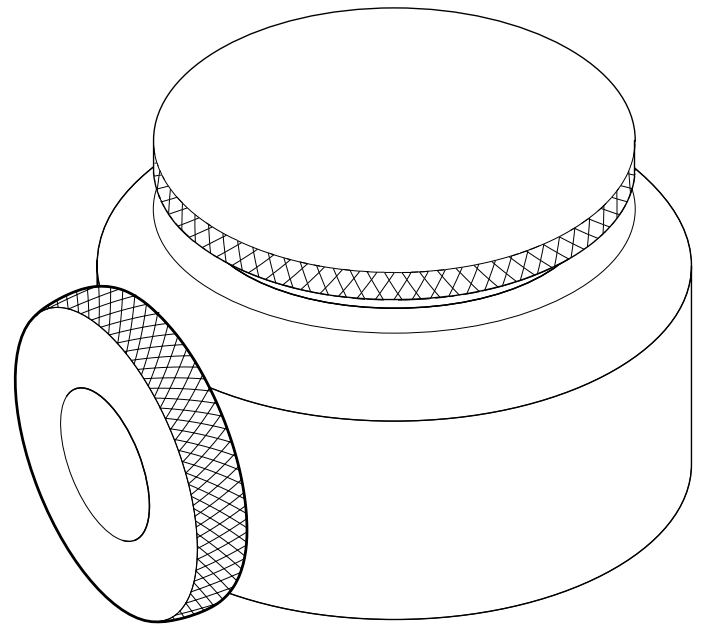
## Information about the device

### Device description

Together with the saturated salt solutions, the calibration chamber offers an easy and cost-effective way to calibrate and adjust hygrometers with a sensor diameter of 10–12 mm.

The separately available salt solutions are supplied with a traceable calibration certificate and allow for high calibration accuracy.

### Device depiction



### Technical data

Parameter	Value
Probe diameter	10–12 mm
Calibration temperature	23 °C ± 2 °C
Storage temperature	10 °C to 50 °C

### Scope of delivery

- 1 × Calibration chamber

**Transport and storage**

**Note**

If you store or transport the device improperly, the device may be damaged.  
 Note the information regarding transport and storage of the device.

**Transport**

When transporting the device, ensure dry conditions and protect the device from external influences e.g. by using a suitable bag.

**Storage**

When the device is not being used, observe the following storage conditions:

- Dry and protected from frost and heat
- Protected from dust and direct sunlight
- The storage temperature is the same as the range given in the Technical data chapter.

**Operation**

**Preparations for calibration with unsaturated salt solutions**

- The sensor of the device to be tested and the calibration chamber must be clean and dry.
- If the protective grid of the sensor is clogged or dirty, it must be replaced with a new original protective grid before calibration.
- For an accurate calibration, the sensor to be calibrated, the calibration chamber and the salt solution must have the same temperature (calibration temperature), which must be kept constant during the entire calibration process.
- To achieve precise results, the calibration temperature must be  $23\text{ °C} \pm 2\text{ °C}$ . Ideally, calibration should take place in a temperature-controlled environment without any draught or direct sunlight.
- Information on the reference humidity value provided by a saturated salt solution at different temperatures can be found on the label inside the box of each set of ampoules.
- Do not hold the calibration chamber with your hand during calibration. This would lead to temperature fluctuations and incorrect calibration results.

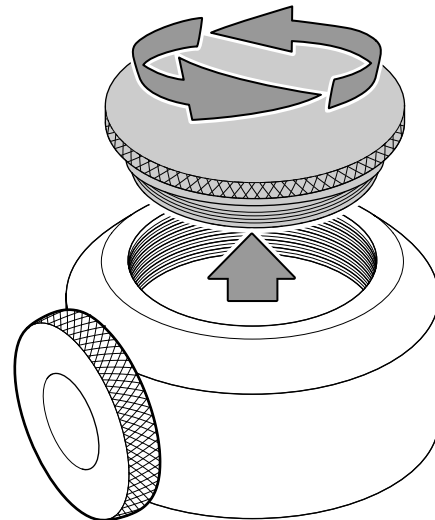
**Note**

The calibration chamber must remain in a stable, horizontal position during the entire calibration process. The salt solution must not come into contact with the measuring head (tip of the sensor) of the device to be tested.

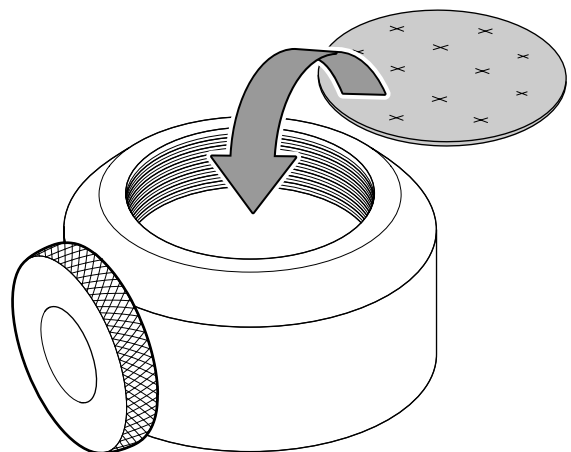
- Insert the sensor to be calibrated into the calibration chamber and check whether the set-up is stable. In some cases, it may not be sufficient to place the calibration chamber on a table. To ensure a stable set-up, it may be necessary to fix the calibration chamber and/or probe mechanically, as for example in case of heavy, long probes or wall-mounted / duct-mounted hygrometers with bulky enclosures.

**Calibration**

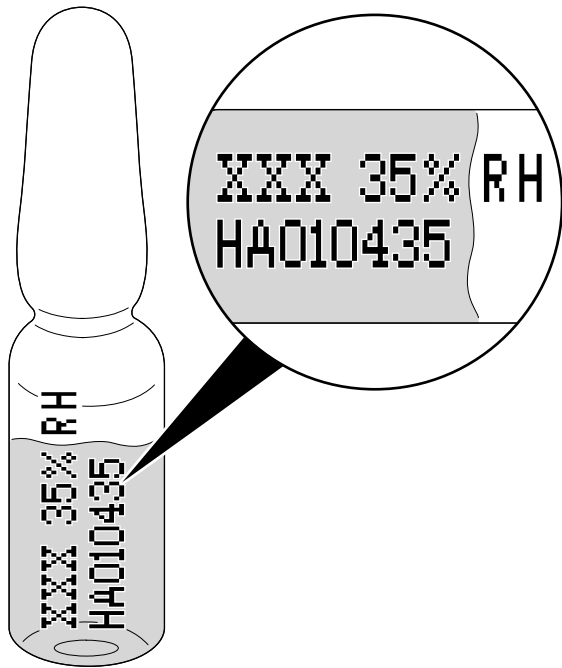
1. Place the calibration chamber horizontally or fix it in a horizontal position.
2. Remove the cover.



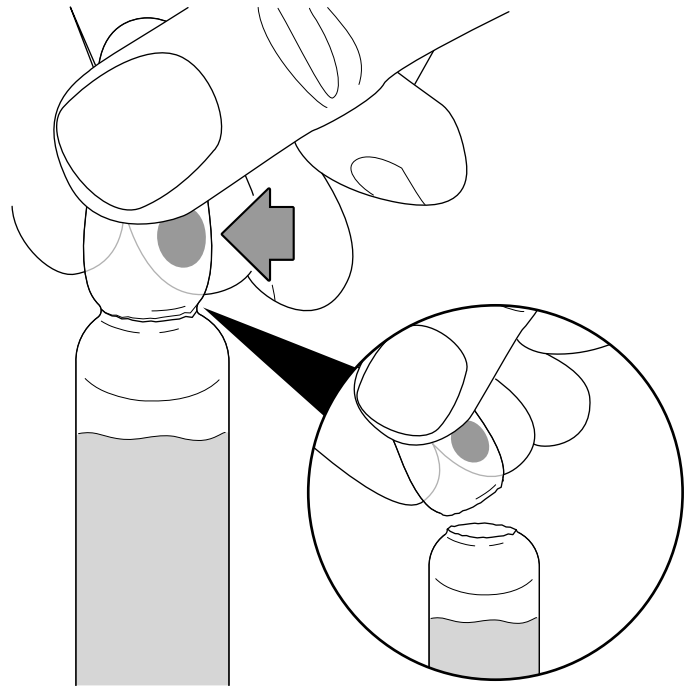
3. Place a textile pad on the bottom of the calibration chamber.



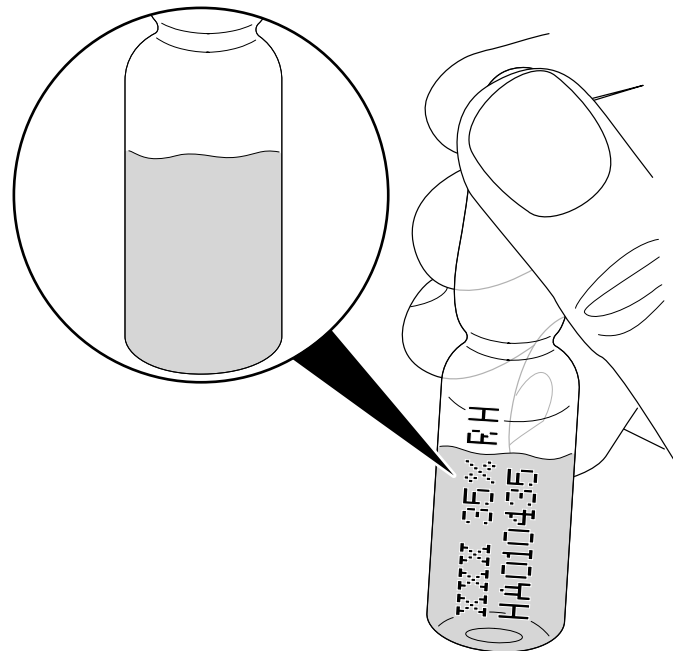
4. Choose an ampoule with the desired reference humidity, e.g. 35 % RH (HA010435).



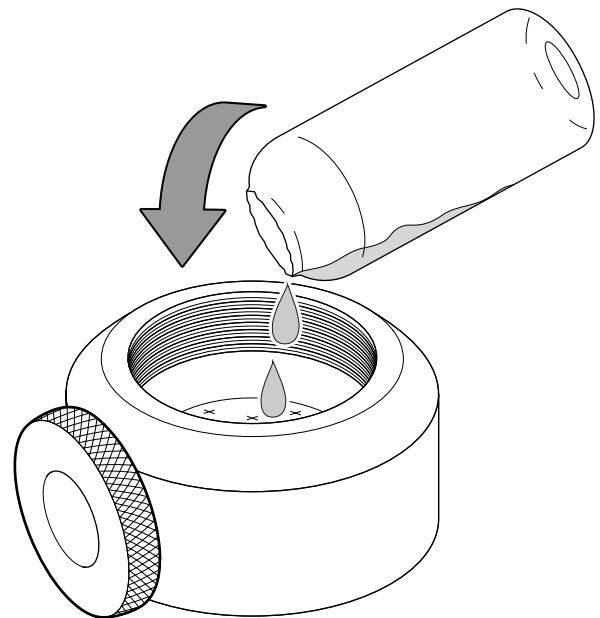
6. Press back the tip of the ampoule at the mark to break it open.



5. Carefully shake and tap the glass to bring the fluid into the lower part of the ampoule.



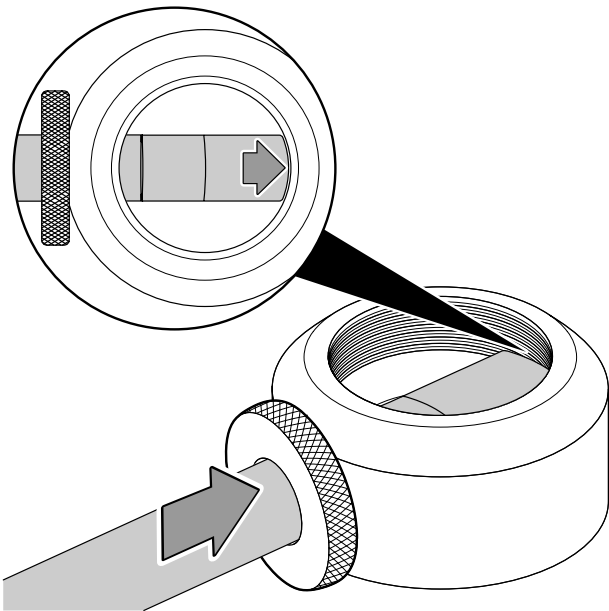
7. Empty the content of the ampoule onto the textile pad by tapping it gently.



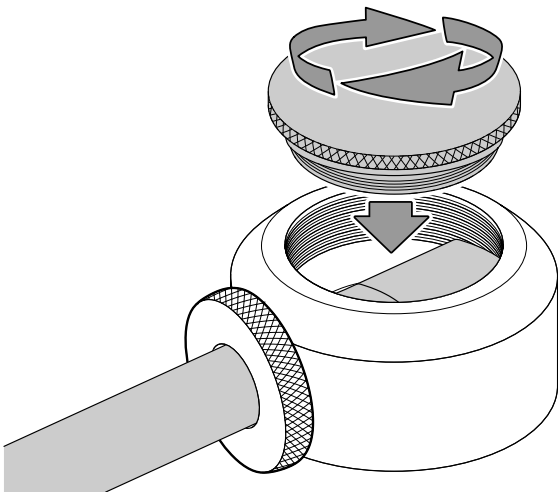
8. Insert the sensor into the calibration chamber until it reaches the opposite side. The measuring head (tip of the sensor) must not come into contact with the salt solution.

**Note**

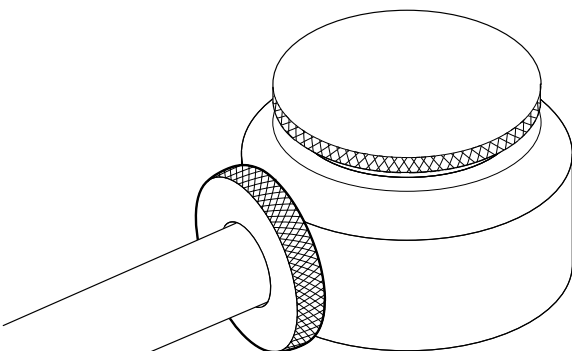
Do not remove the protective grid.



9. Put the cover on the calibration chamber and close it tightly.



⇒ The hygrometer can now be calibrated or adjusted.



We recommend the following stabilisation times for both calibration and adjustment:

- 45 min for 0–65 % RH
- 60 min for 80 % RH
- 120 min for 95 % RH

For adjustment, please observe the instructions in the operating manual of the device to be tested.

Dispose of the textile pad after every calibration point. Rinse the calibration chamber with tap water and wipe it completely dry with a soft, lint-free cloth. Do not use any other solvents, sprays, alcohol-based cleaning agents or abrasive cleaners.

When calibrating several points, we recommend proceeding in a loop, starting with the lowest humidity, e.g. 10 % → 35 % → 50 % → 80 % → 50 % → 35 % → 10 %.

**Available accessories**

Designation	Article number
Calibration ampoules 5 % RH	3.510.200.236
Calibration ampoules 10 % RH	3.510.200.237
Calibration ampoules 20 % RH	3.510.200.238
Calibration ampoules 35 % RH	3.510.200.215
Calibration ampoules 50 % RH	3.510.200.232
Calibration ampoules 65 % RH	3.510.200.239
Calibration ampoules 80 % RH	3.510.200.233
Calibration ampoules 95 % RH	3.510.200.240

**Disposal**

The device does not contain any electrical or electronic elements. At the end of its life, please dispose of this device according to the valid legal requirements.

The device is made of stainless steel. We recommend disposal via the municipal collection of recyclables.

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