



# Storage Container For Humidity Sensors

## Application Information

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## Warnings / Important information

Please read before operating

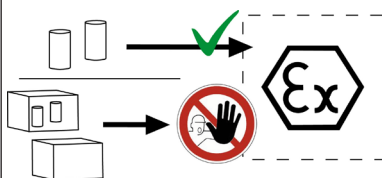
### Warnings



Danger of explosions.

In explosive areas zone 1 and zone 2, only use the following humidity pots: 0554 0635, 0554 0636 or 0554 0637.

Remove humidity pots from the packaging (box and polystyrene) outside of the explosive area. Do not take the packaging into the explosive area:



### Important information

- ! If there are not many salt crystals present the storage container must be replaced.

### Safety sheet

- ! For further information please download the safety sheet as a PDF file from our website:  
<https://www.testo-international.com/safety>.

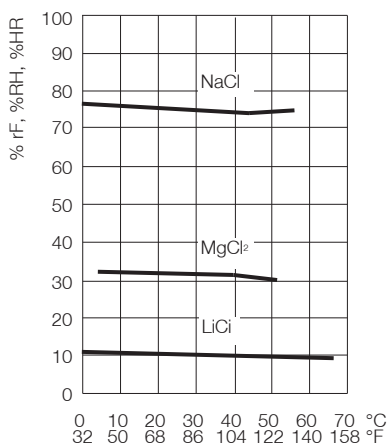
## General description

A storage container with a defined humidity of 33%RH is additionally available. It is used to

- bring the humidity probes to a defined initial state before checking and adjusting.
- ensure that the humidity sensors or probes do not dry out or become too humid during storage.

To control and calibrate humidity sensors, testo offers the control and calibration set (Order No.: 0554.0660).

Relative humidity for saturated solutions

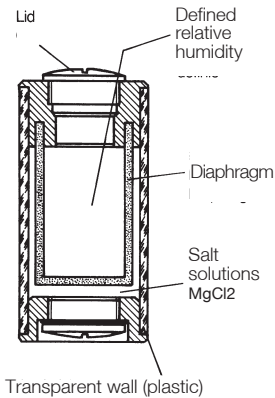


Defined relative humidities can be created using saturated salt or acid solutions. With saturated salt solutions the salt content remains constant if there is enough undissolved salt at the bottom of the container (= saturated solution). With unsaturated salt solutions this is not the case (only liquid is visible) and a defined relative humidity above such solutions cannot be guaranteed.

MgCl<sub>2</sub> solution is used for control and adjustment as their relative humidities are almost temperature-independent (see graph).

## Description of operation

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The storage containers are double-walled (see diagram). The inner wall is a diaphragm (porose wall, permeable to water vapour). The outer wall is made of transparent plastic. The saturated salt solution ( $\text{MgCl}_2$ ) is located between these two walls. The water vapour penetrates through the diaphragm into the inner part of the storage container and forms an air mixture with a specified water level. This corresponds to a defined relative humidity.

The storage container can be used in any position and without limitation if in perfect condition.

#### **Polystyrene holder**

Remove the polystyrene holder from the packaging. The storage container should remain in the polystyrene holder since the achievement of the defined initial state is temperature-dependent.

Excepted are humidity transducers and data loggers. Since these instruments are usually used on location it cannot always be avoided that the respective container is removed from the polystyrene holder.

#### **Checking the storage container**

If there is liquid in the inner part of the storage container this must be removed.

The functioning of the storage container is guaranteed if there are enough salt crystals in the solution and the solution is between min. and max. Therefore the salt solution level should be checked from time to time. To do this remove the storage container from the polystyrene.

If there are no salt crystals present the storage container should be replaced.

Shake the storage container briefly before adjustment.

#### **Screwing off the lid of the storage container**

The storage container should only be opened for a short time. If the ambient air mixes with the air mixture in the inner part of the storage container the defined humidity should be set first when the probe is screwed in or inserted.

In order to ensure that the storage container function for as long as possible it is important to close the containers immediately after use. Clean and dry the sealing surface before closing.

### Level in the storage container



#### Recognising the optimum level

The level in the storage container may deviate from the ideal level on account of ambient conditions. There is a min/max mark on the storage container which can be easily checked. The liquid must be between these marks. The salt should be covered by the liquid.

#### Note

The liquid level at storage container increases through water absorption.

The storage container is filled in the factory so as to prolong the shelf life (between min/max).

### Checking the humidity and temperature sensor

#### Optical judgement

The humidity probe should be checked as to whether it is in perfect condition:

1. Checking for dirt

Ensure that there is no conductive dirt between the sensors.

2. Contact of the sensors

Ensure that the sensors are fitted securely and that the pins guarantee contact (no break).

3. Humidity sensor

Check the condition of the sensor surface i.e. if there are any scratches, dirt, fingerprints or if the humidity sensor is broken etc.

### Cleaning the sensors

The sensor can be cleaned in distilled water.

The following should be observed when cleaning:

- The water temperature should be only max. +60 °C. Ideally the water temperature should correspond to the temperature of the sensor.
- Fill water in a clean container.
- Rotate the sensor for max. 1 minute in the water.
- Let it dry straightaway in the air.
- Wait 24 hours before using the sensor or before checking the sensor characteristics. Storage between 30 to 40%RH, preferably at 33%RH in storage container.

### Inserting the humidity probe in the storage container



#### Note :

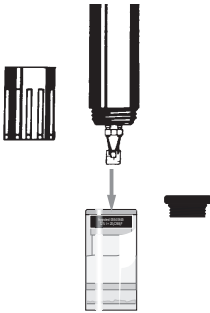
The supplied screw connection must be used for the humidity probes in the testo 610 (0563 6105) instrument, penetration probe 0636 21xx, sword probe 0636 0360, 0636 0340 and for the probes in the hygrotest 600 humidity transducer.

Use the enclosed adapter with a small diameter for the thin humidity probe 0636 2130 and 0636 2135 (ø 4 mm).

A special adapter is needed for the 3-function probe 0635 1045 and 0635 1540 (Item no. 0554 0661). You need a special adapter for the data loggers. For data logger 0572 1754, use a grey insert, and for 0563 1775, use a black insert.



### Attaching the screw connection or adapter



#### Attaching the screw connection or adapter

- 1) Screw on the storage container.
- 2) Screw the connection or adapter into the thread.
- 2a) Loosen the swivel nut on the screw connection.
- 3) Carefully insert the humidity probe - **only as far as the mark:**
  - 3-function probe 0635 1045, 0635 1540 and 0632 1535 without the protective cap,
  - humidity probe  $\varnothing$  12 mm with plastic cap,
  - humidity probe  $\varnothing$  4 mm with metal cap
  - penetration probe 0636 2160 and 0636 2140 without sintered cap,
  - sword probe 0636 0360 and 0636 0340 with special sealing insert\*.
- 3a) Pull up the swivel nut by hand until the connection is tightly sealed.

\* Please exchange for standard sealing insert

#### Note :

No additional accessories are required for humidity probes 0636 976x and 0632 1535, probes for humidity transducer hygrottest 602, 0555 60xx and probes for panel meters

Once the sintered cap or protection cap is removed, **carefully** screw the sensors directly into the control container until the stop.

**Contents of the storage container and deviation:**

MgCl<sub>2</sub> solution (saturated) =  
33%RH ± 2%RH

**Rated temperature:** + 25 °C

**Permissible operating temperature:**

+20 to +30 °C

**Permissible storage and transport temperature:**

0 to + 40 °C

**Service life** (average values):

Container constantly open:

approx. 1 month

Container only opened for adjustment  
purposes (otherwise sealed air-tight):

at least 2 years

**Dimensions of polystyrene holder:**

(BxWxH) 147 x 85 x 83mm

**Warranty:**

6 Months

Description	Order no.
Control and adjustment set.....	0554 0660
Storage container 11.3%RH (LiCl).....	0554 0635
Storage container 75.3%RH (NaCl).....	0554 0637
Humidity adjustment set for testo 615/625 .....	0554 0638
Storage container .....	0554 0636
Adapter, 3 function probe 0635 1540/1045.....	0554 0661
Adapter for sword probe 0636 0264 .....	0554 0664
Adapter for penetration probe 0636 2164.....	0554 0649
Screw connection.....	0241 9117
Seal for sword probe .....	0135 1013
DAkS calibration certificate for humidity .....	0520 0206
Standard calibration certificate for humidity.....	0520 0006
Special calibration certificate for humidity.....	0520 0106

