



HMK15 Humidity Calibrator



Features

- Easy and reliable calibration of humidity probes and transmitters
- Based on saturated salt solutions
- Fast temperature equilibration
- No external power required
- Suitable for laboratory use and on-site checks
- Chambers and transit covers make HMK15 easy to transport
- Pre-measured certified salts available
- Vaisala Service Centers offer accredited calibrations for humidity, temperature, and barometric pressure

No measuring instrument stays accurate by itself. It is essential that the functioning of an instrument is periodically checked against a reference. Vaisala has developed Vaisala Humidity Calibrator HMK15 to make calibration and spot-checking of humidity probes and transmitters easy and reliable.

Benefits

- Easy to use
- Reliable calibration
- Certified and pre-measured salts available on order form of HMK15

Reliable calibration method

The operating principle of HMK15 is based on the fact that a saturated salt solution generates a certain relative humidity in the air above it. The reading of the humidity probe or transmitter can then be adjusted accordingly. Many calibration laboratories use this generally accepted and reliable method to

calibrate humidity instruments. Usually two or three different salt solutions are used. Salts are chosen according to the application. Available salts and their reference humidities:

- Lithium chloride LiCl (11 %RH)
- Magnesium chloride $MgCl_2$ (33 %RH)
- Sodium chloride NaCl (75 %RH)
- Potassium chloride KCl (85 %RH)
- Potassium sulphate K_2SO_4 (97 %RH)

Certified salts

HMK15 can be ordered with certified and pre-measured salts. A sample calibration is made from each salt batch in Vaisala's Measurement Standards Laboratory (MSL).

FINAS accredited measurement standards laboratory

Vaisala's Measurement Standards Laboratory is a FINAS accredited calibration laboratory. FINAS is a member of the EA (the European Cooperation for Accreditation).



Technical data

Operating environment

Operating temperature range +0 ... +50 °C (+32 ... +122 °F)

Mechanical specifications

Dimensions (H × W × L) 90 × 230 × 200 mm
(3.54 × 9.06 × 7.87 in)

Weight 1 kg (2.20 lb) without salt solutions

Material (metal parts) Anodized aluminum

Parts

Standard contents of HMK15 calibrator

Base plate

Two salt chambers with basic lids and transit covers

Thermometer

Measurement cup and mixing spoon

Calibration adapter (Ø13.5 mm) for Ø12 mm probes with long sensor legs

Calibration adapter (Ø13.5 mm) for Ø12 mm probes with short sensor legs

Optional items

See table *Spare parts and accessories*

Spare parts and accessories

Rubber plug set 19746HM

O-ring set 218096

Ion exchanged water 19767HM

Thermometer with red capillary liquid 25130HM

Transit bag HM27032

Salt chambers and lids

HMK15 basic lid 271549

HMK15 universal lid 271550

HMK15 custom lid for 4 × HMP110 with filter on 253277SP

HMK15 custom lid for DMT132 and HMP60/HMP110 with filter on 230914

HMK15 salt chamber with basic lid and transit cover DRW255417SP

HMK15 salt chamber with universal lid and transit cover 19766HM

Calibration adapters

Calibration adapter for HMP9 probe ASM213801

Calibration adapter (Ø13.5 mm) for Ø12 mm probes with long sensor legs 211302SP

Calibration adapter (Ø13.5 mm) for Ø12 mm probes with short sensor legs 218377SP

Calibration adapter for HMP42 probe HM37067

Certified and ready-dosed salts ¹⁾

Ready-dosed LiCl salt package 19729HM
(LiCl salt 11 %RH, total uncertainty ±1.3 %RH) ²⁾

Ready-dosed MgCl₂ salt package 19730HM
(MgCl₂ salt 33 %RH, total uncertainty ±1.2 %RH) ²⁾

Ready-dosed NaCl salt package 19731HM
(NaCl salt 75 %RH, total uncertainty ±1.5 %RH) ²⁾

Ready-dosed KCl salt package 251377HM
(KCl salt 85 %RH, total uncertainty ±2.0 %RH) ²⁾

Ready-dosed K₂SO₄ salt package 19732HM
(K₂SO₄ salt 97 %RH, total uncertainty ±2.0 %RH) ²⁾

¹⁾ Calibration certificate included with each salt package.

²⁾ Uncertainties given at +20 °C (+68 °F).