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).

FINAS
Finnish Accreditation Service
K008 (EN ISO/IEC 17025)

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 (LiCl salt 11 %RH, total uncertainty ±1.3 %RH) [2]	19729HM
Ready-dosed $MgCl_2$ salt package ($MgCl_2$ salt 33 %RH, total uncertainty ±1.2 %RH) [2]	19730HM
Ready-dosed NaCl salt package (NaCl salt 75 %RH, total uncertainty ±1.5 %RH) [2]	19731HM
Ready-dosed KCl salt package (KCl salt 85 %RH, total uncertainty ±2.0 %RH) [2]	251377HM
Ready-dosed K_2SO_4 salt package (K_2SO_4 salt 97 %RH, total uncertainty ±2.0 %RH) [2]	19732HM

1) Calibration certificate included with each salt package.
2) Uncertainties given at +20 °C (+68 °F).

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