

Control Kit

For the Calibration of Relative Humidity Sensors



Technical Specifications

The control kit consists of:

- 5 phials of the same humidity value
- 7 test strips
- 1 control chamber with version HKCxxC, without control chamber with version HKCxxS
- Box dimensions: 100 x 140 x 40mm (3.93 x 5.51 x 1.57")
- Weight: 0.15kg (0.33lb)

Accuracy

An accuracy of $\pm 3\%$ RH can be achieved if the test procedure is adhered to.

Operating Conditions

- Reference temperature: $+23^{\circ}\text{C} \pm 1^{\circ}\text{C}$ ($+73^{\circ}\text{F} \pm 1.8^{\circ}\text{F}$)
- Environmental humidity stabilized $\pm 10\%$
- Set up conditions:
Temperature between 0 and $+50^{\circ}\text{C}$ ($+32$ and $+122^{\circ}\text{F}$) with correction to be applied according to the instruction manual.

Humidity between 40 and 60% RH

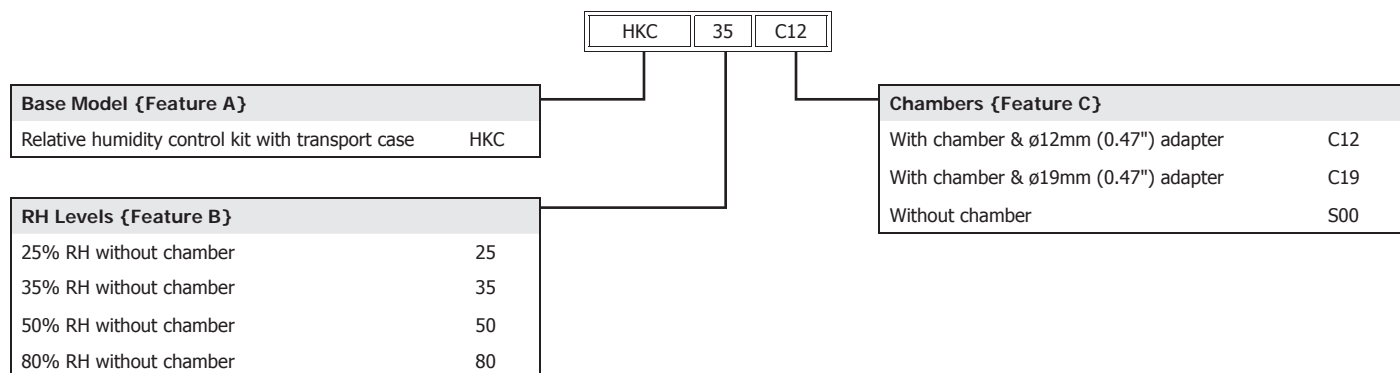
- The instrumentation should be checked and the control kit must be kept in the same environment at least 10 hours before the procedure is started
- Shelf life of the solutions:
In phial: unlimited
In the control chamber: 2 hours

Ordering Codes

To construct the order code, select the relevant feature from the tables below, starting with the base model, which is {Feature A} and then add on options to create a string: {Feature A}+{Feature B}+{Feature C}

Order example: HKC-25-C12

25% RH control kit with chamber & $\varnothing 12\text{mm}$ (0.47") adapter, including transport case



Effects of pressure, temperature and concentration on humidity parameters

In nature, water exists in three different states: gaseous (vapor), liquid (rain, fog) and solid (snow, ice, hail). Water in the gaseous state is invisible. The maximum quantity of water vapor that the air can contain depends on temperature and pressure. The table below shows how the parameter change influences the measured values.

Relative humidity is the ratio of the actual quantity of water vapor that an air sample contains to the maximum quantity of water vapor that such a sample can contain at the sample pressure and temperature.

	Temperature Increase	Temperature Decrease	Pressure Increase	Pressure Decrease	Vapor Increase	Vapor Decrease
% RH	↓	↑	↑	↓	↑	↓
Dew Point	↔	↔	↑	↓	↑	↓
Absolute Humidity	↔	↔	↑	↓	↑	↓
Mix Ratio	↔	↔	↔	↔	↑	↓
Concentration of Water Vapor	↔	↔	↔	↔	↑	↓