A new family of handheld instruments

**MI70 Measurement Indicator and Handheld Meters for Dewpoint and Carbon Dioxide**

The Vaisala MI70 Measurement Indicator is the latest product in a new family of Vaisala handheld instruments. The MI70 Indicator is a general indicator containing multiple measurement probe options. The indicator is first available for dewpoint and carbon dioxide measurements in combination with the DM70 and GM70 Handheld Meters.

The MI70 Measurement Indicator is the newest product in the portable instrument market for spot-check measurements of dewpoint or carbon dioxide. The flexible MI70 product concept enables the measurement of several different parameters simply by changing the probe. After a probe change, the indicator automatically recognizes the connected probe and displays the parameters the probe is able to measure. The MI70 also allows two probes to be connected simultaneously to the indicator. Due to its durable and rugged structure and compact size, the MI70 can be used in a wide variety of applications.

The MI70 Measurement Indicator has a backlit graphical display that shows the measured data in either numerical or graphical format. Measurement data on up to three parameters can be displayed simultaneously. The menu-based user interface is easy to use. The user can configure the menus and also select the menu language.

The MI70 Indicator has an extensive memory for on-site data logging. To simplify operation, a sophisticated Windows® software program is available to transfer logged data or real-time measurement data from the indicator to a PC, where it can be further processed and copied to other Windows® programs in graphical or numerical format.

The Vaisala DM70 Dewpoint Meter allows spot-check measurements of low dewpoints to be made quickly and easily. The meter utilizes the patented Vaisala DRYCAP® technology, which has been successfully used by Vaisala Dewpoint Transmitters to make fixed measurements. Now the same measuring excellence is available for low dewpoints through the DM70 Handheld Dewpoint Meter.

The advantages of DRYCAP® polymer technology, when used for low dewpoint measurements, are its very good long-term stability, fast response and durability against condensation - all very important features in portable dewpoint meters.

Long-term stability means that the accuracy of the readings lasts, which in turn translates into lower lifetime cost, since the calibration interval can be extended.

Durability against dew and condensation is another important feature of portable dewpoint meters, as dew can form in the system through dryer malfunctions, for example. As soon as the polymer sensor dries up, the user can feel confident that the readings of the meter are correct and lie within the specifications.

A fast response time means that measurements take less time, which is important in spot-check measurements. Naturally, if the dewpoint in the measured space is very low, say –50 °C, the drying down of the entire probe (or in some cases the entire measured system) can take quite a long time, i.e. it will take a while.
before the dewpoint reading is stabilized. However, the user can easily check the dewpoint curve in the graphical display of the DM70 to see whether the reading has stabilized.

Compressed air lines in which the dewpoint should be maintained at a specified level are one application in which the DM70 Handheld Meter is very useful. To facilitate the measurement from the pressurized pipelines, the DM70 Meter can be equipped with an optional installation accessory which can be integrated as a part of the measurement probe. This accessory can be plugged into the pipeline in seconds, which makes the measurement procedure easy and fast.

Although the DM70 Handheld Meter is mainly used as a spot-check meter, it can also be connected to Vaisala’s fixed dewpoint transmitters for use as a reference meter. It can also be used without a dewpoint probe as a temporary display for the transmitters. This connection can be made without disturbing the transmitter’s operation as a control device, e.g. in a drying process, and thus enables the process to continue without interruption.

**GM70 Handheld Carbon Dioxide Meter**

- Wide selection of measuring ranges
- Compact size and light weight
- Short warm-up time
- Data logging and transferring capabilities

The Vaisala GM70 Handheld Carbon Dioxide Meter combines the numerous easy-to-use features of the MI70 and enhanced CARBOCAP® technology. Thanks to the constant reference measurement of the CARBOCAP® sensor, the GM70 Meter provides stability with respect to both time and temperature. Because of the power-saving data-logging capability of the MI70, the meter can be used for several days without external power.

The GM70 utilizes the same fully interchangeable CARBOCAP® probes as used in Vaisala’s GMM220 and GMT220 series transmitters. This gives the user a wide selection of measuring ranges from 0 - 2000 ppm CO₂ to 0 - 20 % CO₂. The range can be easily modified by changing the probe; there is no need for any adjustment or calibration.

The combining of these features into a compact package makes the GM70 an ideal tool for several carbon dioxide spot-check applications, including greenhouses, fruit stores, safety alarms and demand-controlled ventilation. The meter is also ideal for the on-site checking of carbon dioxide transmitters. The GM70 offers one and two-point calibration modes for adjusting the interchangeable CARBOCAP® probes. The interchangeability feature gives the possibility to use a newly calibrated probe whenever needed, without having to send the whole equipment for calibration. This concept, together with the long-time stability achieved by CARBOCAP® technology, minimizes downtime and eliminates the need for expensive calibration equipment.