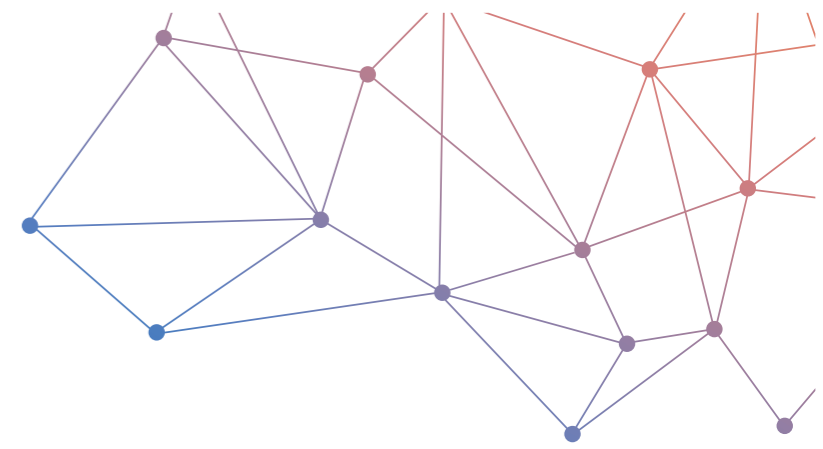
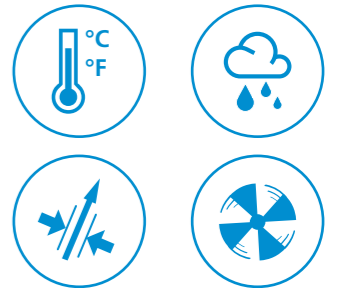


Manufacturer of innovative solutions for the measurement and control of indoor air quality.



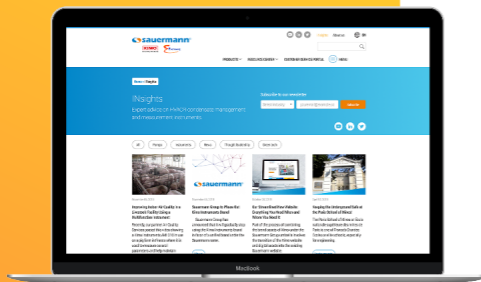
Supplied with CALIBRATION certificate



INsights

Expert advice on e-HVACR condensate management and measurement instruments

sauermanngroup.com/insights



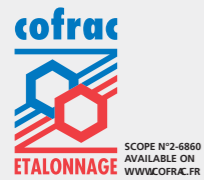
THE EASY-TO-USE e-HVACR MEASURING INSTRUMENTS RANGE

It's all about simplicity



Non-contractual document – We reserve the right to modify the characteristics of our products without prior notice.

67875 - 12/19



Accredited temperature laboratory as per ISO 17025 standard

KIMO can perform COFRAC calibrations on any type of thermometer (measuring chain, Pt100, thermocouple, etc.) within a range from -70 to +200°C in thermostatic chambers and in baths.



Accredited hygrometry laboratory as per ISO 17025 standard

KIMO can perform COFRAC calibrations on any type of hygrometer within a range from 10 to 95 %RH, for a dry temperature from +10 to +50°C.



After sales service, support and calibration:



Enviroterm Sdn. Bhd.

Lot 5035, Jalan 18/62, Taman Sri Serdang, 43300, Seri Kembangan, Selangor, Malaysia.
Tel: 03 8210 8338 Fax: 03 8943 6012
Email: sales@enviroterm.com



Authorised Dealer:

www.sauermanngroup.com



THE EASY-TO-USE e-HVACR MEASURING INSTRUMENTS RANGE

It's all about simplicity



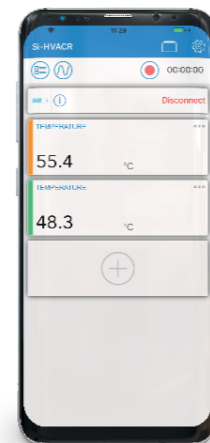
For over 45 years, Sauermann has designed, manufactured and sold products and services dedicated to industrial and e-HVACR markets.

The Group specifically focuses on the detection, measurement and control of Indoor Air Quality for e-HVACR professionals.

We offer a full range of easy-to-use instruments comprised of: Dual Input Thermometer (Si-TT3), Infrared Thermometer (Si-TI3), Thermo-Hygrometer (Si-HH3), Vane Thermo-anemometer (Si-VV3), Hotwire Thermo-anemometer (Si-VH3) & Digital Differential Pressure Manometer (Si-PM3).

These comprehensive instruments measure a variety of parameters including: Temperature, Relative Humidity, Pressure, Air velocity and Airflow.

Our user-friendly Si-HVACR Measurement MobileApp completes the range by displaying measurement data right on your smartphone or tablet via Bluetooth.®



Sauermann's range of instruments measures a variety of parameters, and can be applied to a diverse set of e-HVACR applications: boiler rooms, domestic hot water, ventilation installations, air handling units, cold rooms, hospitals, museums, universities, server rooms, green houses, warehouses, and general indoor air quality measurements.



Accessories

Description	Part number
<p>Measurement grid kit for DBM 620 instrument</p> <p>Designed for air velocity measurements on any types of large ceiling vent or diffuser. The grid is similar to the DBM 620 grid. It calculates the average air velocity from 24 points to guarantee a reliable measurement. The grid is attached to a telescopic (maximum length is 2.05 m) and articulated pole (from 0 to 90°). Struts of 3 different lengths allow a correct positioning of the grid on the ceiling surface. A custom carrying case allows easy carriage of the grid and its accessories (telescopic pole, articulation, 2 x 0.80 m of silicone tube, positioning struts and electronic housing).</p> <ul style="list-style-type: none"> • Measuring range: from 0.2 to 10 m/s • Accuracy: ±3% of the measured value ±0.04 m/s • Resolution: 0.01 m/s up to 3 m/s and 0.1 m/s beyond • Struts length: 5 cm / 15 cm / 25 cm 	26455
<p>Removable unit ONLY</p> <p>Range from 0 to 99,999 m³/h / -2500 Pa to 2500 Pa, micromanometer function: measurement of air velocity and airflow with different differential pressure instruments (Pitot tube, Debimo), compensation of the measurement according to thermocouple temperature. Supplied with 2 x 0.80 m of silicone tube and calibration certificate</p>	26449
<p>Tripod</p> <p>Telescopic tripod with casters. Adjustable height from 1.20 to 4 m. Supplied with soft case. For DBM 620 and measurement grid.</p>	26456
<p>DBM 620 replacement carry case</p>	26465
<p>2 x 2 ft (610 x 610 mm) hood ☐</p>	26450
<p>2.36 x 2.36 ft (720 x 720 mm) hood ☐</p>	26451
<p>2.36 x 4.33 ft (720 x 1320 mm) hood ☐</p>	26452
<p>1.38 x 4.99 ft (420 x 1520 mm) hood ☐</p>	26453
<p>3.35 x 3.35 ft (1020 x 1020 mm) hood ☐</p>	26454

☐ Each hood is supplied in its transport bag.

Maintenance

We carry out calibration, adjustment and maintenance of your devices to guarantee a consistent and accurate level of quality of your measurements. As part of Quality Assurance Standards, we recommend you to carry a yearly checking.

Warranty

Devices have 1-year guarantee against any manufacturing defect (return to our After-Sales Service required for appraisal).

Operating principles

The DBM 620 housing communicates with the smartphone or tablet via wireless connection. This allows measured values reading and viewing of reports directly on your mobile device screen, via the dedicated SmartKap mobile application.



Product Overview

Simplicity and ease-of-use: our range of e-HVACR measuring instruments





Backlit LCD screen



Low consumption device



Magnetic backing for easy fixing



Carrying bag



Calculated values on mobile App



Telescopic rod with double graduation



Air velocity and airflow with Pitot tube (optional)



Large vane probe with 2-meter cable



Adjustable emissivity

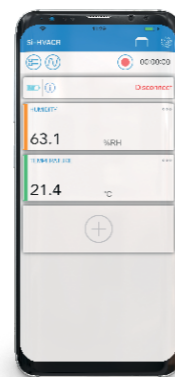


Si-HVACR Measurement MobileApp

The Si-HVACR Measurement MobileApp allows to view and record measurements in real-time.

Main features:

- Easily view different parameters
- Browse saved measurements history and data graphs (average, min & max values, etc.)
- Create reports (PDF, CSV, or XML) and add up to four (4) photos



Functions of the micromanometer housing

The electronic housing can be used alone to perform the following functions:

In air velocity and airflow:

- Choose between the Pitot tube, Debimo blades, coefficient or measurement grid
- Section selection
- Unit selection
- Point/point, automatic or automatic point/point average
- Manual compensation in temperature, automatic or manual compensation in atmospheric pressure
- Hold, minimum and maximum values
- Standardized airflow, K factor

In pressure:

- Manual or automatic autozero
- Unit selection
- Pressure integration (from 0 to 9)
- Point/point, automatic or automatic point/point average
- Hold, minimum and maximum values

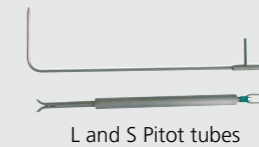
Measurement grid

The measurement grid is attached to the base and measures **24 different points** throughout the surface of the flow area. Measurement is performed using a **differential pressure sensor** calibrated in atmospheric pressure and temperature, and compensated in temperature.

Autonomous micromanometer

Once removed, the measuring unit can be used as a micromanometer:

- Measure airflow in a duct using the Pitot tube attachment
- Silicone tubing allows technician to check for filter issues



L and S Pitot tubes



Silicone tube



Hood with flow straightener



Use of the air flow meter



Use with the measurement grid

Use with the telescopic tripod



Device positioning on the air vent

SmartKap mobile application will help you correctly position the hood on the air vent:

- Select the correct air vent type, OR
- Create a customized air vent if required
- Follow the instructions for a perfect fit!

Find more information in the user manual.

General features

Display	On smartphone or tablet ⁽¹⁾
Integrated support for smartphone or tablet	Adjustable integrated support Smartphone or tablet max. Width: 6.2"
Connectors/Pneumatic	ABS connectors, Ø 7 x 4 mm
Maximum operating pressure	500 mbar
Housing	Shock-proof made of ABS
Protection	IP40
Keypad	1 key on the housing
Power supply	4 alkaline batteries LR6 AA 1.5 V ⁽²⁾
Battery life	Up to 30 hours
Wireless connection	Class 1, BLE 4.2. Range: 2.4 GHz Range up to 30 m (98 ft) - Depending on smartphone and tablet wireless connection radio strength Minimum required versions: Android 7.1, iOS 12.4, BLE 4.0
Device dimensions	Folded: 475 x 455 x 255 mm (1.56 x 1.49 x 0.84 ft) Mounted: 610 x 610 x 980 mm (2 x 2 x 3.22 ft)
Environmental conditions of use	Air, non corrosive and combustible gases Temperature: from -5 to +50 °C (23 to 122 °F), in dry air and non-condensing condition Hygrometry: in non-condensing conditions (< 80% RH) Maximum altitude: 2000 m (6561')
Storage temperature	From -20 to +60 °C (-4 to 140 °F)
Auto-shut-off	Adjustable from 0 to 60 minutes
Weight	Base/Measuring unit/Hood/Frame: 2.9 kg (6.4 lbs) Standard DBM 620 content kit: 6.4 kg (14.1 lbs)
Languages	German, Spanish, Italian, Dutch, Portuguese, Hungarian, Polish, Romanian, Russian, Slovak, Finnish, Danish, Norwegian, Swedish, Chinese, Korean, Japanese
European directives	2011/65/EU RoHS II; 2012/19/EU WEEE; 2014/53/EU RED

⁽¹⁾ Device not provided

⁽²⁾ We recommend the use of type Nx PCA9002 batteries

The **DBM 620** folding frame limits space restrictions and allows for easier mounting.



Carbon fiber rods provide stability while adding minimal weight.

Foldable frame patent granted in France (patent number: 1859064)

Kit content

Standard DBM 620:

- 1 Base including the measurement grid and a temperature and hygrometry probe
- 1 Removable measuring unit with wireless connection and 4 alkaline batteries LR6 AA 1.5 V
- 1 Hood of 610 x 610 mm (2 x 2 ft) with flow straightener and foldable frame
- 1 Sheath including the 4 frame fixing rods
- 2 x 0.80 m of silicone tube
- Replacement hinges for frames
- 1 Transport case
- 1 Calibration certificate

DBM 620 C:

- 1 Standard DBM 620 kit
- 4 Additional hoods:
 - 1 Hood of 720 x 720 mm (2.36 x 2.36 ft) with foldable frame and transport case
 - 1 Hood of 720 x 1320 mm (2.36 x 4.33 ft) with foldable frame and transport case
 - 1 Hood of 420 x 1520 mm (1.38 x 4.99 ft) with foldable frame and transport case
 - 1 Hood of 1020 x 1020 mm (3.35 x 3.35 ft) with foldable frame and transport case



Available hoods

DBM 620 air flow meter comes in standard with a 610 x 610 mm (2 x 2 ft) hood.

4 optional hoods are available:

- 1020 x 1020 mm (3.35 x 3.35 ft)
- 720 x 720 mm (2.36 x 2.36 ft)
- 720 x 1320 mm (2.36 x 4.33 ft)
- 420 x 1520 mm (1.38 x 4.99 ft)

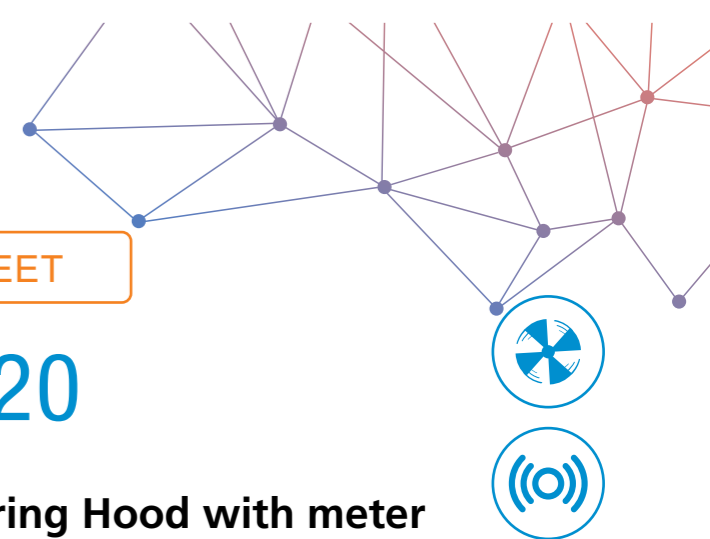
Hoods are airtight and have a transparent viewing window that allows the user to **see through the vent** to ensure the hood is in proper position.

Technical information

Measuring e-HVACR parameters has never been easier



	Si-PM3	Si-HH3	Si-TT3	Si-TI3	Si-VV3	Si-VH3
Differential Pressure	✓	-	-	-	-	-
Air velocity and airflow with Pitot tube (optional)	✓	-	-	-	-	-
Relative humidity	-	✓	-	-	-	-
Dew point	-	✓	-	-	-	-
Absolute humidity	-	✓	-	-	-	-
Enthalpy	-	✓	-	-	-	-
Mixing ratio	-	✓	-	-	-	-
Wet bulb temperature	-	✓	-	-	-	-
NTC temperature	-	✓	-	-	✓	✓
K thermocouple temperature	-	-	✓	-	-	-
Infrared temperature	-	-	-	✓	-	-
Ambient temperature	-	✓	-	✓	-	-
Air velocity	-	-	-	-	✓	✓
Airflow	-	-	-	-	✓	✓
Carrying bag	✓	✓	✓	✓	✓	✓
Magnets at backside	✓	✓	✓	-	✓	✓
Auto shut-off	10 minutes	10 minutes	10 minutes	15 seconds	10 minutes	10 minutes
Battery life	170 hours	250 hours	400 hours	14 hours	120 hours	20 hours
Bluetooth®4.0	✓	✓	✓	✓	✓	✓
Mobile application	✓	✓	✓	✓	✓	✓
Warranty	1-year	1-year	1-year	1-year	1-year	1-year



DATA SHEET

DBM 620

Flow Measuring Hood with meter



Supplied with CALIBRATION certificate

- Foldable frames & hoods**
- Switch between hoods quickly and easily**
- Lightweight and compact Easy to transport (with transport case)**
- Measuring range from 35 to 4250 m³/h (10 to 1181 L/s)**
- SmartKap mobile App Data reading & reporting**
- Hoods flow straightener Compatible with all air vent types**

Functions

- Simultaneous display of up to 4 parameters. Choose between:
 - airflow
 - relative humidity
 - atmospheric pressure
 - temperature
 - differential pressure
 - air velocity
- Corrections based on diffusor type for accurate measurements (via the app)
- ACR function (Air Change Rate)
- Automatic airflow direction (extraction or air blast)
- Automatic averaging or point by point averaging
- HOLD function
- Removable measuring unit (micromanometer function)
- Long range & Low energy wireless connection

SmartKap mobile App

GET IT ON **Google Play** **Download on the App Store**

Technical specifications

Parameters	Accuracy ⁽¹⁾	Measuring range	Resolution
Airflow	±3% of the measurement ±10 m³/h ±3% of the measurement ±3 L/s ±3% of the measurement ±6 CFM	From 35 to 4250 m³/h From 10 to 1181 L/s From 21 to 2501 CFM	1 m³/h 1 L/s 1 CFM
Air velocity	±3% of the measurement ±0.04 m/s ±3% of the measurement ±8 ft/min	From 0.2 to 10 m/s From 39 to 1969 ft/min	0.01 m/s up to 3 m/s & 0.1 m/s above 1 ft/min
Temperature	±0.2 °C ±0.36 °F	From -20 to 70 °C -4 to 158 °F	0.01 °C 0.01 °F
Relative humidity	Repeatability, linearity: ±1.5% RH (from 10 to 80% RH and from 10 to 50 °C) Hysteresis: 0.8% RH at 25 °C Time drift: <0.5% RH per year in normal conditions of use (from 5 to 50°C and from 20 to 80% RH, apart from indoor pollutants)	From 0 to 100% RH	0.01% RH
Atmospheric pressure	±3 mbar	From 700 to 1100 mbar	1 mbar
Pressure	±0.2% of reading ±2 P ±0.2% of reading ±0.008 inWg	From -2500 to +2500 Pa From -10 to 10 inWg	From 0.001 to 0.1 Pa .001 inWg

Measuring ranges

Measuring e-HVACR parameters has never been easier



	Si-PM3	Si-HH3	Si-TT3	Si-TI3	Si-VV3	Si-VH3
Differential Pressure	-150 to +150 hPa -60 to 60 inH ₂ O	-	-	-	-	-
Air velocity with Pitot tube (optional)	2 to 80 m/s 394 to 15748 fpm	-	-	-	-	-
Airflow with Pitot tube (optional)	0 to 9999 m³/h	-	-	-	-	-
Relative humidity	-	0 to 100%RH	-	-	-	-
Dew point	-	-40 to +60°C _{Td} -40 to 140°F _{Td}	-	-	-	-
Absolute humidity	-	0 to 600 g/m³	-	-	-	-
Enthalpy	-	0 to 10000 kJ/kg	-	-	-	-
Mixing ratio	-	0 to 10000 g/kg	-	-	-	-
Wet bulb temperature	-	0 to 60°C _{T_w} 32 to 140°F _{T_w}	-	-	-	-
NTC temperature	-	-20 to +60°C -4 to 140°F	-	-	-10 to +60°C 14 to 140°F	-10 to +60°C 14 to 140°F
K thermocouple temperature	-	-	-200 to +1300°C -328 to 2372°F	-	-	-
Infrared temperature	-	-	-	-40 to +500°C -40 to 932°F	-	-
Ambient temperature	-	-20 to +60°C -4 to 140°F	-	0 to 50°C 32 to 122°F	-	-
Air velocity	-	-	-	-	0.4 to 30 m/s 78.7 to 5905 fpm	0 to 30 m/s 0 to 5905 fpm
Airflow	-	-	-	-	0 to 9999 m³/h 0 to 9999 m³/min 0 to 9999 m³/s 0 to 9999 cfm	0 to 9999 m³/h 0 to 9999 m³/min 0 to 9999 m³/s 0 to 9999 cfm