sauermann®

DBM 620

Air flow 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

SmartKap mobile App

GET IT ON Google Play

Download on the App Store

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

Technical specifications

Parameters	Accuracy[1]	Measuring range	Resolution
Airflow (calculated parameter)	±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 to 21 to 2501 CFM	1 m³/h 1 L/s 1 CFM
Air velocity (calculated parameter)	±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 and 0.1 m/s above 1 ft/min
Temperature (NTC)	±0.2 °C ±0.36 °F	From -20 to 70 °C -4 to 158 °F	0.01 °C 0.01 °F
Relative humidity (capacitive sensor)	Repeatability, linearity: ±1.5% RH[2] (from 10 to 80% RH and from 10 to 50 °C)[3] 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[4]	±0.2% of reading ±2 Pa[5] ±0.2% of reading ±0.008 inWg[5]	From -2500 to +2500 Pa From -10 to 10 inWg	From 0.001 to 0.1 Pa[6] 0.001 inWg

[1]All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurement carried out in the same conditions or with calibration compensation.

[2]Accuracy in RH depends on temperature: typical ±2% RH below 10 °C (50 °F) and above 50 °C (122 °F).

[3]The sensor shows best performance when operated within recommended normal temperature and humidity range of 5 °C – 60 °C (50 – 122 °F) and 20% RH–80% RH, respectively. Long-term exposure to conditions outside normal range, especially at high humidity, may temporarily offset the RH signal (e.g.+3% RH after 60h kept at >80% RH). After returning into the normal temperature and humidity range the sensor will slowly come back to calibration state by itself. Prolonged exposure to extreme conditions may accelerate ageing.

[4]Tolerated overpressure: 344.73 mbar. Proof pressure: 500 mbar. Burst pressure: 750 mbar. / [5]Potential drift: ±0.04% of reading per degree. / [6]From 0 to 1 Pa: 0.001 Pa / 1 to 20 Pa: 0.01 Pa / 20 to 2500: 0.1 Pa

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

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
Storage capacity	Standard size of a measurement dataset report: 1 Mo
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 Additionnal 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.

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
- Silcone tubing allows technician to check for filter issues
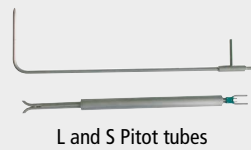
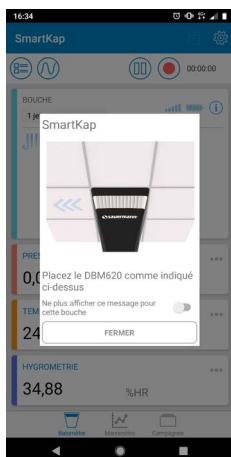L and S Pitot tubes

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.

Accessories

Description	Part number
Measurement grid kit for DBM 620 instrument Designed for air velocity measurements on any types of large celling 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 celling 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). • **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
Removable unit ONLY 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	26449
Tripod Telescopic tripod with casters. Adjustable height from 1.20 to 4 m. Supplied with soft case. For DBM 620 and measurement grid.	26456
DBM 620 replacement carry case	26465
2 x 2 ft (610 x 610 mm) hood*	26450
2.36 x 2.36 ft (720 x 720 mm) hood*	26451
2.36 x 4.33 ft (720 x 1320 mm) hood*	26452
1.38 x 4.99 ft (420 x 1520 mm) hood*	26453
3.35 x 3.35 ft (1020 x 1020 mm) hood*	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.
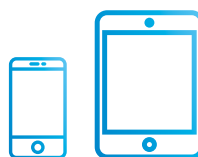
Uw distributeur
Hitma B.V.
Vragen over handmeters:
www.hitma-handmeters.nl

DBM 620 Electronic housing on the base

SmartKap Mobile App