Digital Air Flow Meter

Your all in one calibrator for air sampling pumps

The Flow Detective™ is designed with ruggedness and accuracy in mind. With Casella’s world renowned ease of use, calibration of air sampling pumps just got quicker and easier.

www.casellasolutions.com
Key Features

- High accuracy calibration
- Pulsation detection
- Simple operation
- Rugged design
- Long battery life
- Wide flow measurement
- Bluetooth connectivity
- Closed loop, wireless calibration with Apex2 pumps

Dependable and Easy to Use

The Flow Detective™ has been designed to be rugged, with no moving parts so it can be used in the field. Performing calibrations is quick and easy, with a simple user interface and colour screen that can be easily viewed from a distance.

- Colour display
- Instant and average flow readings
- Selectable measurement units
- No warm up required
- Saves time compared to traditional calibration methods

Instant and average flow rate is displayed and the averaging time can be set as required.

The Flow Detective™ works over a wide range of temperatures and pressures due to it's internal sensors.

Use Airwave on your mobile device to connect remotely to the Flow Detective™ and send calibration information via email

Airwave allows you to connect to both the Flow Detective™ and Apex2 pumps simultaneously

(Airwave is available free on casellasolutions.com and in the Apple App Store and Google Play Store)
Wide Performance
With the longest battery life on the market, there is peace of mind that it is always ready to go. Within a few seconds of switching on the Flow Detective™ is ready to measure, ensuring you can calibrate devices quickly. With it’s wide flow range, as well as calibrating dust sampling heads, it can be used to calibrate at low flows for sorbent tube sampling, ensuring you just need one device for all personal air sampling calibration.

- Calibration to within 2% accuracy
- 70 hour battery life
- Flow range from 20mL/min (Plus model) to 5,000mL/min
- Displays standard or actual flow

“Under the pump standard ISO13137, pumps must have a pulsation level of less than 10%, the Flow Detective™ is the only flowmeter to be able to verify this on any manufacturers pump”

Unique Pulsation Detection
As pumps generally use a moving diaphragm, this creates fluctuations in the flow rate on a pump. As sampling heads like cyclones rely on a steady flow to maintain a specific size cut, it is important for pulsation to be as small as possible. The Flow Detective™ displays a red indicator if pulsation is above 10%.

- Displays when pulsation is above 10%
- Helps ensure size selection of sampling heads are accurate

Bluetooth Connectivity
When calibrating any device, the Airwave App can be used to remotely control the Flow Detective™ and wirelessly receive calibration data. When used with an Apex2 pump, closed loop calibration can be achieved so nothing has to be set manually on the pump, which saves time.

- Receive calibration data to your mobile device
- Halves the time to calibrate Apex2 air sampling pumps

Send Calibration Data Easily
The Airwave App allows calibration data to be sent from your mobile devices’ email client. This allows you to get calibration traceability data quickly, both before taking a sample run with a pump, and after the sampling period to verify flow is within 5%.

- Send calibration data direct to your inbox
- Specify if the result is a calibration or post measurement check
- Includes environmental and optional location data
- Has the ability to add sample information such as the wearer of the pump

“This will save me lots of time and give me confidence in traceability of my data”
Technical Specification

General:
- Flow Range (mL/min): Normal Range: 500 to 5,000
- Low Flow Range: 20 to 500
- Accuracy: < ±2% from 500 to 5000mL/min
- ±0.8% of reading ±0.2% FSD from 20mL to 500mL/min
- Pulsation Indicator: Flash when pulsation is >10%
- Flow Modes: Standard or Actual Flow
- Volume Units: mL/min, L/min, cf/min, cc/min
- Temperature Units: °C, °F, K
- Pressure Units: kPa, mmHg, "H₂O, cmH₂O, mBar, PSI

Physical:
- Display: Colour OLED
- Controls: 4 buttons
- Warm Up Time: <1 second
- Dimensions: 112 x 37 x 102 mm (4.41 x 1.46 x 4.02 inches)
- Weight: 370g (13oz)

Environmental:
- Temperature: Operation, 0° to 45°C
- Storage, -10° to 50°C
- Humidity: 30 to 95% RH (non-condensing)
- Barometric Pressure: Auto-correcting

Electrical:
- Battery Type: Rechargeable Li Ion
- Battery Level Indicator: Yes
- Battery Life: >70 hours
- Charge Time: Typically <6 hours

Model Selection

<table>
<thead>
<tr>
<th>Feature</th>
<th>Standard</th>
<th>Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard or Actual flow</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Pulsation detection</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Flow rate to 5L/min</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Low flow calibration (&lt;0.5L/min)</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Bluetooth connectivity®</td>
<td></td>
<td>●</td>
</tr>
<tr>
<td>Closed loop calibration with Apex2 pumps</td>
<td>▪</td>
<td></td>
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</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowdetective</td>
<td>Standard Flow Detective Instrument</td>
</tr>
<tr>
<td>Flowdetectiveplus</td>
<td>Flow Detective Plus Instrument</td>
</tr>
</tbody>
</table>

Each instrument comes complete with protective rubber boot, calibration certificate, 1m tube and field guide.

Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>209152/KIT</td>
<td>Single Charging Station for the Flow Detective™ inc PSU</td>
</tr>
<tr>
<td>213026D</td>
<td>Kit case to hold Flow Detective™, Charger (inc PSU) and Calibration Adaptor</td>
</tr>
<tr>
<td>P109028</td>
<td>Calibration adaptor to attach Flow Detective™ to inhalable sampling heads</td>
</tr>
<tr>
<td>213018C</td>
<td>Protective Rubber Boot (included with Flow Detective™)</td>
</tr>
<tr>
<td>213028B</td>
<td>Desktop stand</td>
</tr>
</tbody>
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Authorised distributor

Order Placement:
For customer service, call 1300-735-292
To fax an order, use 1800-067-639
To email an order, ordersau@thermofisher.com

Contact Us:
For customer service, call 1300-735-292
For service and calibration, call 1300-736-767
To order online: thermofisher.com

Casella reserves the right to amend the specification without notice