



# Datasheet



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## Air Volume Instruments



Model PH731 (Accessories shown on following page)

### ProHood Capture Hood Model PH731

The PH731 ProHood Capture Hood is a multipurpose electronic air balancing instrument primarily used for efficiently taking direct air volume readings at diffusers and grilles. It features a detachable micromanometer which can be used with optional probes for increased flexibility in multiple measurement applications.

Offering durable, trouble-free operation, this lightweight, ergonomically designed capture hood kit saves time and money by combining multiple measurement tools into one package. The PH731 ProHood Capture Hood helps you create healthy and energy efficient environments while meeting local codes, guidelines and regulations for ventilation systems.

### Features and Benefits

- Ergonomic design and ultra light weight for easy, one-person operation
- Automatically senses and displays supply or return flows, saving time on the job
- Back pressure compensation ensures accurate readings
- Multiple hood sizes available for easy, cost effective use across multiple jobs
- Detachable digital micromanometer offers flexibility to use in multiple applications
- Includes Swirl X Flow Conditioner for use with twist or swirl type supply air diffusers

### Applications

- Test and balance contractors
- Commissioning agents
- Facilities managers
- Health and safety specialists
- Ventilation system installers

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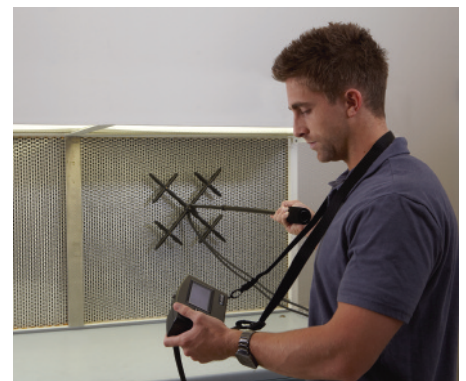
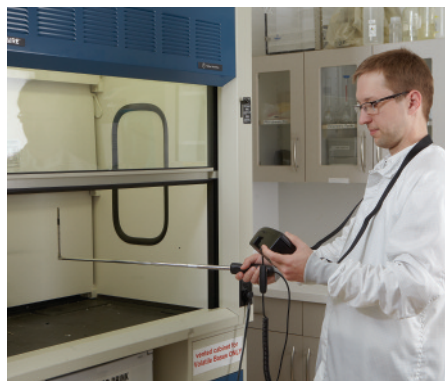
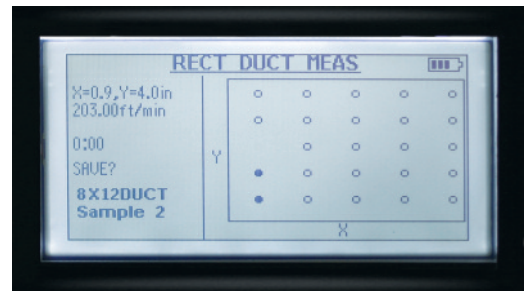
Model PH730 (Micromanometer shown with standard and optional accessories)

## Features and Benefits

- Accurately measures pressure, velocity and flow to help you meet industry standards
- Auto-zeroing pressure sensor reduces user-steps and saves time
- Automatic density correction increases reading accuracy
- Intuitive menu structure allows for ease of use and setup
- Large graphic display with backlight offers easy-to-use interface
  - Displays up to five measurements simultaneously
  - On-screen messages and instructions
  - Programmed for multiple languages
- Integrated Log-Tchebycheff duct traverse application simplifies calculations
- Bluetooth communications for transferring data or remote polling
- Includes downloading software with USB cable
- Accommodates optional pitot, air flow (straight pitot), temperature/relative humidity, velocity matrix, or thermoanemometer probes for use in multiple applications

## Detachable Micromanometer Model PH730

The PH731 ProHood Capture Hood includes a detachable PH730 micromanometer—one of the most advanced, versatile, and easy to use micromanometers on the market today. The PH730 features an auto-zeroing pressure sensor that increases measurement resolution and accuracy along with an intuitive menu structure for ease of operation.





### Specifications

Models PH730 and PH731

#### Velocity Range

|                 |   |
|-----------------|---|
| Pitot probes    | 25 to 15,500 ft/min (0.125 to 78 m/s)                                     |
| Air flow probe  | 25 to 5,000 ft/min (0.125 to 25 m/s)                                      |
| Velocity matrix | 25 to 2,500 ft/min (0.125 to 12.5 m/s)                                    |
| Accuracy        | ±3% of reading ±7 ft/min (±0.04 m/s) at velocities >50 ft/min (>0.25 m/s) |
| Units           | ft/min, m/s   |
| Resolution      | 1 ft/min (0.01 m/s)   |

#### Pressure

##### Differential pressure

±15 in. H<sub>2</sub>O (±3735 Pa);  
150 in. H<sub>2</sub>O (37.5 kPa),  
maximum safe operating pressure

|                   |  |
|-------------------|--|
| Absolute pressure | 15 to 40 in. Hg (356 to 1016 mm Hg)  |
| Accuracy          | ±2% of reading ±0.0001 in. H <sub>2</sub> O (±0.025 Pa) static and differential; ±2% of reading absolute |
| Units             | in. H <sub>2</sub> O, in. Hg, Pa, hPa, kPa, mm Hg, cm Hg, mm H <sub>2</sub> O, cm H <sub>2</sub> O,      |
| Resolution        | 0.00001 in. H <sub>2</sub> O (0.001 Pa) static and differential; 0.01 in. Hg (1 mm Hg) absolute          |

#### Volume

|            |  |
|------------|--|
| Range      | 25 to 2,500 ft <sup>3</sup> /min (42 to 4250 m <sup>3</sup> /h) capture hood   |
| Accuracy   | ±3% of reading ±7 ft <sup>3</sup> /min (±12 m <sup>3</sup> /h) at flows >50 ft <sup>3</sup> /min (>85 m <sup>3</sup> /h) |
| Units      | ft <sup>3</sup> /min, m <sup>3</sup> /h, m <sup>3</sup> /min, l/s  |
| Resolution | 1 ft <sup>3</sup> /min (1 m <sup>3</sup> /h)   |

#### RH

|            |                                  |
|------------|----------------------------------|
| Range      | 5 to 95% RH temperature/RH probe |
| Accuracy   | ±3% RH                           |
| Resolution | 0.1% RH                          |

#### Temperature

|                      |                           |
|----------------------|---------------------------|
| Sensor in base       | 40 to 140°F (4.4 to 60°C) |
| Temperature/RH probe | 14 to 140°F (-10 to 60°C) |
| Accuracy             | ±0.5°F (±0.3°C)           |
| Units                | °F, °C                    |
| Resolution           | 0.1°F (0.1°C)             |

#### Instrument Temperature Range

|           |                           |
|-----------|---------------------------|
| Operating | 40 to 140°F (4.4 to 60°C) |
| Storage   | -4 to 160°F (-20 to 71°C) |

#### Statistics

min, max, average

#### Data Storage

26,500 samples, time and date stamped

#### Logging Interval

User selectable

#### Response Time

2 to 8 seconds, differential pressure sensor

#### Dimensions (manometer only)

7.4 in. x 4.5 in. x 2.3 in. (18.8 cm x 11.4 cm x 5.8 cm)

#### Pressure Connection

¼ in. (6.35 mm) OD straight ports with barbed ends for use with ⅜ in. (4.76 mm) ID flexible tubing

#### Weight with Batteries

|       |                 |
|-------|-----------------|
| PH730 | 17 oz (0.5 kg)  |
| PH731 | 7.4 lb (3.4 kg) |

#### Power Requirements

Four AA-size cells or AC adapter

#### Ordering Information

|       |  |
|-------|--|
| PH730 | Manometer with carrying case, 4 AA size rechargeable NiMH batteries, multi-country AC adapter, 18 in. (46 cm) Pitot probe, 2 Static Pressure probes, 16 ft (4.8 m) Neoprene tubing, downloading software, USB interface cable, NIST-traceable calibration certificate, and manual.   |
| PH731 | 2 ft x 2 ft (610 mm x 610 mm) air capture hood/frame/base, Swirl X Flow Conditioner, manometer with carrying case, 4 AA size rechargeable NiMH batteries, multi-country AC adapter, 18 in. (46 cm) Pitot probe, 2 Static Pressure probes, 16 ft (4.8 m) Neoprene tubing, wheeled luggage-style carrying case, NIST-traceable calibration certification, downloading software, USB interface cable, and manual. |

# Air Volume Instruments

Models PH730 and PHT731

## Hood Sizes Available (PH731)

### Standard Hood Kits

801208 2 ft x 2 ft (610 mm x 610 mm)

### Optional Hood Kits

801201 2 ft x 4 ft (610 mm x 1220 mm)  
 801200 1 ft x 4 ft (305 mm x 1220 mm)  
 801202 1 ft x 5 ft (305 mm x 1525 mm)  
 801203 3 ft x 3 ft (915 mm x 915 mm)  
 801209 16 in. x 16 in. (406 mm x 406 mm)  
 801210 5.25 in. x 4 ft (133 mm x 1220 mm)  
 801211 28 in. x 28 in. (710 mm x 710 mm)  
 801212 28 in. x 50 in. (710 mm x 1270 mm)

### BSC Hood Kit


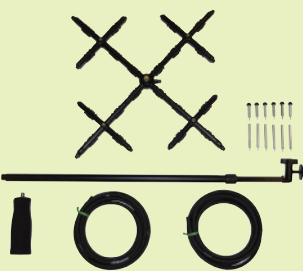


801204 8 in. x 22 in. (205 mm x 560 mm)  
 801205 10 in. x 22 in. (255 mm x 560 mm)

The BSC hood kits are used to certify Class II bio-safety cabinets by taking direct in-flow measurements for NSF compliance.

### Recommended Accessories

800187 Air flow probe (straight pitot), 18 in. (46 cm)  
 800218 Temperature probe  
 800219 Humidity and temperature probe  
 801090 Velocity matrix, telescopic handle,  
 (2) 8 ft. (2.4 m) neoprene tubing sections  
 960 Air Velocity and Temperature, Straight Probe  
 962 Air Velocity and Temperature, Articulating Probe  
 964 Air Velocity, Temperature, and Humidity,  
 Straight Probe  
 966 Air Velocity, Temperature, and Humidity,  
 Articulating Probe  
 634634000 Pitot probe 5/16 in. (8 mm) diameter - 12 in. (30 cm)  
 634634001 Pitot probe 5/16 in. (8 mm) diameter - 18 in. (46 cm)  
 634634002 Pitot probe 5/16 in. (8 mm) diameter - 24 in. (61 cm)  
 634634003 Pitot probe 5/16 in. (8 mm) diameter - 36 in. (91 cm)  
 634634005 Pitot probe 5/16 in. (8 mm) diameter - 60 in. (152 cm)  
 634650002 Duct plug, 3/8 in. (9.5 mm) diameter - 1000 pieces  
 634650003 Duct plug, 3/8 in. (9.5 mm) diameter - 5000 pieces  
 8934 Wireless Bluetooth Printer

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| Optional Accessories   | Description / Part Number   |
|--|---|
|    | <p><b>Airflow Probe 800187</b><br/>                     18 in. (46 cm) straight probe that can be used to perform a duct traverse and to measure face velocity measurements in applications such as chemical fume hoods, HEPA filters, or other laminar flow devices. Ideal for small diameter ductwork.</p>  |
|   | <p><b>Velocity Matrix 801090</b><br/>                     Used to measure face velocities of HEPA filters, chemical fume hoods, laminar flow benches, filter banks, kitchen exhausts, and other applications where a large surface area needs to be measured. The 16 point grid covers one square foot area and averages the air velocity while minimizing the affects of turbulence to produce a stable reading.</p> |
|  | <p><b>Thermoanemometer Air Velocity Probe Models 960, 962, 964, 966</b><br/>                     Available in straight or articulating construction, and with or without a relative humidity sensor. Models with a relative humidity sensor can also calculate wet bulb and dewpoint temperature.</p>   |
|  | <p><b>Temperature and Humidity Probe 800220</b><br/>                     Telescopic probe extends from 9 to 39 in. (230 to 990 mm) and is ideal for measuring inside of duct work before and after a coil. Probe can be inserted into a standard 5/16 in. (8 mm) diameter hole typically used for pitot traverses and can be used to calculate wet bulb and dewpoint temperatures.</p>                                |

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Contact your local AIRFLOW Distributor or visit our website [www.airflowinstruments.co.uk](http://www.airflowinstruments.co.uk) for more detailed specifications.

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