

# CPS®

Smart.Connected.Tools™

## **ABM-HOOD & ABM-HOOD-200 Owner's Manual**

(Rev C: Replaces All Prior Versions)



Patented CPS Link™ Wireless Technology



Bluetooth





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# OVERVIEW

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The ABM EasyHood measures airflow volumes from air supply or return/exhaust vents in residential or commercial buildings. To accomplish this, the ABM EasyHood is used with an ABM-200 Airflow & Environmental Meter (or ABM-100 Airflow Meter) and a smartphone having the latest, free, CPS Link™ app installed.

## KEY FEATURES

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- Accurate and affordable HVAC airflow measurement
- Use smartphone and CPS Link™ app to display, store and send data
- Also measures temperature, wet bulb, dew point and relative humidity (ABM-200)
- Easy operation with online guidance and visual instruction

## ABM EASYHOOD LAYOUT

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# PARTS & ACCESSORIES



ABM EasyHood



Padded Carrying Case



Low Volume Adapter



ABM-200  
with mic jack adapter  
(Included with  
ABM-HOOD-200)

ABM-100  
(Purchased Separately)



Expansion Hood  
(24" x 24")

## SPECIFICATIONS

<b>ABM-HOOD</b>		
Hood Opening	12" x 12" (.3 m x .3 m)	
Expansion Hood Opening	24" x 24" (.6 m x .6 m)	
Weight (with Expansion Hood)	4.75 lb (2.15 kg)	
Hood Size (with Expansion)	17.75" H x 25" W x 25" D (.45 m x .63 m x .63 m)	
<b>ABM-HOOD-200 (when used with ABM-200 meter)</b>		
Wireless Connection Range	≤100 ft. (30.5 m)	
Airflow Volume (Regular Test)	35~720 CFM (59 ~ 1,223 M <sup>3</sup> /H)	Accuracy: +/-5% (+/-2%*)
Airflow Volume (Low Volume)	7-100 CFM (12-170 M <sup>3</sup> /H)	Accuracy: +/-5% (+/-2%*)
Relative Humidity	Range: 0-85%	Accuracy: ±4%
Operational Temperature	Range: 0 °F to 140 °F (-18 °C to 60 °C)	Accuracy: ±0.7 °F (0.4 °C)
Average Volume	CFM	
Maximum Volume	CFM	
Minimum Volume	CFM	
Calculates Wet Bulb	°F or °C	
Calculates Dew Point	°F or °C	
Bluetooth Smart	ABM-200 Meter	
Auto Power Off	No connection or 30 sec after closing app	
Battery Type (3.0 V)	Inside ABM-200 (CR2450 Coin Cell, Lithium)	
Battery Life	> 500 hrs.	
Warranty	1 Year (including ABM-HOOD)	

\*In laboratory conditions

# QUICK START GUIDE

## APP DOWNLOAD & SETUP

The CPS Link app will work with older smart phones and tablets but has been optimized for use with Apple iPhones SE, 8 and 8 Plus or newer, and iPads with operating system iOS 9.3 or newer.

For phones and tablets with Android operating systems, the CPS Link app has been optimized for all Bluetooth Smart compatible devices with operating system 7.0-7.1.2, (Nougat) or newer.

1. To download CPS Link™ app go to the App Store or Google Play
2. If you have a QR code scanner app on your phone, scan the QR code below to be redirected to the App Store or Google Play.
3. After downloading app, select the CPS Link app on your mobile device.
4. Starting from Device List screen in the app, look for an "available" ABM-100 or ABM-200 (indicated by a GREEN circle with a "check mark").
  - a. Touch either available device and wait for it to connect to your mobile device.
  - b. Starting from Dashboard Screen, select TESTS then select ABM-Hood-200.
  - c. Once on the ABM EasyHood main screen (Location Description Screen), input Duct Type and select Test Type.
5. Select "Start" when ready to begin.



CPS Link™

U.S. Patent No. 9,043,161



Version 4.3 or higher

## QUICK START GUIDE (CONT'D)

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### INSTALL METER

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1. If using ABM-200, attach threaded mic jack metal adapter (chrome metal pin) to meter, then plug meter into socket inside control box opening.
2. If using ABM-100, plug meter into socket inside control box opening.

### HANDS FREE MOBILE PHONE USE

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1. For greater convenience, mount your mobile phone to the adjustable [2-3/8" to 5-5/8" (60 to 90 mm)] spring loaded base.

*If using ABM-100, use cable inside smartphone platform and connect to headphone jack on smartphone.*



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## QUICK START GUIDE (CONT'D)

### REGULAR TEST [35 ~ 720 CFM (59 ~1,223 M3/H)]

1. From the ABM EasyHood screen, select **REGULAR TEST**.
2. Place hood over grille to capture airflow readings.
3. App will calculate airflow and other values.
4. When test is done, press **STOP** on mobile device screen or the test will end automatically after 30 seconds.



ABM EasyHood Main Screen



Capture Airflow Readings



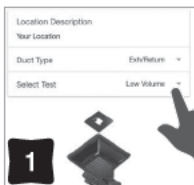
5. Press **STOP** to end test.
6. Press **SAVE** (or **CANCEL**) on screen to end your session.
7. If **SAVED**, retrieve test report from Job File.



# QUICK START GUIDE (CONT'D)

## LOW VOLUME TEST [7 TO 100 CFM (12 TO 170 M<sup>3</sup>/H)]

1. Select **LOW VOLUME** from main screen on ABM-EasyHood app.
2. Insert Low Volume Adapter into **WIDE** portion of Vortex grille (see photo below).
3. Place hood over grille to capture airflow readings.
4. App will calculate airflow and other values.
5. When test is done, press **STOP** on mobile device screen.
6. Obtain test report from Job File.



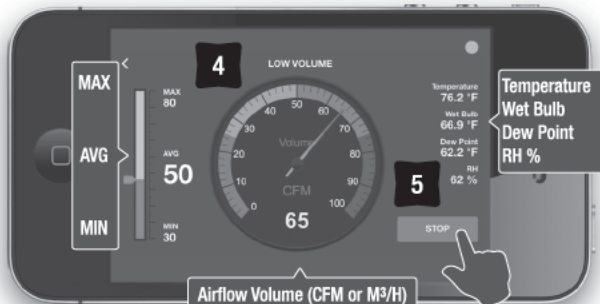
ABM EasyHood Main Screen



Low Volume Adapter



Capture airflow readings



7. Press **SAVE** (or **CANCEL**) on screen to end your session.

## EXPANSION HOOD SETUP (GRILLES UP TO 24" X 24")



## TO REPLACE ABM-200 BATTERY

1. Squeeze **BOTH** sides of rubber "skin" and push **UPWARDS** simultaneously.
2. Pull "skin" over **BACK** of the housing to expose coin cell battery compartment
3. Open battery compartment and replace coin cell.
4. Reinstall "skin" over molded housing.



# TROUBLESHOOTING GUIDE

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PROBLEM	SOLUTION
<b>CPS Link App</b>	
	Ensure mobile device is Bluetooth compatible. And, Bluetooth setting is ON in mobile device
1. CPS Link App Crashes	Turn-off and restart mobile device in case of other conflicting apps running
	Delete app and reinstall on your mobile device
	Ensure wireless device is CPS brand only
2. CPS Link app won't pair to wireless device	Download CPS Link app from Apple App Store or Google Play then pair mobile device to CPS wireless meter
	Mobile device must be $\leq 100$ Ft (30m) from CPS wireless device, range is reduced by interior obstructions
3. App screen freezes	Exit CPS Link app and restart ABM-200 meter. Then reopen app and pair to wireless device
	Ensure ABM-100 or ABM-200 fan blades are ALWAYS PERPENDICULAR to airflow direction during each test
4. Inconsistent air velocity or air volume readings	Airflow from same size but different air vents will likely differ (before being balanced)
	Fan or blower motor air volume varies based on fluctuations in power, fan curve, duct pressure and building envelope conditions. A door opening in another part of the building, wind or stack effect can change the reading
5. App won't calculate values	Exit app and restart meter

## TROUBLESHOOTING GUIDE (CONT'D)

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### PROBLEM

### SOLUTION

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#### ABM-100 (Mounted In ABM EasyHood)

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- |                           |   |
|---------------------------|---|
| 1. Won't provide readings | Meter must be connected to mobile device phone jack via supplied cable (inside storage compartment) |
|---------------------------|---|
- 

#### ABM-200 Meter (Mounted in ABM Easyhood)

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- |   |   |
|---|---|
| 1. Won't provide readings               | Ensure meter properly paired to mobile device                           |
|   | Replace ABM-200 coin cell battery                                       |
|   | Fan or blower motor output varies                                       |
| 2. Low airflow readings seem inaccurate | Install supplied Low Volume Adapter plate (see EasyHood Owner's Manual) |
- 

#### Connection Status

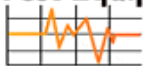
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- |   |  |
|---|--|
| 1. How do I know when the IAQ PRO SmartAir is paired to my mobile device?   | A blue dot is visible in the upper right corner of the Performance Screen or Test Screen |
| 2. How do I know if the IAQ PRO is trying to reconnect to my mobile device? | A YELLOW dot will appear in the upper right corner of the mobile device screen           |
| 3. How do I know if the IAQ PRO is no longer paired to my mobile device?    | A FLASHING RED DOT will appear in the upper right corner of the mobile device screen     |
-

## TROUBLESHOOTING GUIDE (CONT'D)

PROBLEM	SOLUTION
<b>ABM-HOOD (Must Be Used With Separately Purchased ABM Meters)</b>	
1. Won't provide consistent readings from same vent	Hold hood firmly over entire grille area to ensure all airflow is captured Fan or blower motor output varies
2. Low (Or Regular) Airflow-Readings seem inaccurate	Install supplied Low Volume Airflow plate (see Owner's Manual) for airflow ranging from 7 to 100 CFM. No plate required for airflow readings from 35 to 720 CFM HVAC system or blower motor may be off or have variable speeds

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## REPLACEMENT PARTS

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ABMHOOXD1: Phone Base Door

ABMHOOXD2: Rubber Seal

ABMHOOXD3: Expansion Base

ABMHOOXD4: Expansion Fabric

ABMHOOXD5: Expansion Pole

ABMHOOXD6: Low Airflow Plate

## AGENCY APPROVALS AND TESTING

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ABM-200 Meter: FCC & CE. EasyHood with ABM-100 and ABM-200: Performance certified by an AMCA lab.

## WARRANTY

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CPS Products, Inc. guarantees that all products are free of manufacturing and material defects to the original owner for one year from the date of purchase. If the equipment should fail during the guarantee period it will be repaired or replaced (at our option) at no charge. This guarantee does not apply to equipment that has been altered, misused or solely in need of field service maintenance. All repaired equipment will carry an independent 90 day warranty. This repair policy does not include equipment that is determined to be beyond economical repair.

## CPS LOCATIONS

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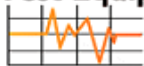
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