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***MUI 121022***

FilterCheck

User Manual

**7506 Holley Circle**

**Panama City Beach, FL 32408**

**December 10th, 2022**

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# Revision Table

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| --- | --- | --- | --- | --- |
| Date | Revision Number | Change Description | Job Title | Initials |
| 12/10/2022 | 0 | Document Created | Software Engineer | LAD |
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# **Overview:**

This Document’s purpose is to give information to a FilterCheck user on the procedures they must follow to operate the FilterCheck and the process of completing a FilterCheck Calibration Check.

# **User Safety Tips:**

* To avoid damage to FilterCheck components, make sure the device is powered down before shutting the lid.
* It is recommended to use the device in cleaner environments to maximize the devices service life.
* To avoid potential damage or shock do not take the FilterCheck apart.
* Store the device with a dust plug to protect the internal components from dirt.
* To avoid clogs/blockages clean the metal screen that is inserted into the flow port.
* To avoid damage to the electronics do not intentionally submerge in water.
* To avoid damage to the electronics only charge the device at 30v with a minimum of 2A.

# **Device Operation:**

1. Remove the Dust Plug



1. Turn on the Power Switch



1. A blinking Blue LED represents the device is initializing (estimated initialization time: 45 seconds)

Graphical user interface

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1. A solid Green LED represents the device is ready to test filters



1. Verify the system to be calibrated:
   * The flow rate must be within the tolerance of 85 ± 1.19 SLPM (83.81 to 86.19 Standard Liters per Minute)
     + Standard Temperature & Pressure (STP) (760 mmHg & 0° Celsius)
   * The low-pressure readings must be within the tolerance of 0 ± .06 cmH2O (-.06 to .06 Centimeters of Water)

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1. Insert a filter to begin testing
2. A blinking Green LED represents the device is analyzing the filter & is adjusting the flow rate back to the required 85 ± 1.19 SLPM (83.81 to 86.19 SLPM)

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1. The Green LED will stop blinking and turn back solid to represent flow is stable and the test has been completed

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1. Press the pause button & record the resulting pressure being displayed

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1. Press the resume button & remove the filter
2. a Blue LED will blink representing the device is zeroing

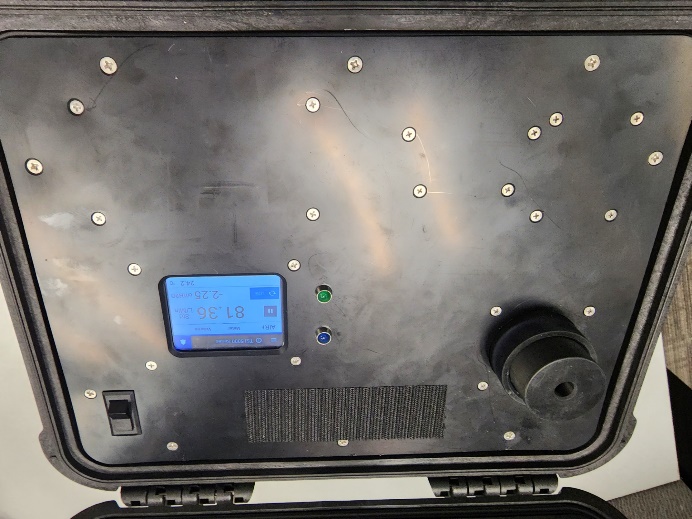
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# **Preforming a Calibration Check:**

1. Complete up to Step: 5 (“Insert a filter to begin testing.”) of the **Device Operation** instructions
2. Insert the included Verification Orifice to begin the Calibration Check



1. Complete up to Step: 8 (“Press the pause button & record the resulting pressure being displayed”) of the **Device Operation** instructions
2. Verify the measured pressure to be -2.4 ± 10% cmH2O (-2.16 to -2.64 Centimeters of Water)



1. Remove the Verification Orifice & a Blue LED will blink representing the device is zeroing

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1. You have now completed the Calibration Check
2. To test filters, continue from Step: 5 (“Insert a filter to begin testing.”) of the **Device Operation** instructions

# **Charging the Device**

* There is an internal Rechargeable Battery inside the FilterCheck.
* The FilterCheck has approximately an 8-hour run-time on a single charge.
* The internal Rechargeable Battery has an over-charge cut-off switch that protects the device from being left on the charger to long.
* Recommended to charge while not in use, so the FilterCheck doesn’t have to be plugged in to operate.
* The FilterCheck passively charges the internal Rechargeable Battery when plugged into a wall outlet.

## Directions:

1. Plug the 30v Power Supply into a wall outlet.
2. Plug the 30v Power Supply’s barrel connector into the FilterCheck

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# **Conclusion:**

This concludes the FilterCheck’s User Manual. For questions and/or concerns regarding the FilterCheck please contact **Ator Labs** at: [LAD@AtorLabs.com](mailto:LAD@AtorLabs.com).