INH2ALE

Molecular Hydrogen Inhalation System

User Manual

Scan the QR code for quick setup instructions

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1. Introduction

Thank you for choosing the InhaleH_2 Unit. This device is designed to safely deliver therapeutic hydrogen gas mixed with HEPA-filtered air. The InhaleH_2 Unit precisely controls concentration levels between 0.1–4.0% hydrogen, staying below the flammability limit to ensure safety and effectiveness. This manual provides information needed to operate, maintain, and care for the device. Before operating your InhaleH_2 Unit for the first time, please read this manual carefully to understand how to set up, operate, and maintain your device.

For visual demonstrations and support, visit: InhaleH2.com/support

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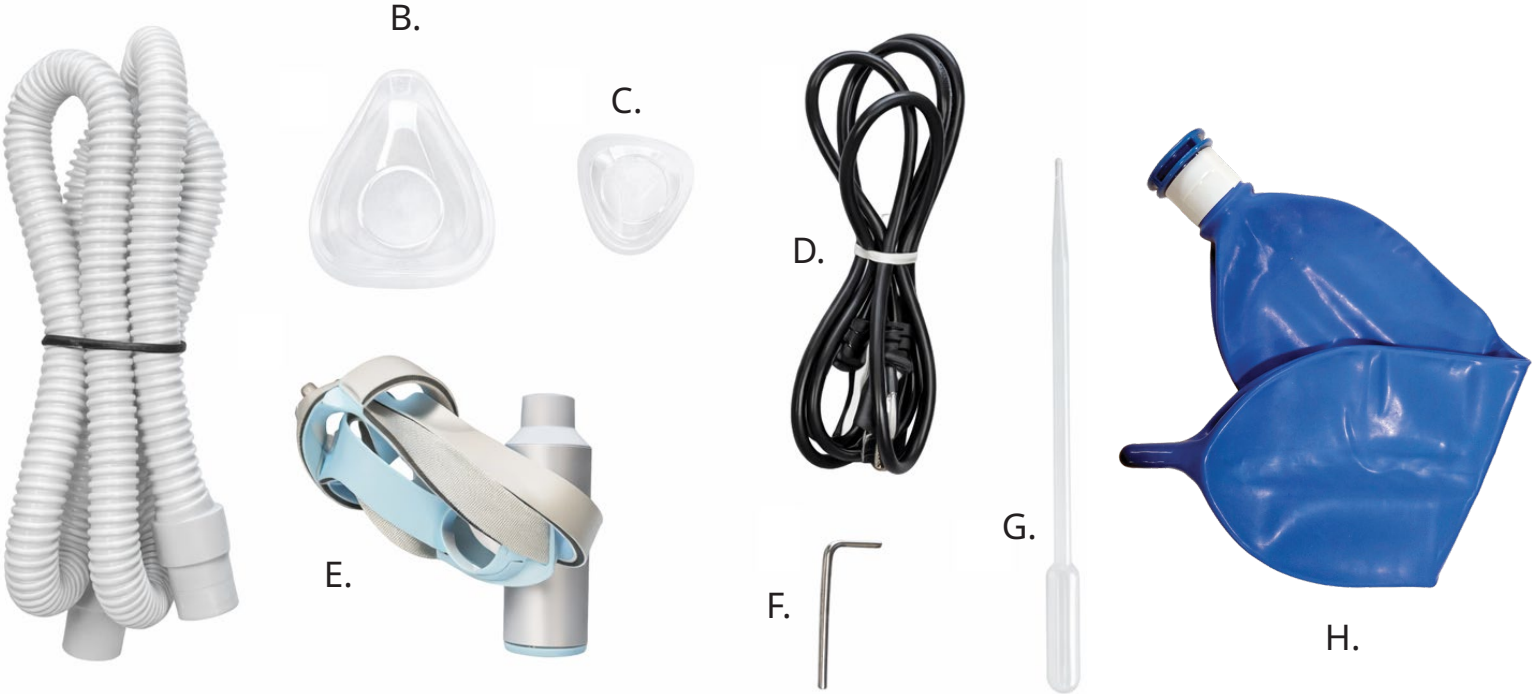
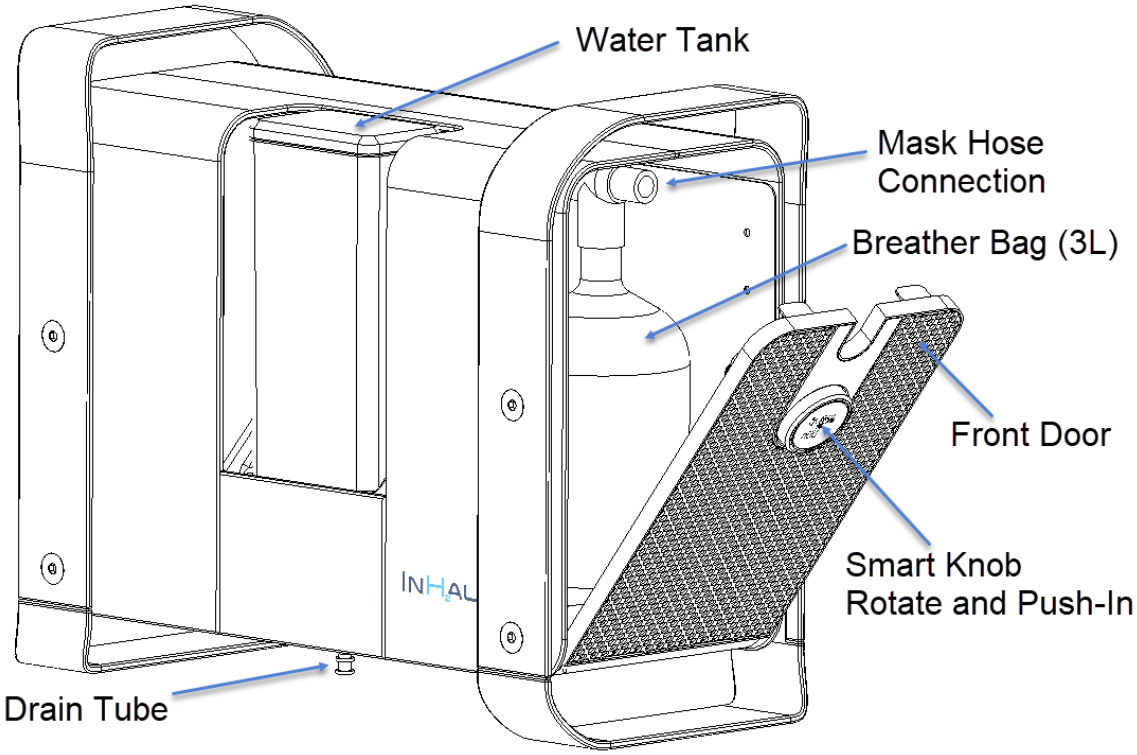
2. What's Included

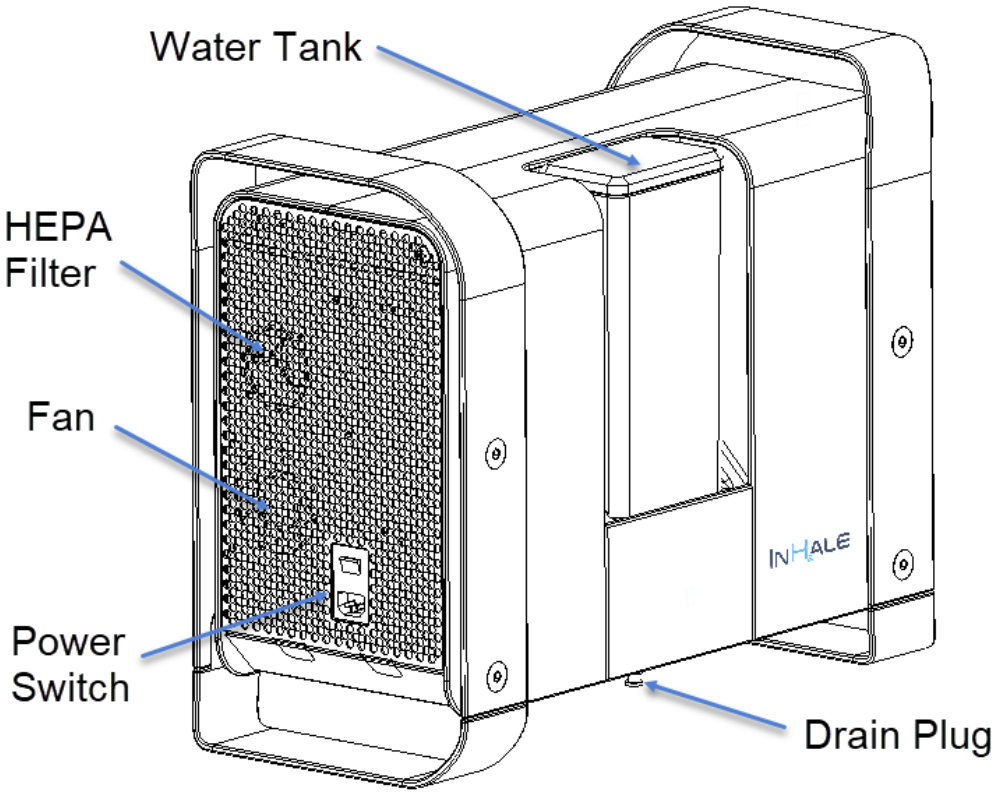
The following is included in the **InhaleH$_2$ Unit**:

- InhaleH$_2$ Inhalation Device
- Accessories (included in side compartment of machine)
  - A. Connector Hose
  - B. Silicone Face Mask
  - C. Silicone Nose Mask
  - D. Power Cable
  - E. Mask Valve (with adjustable head strap)
  - F. Allen Key
  - G. Water Dropper
  - H. Breathing Bag



3. Device Diagram





4. Quick Start Guide

Please ensure your InhaleH_2 unit warms up for at least 8hrs at room temperature before first use. Shipping in cold temperatures can lead to freezing of the PEM(electrolyzer) and water lines, attempting to run the unit before it warms up can cause serious damage to internal components.

1. Fill Water Tank

- Open tank lid
- Remove absorption pad
- Fill with distilled water only to MAX line

2. Connect Breather Bag & Mask

- Remove rubber bands and attach breather bag to Down Tube (if not already connected)
- Attach hose to Mask Hose Connection in compartment → Hose to Mask Valve → Mask Valve to Silicone Face Mask

3. Power On

- Confirm correct voltage on label and plug in power cable
- Switch power ON
- Smart Knob boots up
- Connect to WiFi (optional but strongly recommended for firmware updates)

4. Start Session

- Turn knob → Select concentration & duration
- Press PLAY
- Wait 10 seconds for bag to partially inflate
- Put on mask (face or nose) with head straps and breathe normally

5. End Session

- Press Pause or timer ends automatically

For full instructions, see "Getting Started." For video tutorials, visit the Support Videos page: InhaleH2.com/support

5. Getting Started

Setting up the Machine:

1. Place the InhaleH_2 Unit on a stable, flat surface.

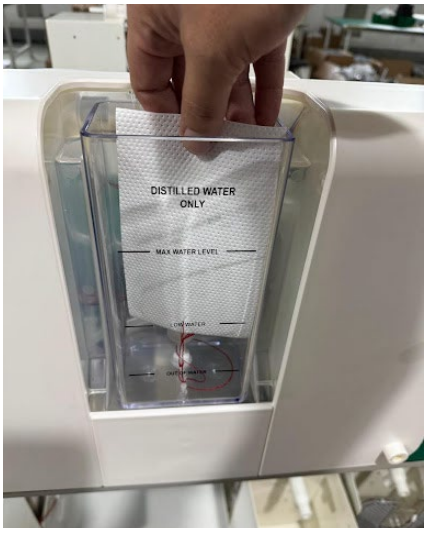
2. Open the front door and remove the accessory box.

4. Attach the Silicone Face Mask to the Mask Valve by pressing it firmly onto the outer ring.

6. Attach the other end of the Hose to the Side Tube of the Tee behind the front door.

3. Remove rubber bands from the breathing bag and connect it to the Down Tube of the Tee behind the front door, if it isn't already connected.

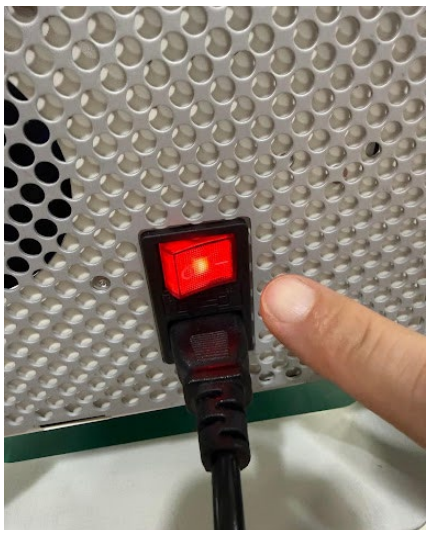
5. Attach the Mask Hose to the small end of the Mask Valve.



7. Open the water tank and REMOVE the absorption pad from the bottom.

8. Pour distilled water only into the tank until the MAX WATER LEVEL line is reached.
   Be sure to always keep water in the tank, even when not in use.

9. Replace the cap on top of the water tank.

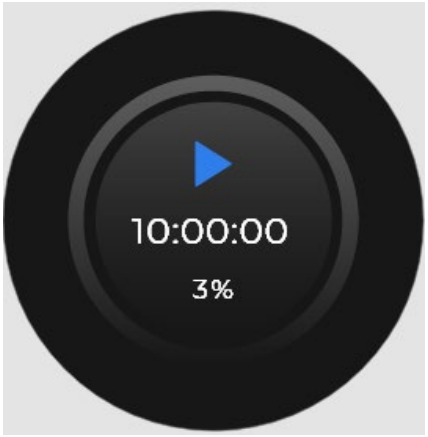


10. Ensure the switch is in the OFF position. Insert power cord into the back of the machine, and insert wall plug into the wall outlet. Ensure the correct voltage on the label.

Starting a Session:

11. Toggle Power Switch to **ON** position.

12. Smart Knob will boot up, and the ventilation fan will turn on.



13. Rotate the Knob to select a setting in **Blue**. Press Smart Knob **IN** to select. **HOLD** the smart Knob in for 3 seconds to get to Settings.

14. Use the Smart Knob to:
    • Set hydrogen concentration (0.1–4.0%)
    • Set session duration (minutes)
    • Connect to WIFI for firmware updates (strongly recommended)

15. Rotate Smart Knob to select the PLAY button. Press IN to start your session.

16. After starting a session, wait up to 10 seconds as the system begins generating gas mixture and inflates the breathing bag. Bag may not inflate completely. This is normal. It allows ebb and flow of breathing rates.

17. Check for bubbles in the water tank. This indicates hydrogen is being produced.

18. Ensure mask is securely in place around your mouth and nose. You may find it more comfortable to twist the Valve to one side. Adjust straps evenly to prevent leaks.

19. Breathe normally. The breathing bag will collapse as you inhale and refill as you exhale.
    • Exhaled air is vented through the mask check valves.
    • Fresh gas mixture continuously refills the bag.

Pausing & Ending a Session:

20. To PAUSE your session, highlight the PAUSE option using the knob and press IN.

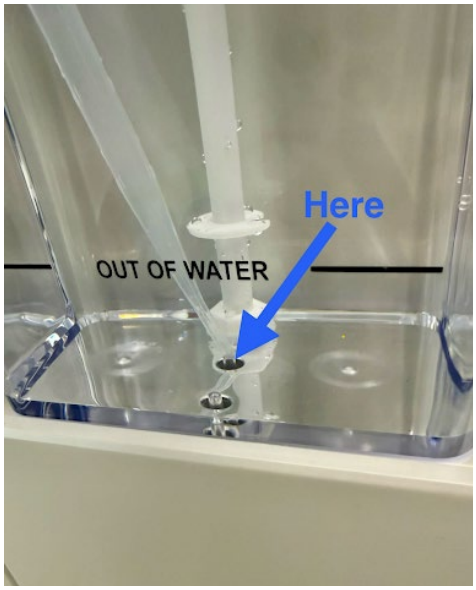
21. When the timer ends, the device will stop automatically.

22. To turn off the machine completely, use the switch at the back of the unit or set the machine to SLEEP by holding the knob down and selecting SLEEP from the menu position. The machine may be left in Sleep Mode between uses; full shutdown is not required, though optional.

6. Important Information Before Use

Prior to getting started, please note the following:

1. **Only use distilled water.** All other water usage voids the warranty.
2. Always keep water in the tank, even when not in use.
3. To ensure firmware stays completely up to date, and for the best experience, connect the machine to WiFi.
4. Ensure the correct voltage is being used on the power switch that matches your country.
5. **Do not smoke or use open flames** near this machine. Although the system is engineered to keep hydrogen levels well below flammability limits, open flames introduce unnecessary risk and should always be avoided.
6. If air flow stops, or bubbles aren't being produced in the water tank, discontinue use. See troubleshooting section of this manual for more information.
7. To drain your machine, use the drain hose at the bottom or carefully pour the water tank out. The water tank is not removable.
8. Water should not leak from the machine.
9. The Smart Knob is not a touch screen. To use, rotate the knob, push it in to select, or hold it down for 3 seconds for more menu options.
10. The breathing bag will not completely inflate.
11. The silicone mask will initially have a strong smell but will disappear after a few uses.
12. The machine is clean of contaminants and can be used immediately upon unboxing.
13. During use, the machine will operate at a noise level comparable to a typical oxygen generator or aquarium pump.
14. During shipping, water may shift and trap air into the water line. If this happens, use the water dropper to force the trapped air out of the water line. You will need to squeeze water into the hole in the water tank until bubbles stop rising and only water (not air bubbles) come out of the other hole. This confirms that all trapped air has been removed. This should not be required again unless transporting the unit causes the issue to re-occur.



7. Connect to WiFi

Connecting to WiFi is not required for the machine to work, but it is highly recommended to receive critical updates as improvements are made. Firmware updates may resolve error messages and improve performance. To connect to WiFi, follow these steps:

1. Hold the Smart Knob down for 3 seconds
2. Select WiFi from the menu.
3. Select Connect To WiFi
4. Select your wifi network from the list.
5. Enter your WiFi password by rotating through each letter using the screen keyboard.
6. Select the CHECK MARK (✔) to finish.
7. Or HOLD to go back.

8. Product Specifications

Feature	Specification	Notes
Dimensions	54 × 41 × 23.5 cm (21.3 × 16.1 × 9.3 in)	Compact design for home or clinic use
Weight	12.25 kg (27 lbs)	Lightweight and portable
Gas + Air Output Rate	11.6–12 L/min (constant airflow)	Delivers steady mixture for comfort at a flow rate high enough for all breathing patterns.
Hydrogen Concentration Range	Adjustable 0.1–4.0%	Controlled via Smart Knob
Breathing Bag Capacity	3 L	Fits all lung sizes at normal breathing rate
Water Requirement	Distilled water only, Total Dissolved Solids (TDS) <5 ppm	Up to 75 hours of hydrogen production from a full tank of water (1 Liter)
Power Requirements	110V or 220V AC	Voltage listed near power switch. Using wrong voltage may cause damage
LED Accent Lighting	Purple color.	Can be turned off using the small switch behind the Smart Knob bezel. Remove the bezel screws to access the switch.

9. Maintenance

To enhance the longevity of your machine, the following maintenance schedule is recommended.

Every 6 months:

- Replace HEPA filter every 6 months (or sooner if visibly dirty). Filters are available on our website.
  - How to replace the filter:
    a. Remove the two screws at top corners of the back perforated metal mesh.
    b. Pull the tag on the edge of the HEPA filter. Slowly pull the filter out.
    c. When replacing, take note of the labels indicating which direction the airflow should be.

Every 1-2 months:

- Drain and change water every 30-60 days (recommended).

As Needed:

- **Refill water tank** with fresh distilled water when level goes below the **LOW WATER LEVEL** line. Do not go above the **MAX WATER LEVEL** mark.
- **Clean breathing bag and mask** as needed with mild soap and water; allow to air-dry.

10. Storage

Store the machine upright, in a cool, dry place, and out of direct sunlight.

The water tank should always contain water to keep the PEM (Proton Exchange Membrane) hydrated. If the PEM dries out, performance and service life may be reduced.

If you need to empty the tank (for example, because incorrect water was added or for travel):

1. Remove the drain tube from the holding ring beneath the tank.
2. Point the tube downward over a sink or bowl.
3. Remove the stopper and allow the tank to drain completely.
4. Replace the stopper and return the tube to the holding ring.

If storing the machine without water temporarily, cover the holes at the bottom of the tank with duct tape or electrical tape. This prevents evaporation and helps keep the PEM from drying out. Replace the water with distilled water as soon as possible, ideally within 60 days.

11. Warning Messages

The following error messages may appear on the Smart Knob. The machine will not operate until the issue is resolved. Before troubleshooting any issues, ensure the latest firmware is installed, which can be done by connecting to WiFi. For detailed repair procedures, refer to the Supplemental Service Manual available on the website: InhaleH2.com/support

⚠ **"Ventilation Fan Stopped"**

The internal ventilation fan is not operating. Confirm the fan is spinning freely. Remove any dust, debris, or blockages around the fan vents. Do not run the machine until airflow is restored.

⚠ **"HEPA Filter Missing"**

The machine cannot detect the HEPA filter. Confirm the HEPA filter is installed in the rear compartment. To access it, remove the two screws at the top corners of the perforated metal panel. Ensure the filter is fully inserted and seated correctly.

⚠ **"Hydrogen Leak Detected"**

This alert is triggered by the internal hydrogen sensor. The sensor uses a heated filament to detect very low gas levels and requires time to reach operating temperature. After storage or exposure to humidity, the sensor may also need to dry (“burn off”) moisture, which can cause temporary false alarms.

- Allow the machine to warm up for 5–7 minutes.
- If the alert continues, leave the machine plugged in for 1–7 days with the vent/fan on to allow moisture to evaporate from the sensor.
- Confirm the ventilation fan is running, as airflow supports sensor accuracy.
- Check that the breather bag is properly connected, as a loose bag can affect internal pressure and trigger warnings.

"Water Not Flowing"

Air may be trapped in the water line (possible after shipping). Use the included water dropper (pipette) to push water into the rear fill hole at the bottom of the tank. Squeeze 3–4 bulbs of water until bubbles stop rising—this forces air out of the line. Try running a session again.

"Water Level Low"

The water tank level has dropped below the required amount. Refill the tank to the MAX WATER LEVEL mark using distilled water only.

"Temperature Sensor"

The room temperature is outside the safe operating range. Keep the machine between 15–26°C (60–80°F). Avoid direct sunlight and high humidity, as these conditions can affect PEM performance.

"Air Pump Failure"

The air pump is not operating. The air pump normally makes a medium humming sound at the start of each session and will stop when the session ends. If you do not hear the pump, do not use the machine. See the service manual or contact support. A failed air pump can cause unsafe hydrogen concentrations inside the system.

"Water Purity Issue"

The Total Dissolved Solids (TDS) reading is above the 5 ppm limit. Drain the tank completely. Refill with clean distilled water only. (Do not use tap water, filtered water, or bottled water.)

Other Potential Issues to watch for:

Issue	Likely Cause	Solution
Device does not start	Power cord unplugged or power switch is off. Possibly faulty power cable.	Check the power cable. Push and wiggle into the socket to confirm it is seated deeply inside. The switch's red light should be on when the switch is in the on position.
Hydrogen Leak Error repeats	The hydrogen leak detector is sensitive to humidity in the air.	Leaving the power on for a few days helps remove humidity from sensor.
Loud Rattling	Air Pump out of place	Look under the machine. Ensure all 4 rubber feet are pulled through the metal cabinet. If the rubber feet are missing, they may have been knocked loose. Follow instructions in the supplemental service manual to locate the air pump and pull the rubber feet through the holes.
Water Leaking	Internal Hose disconnected or drain hose plug is loose.	Unplug the machine. Check that the drain plug is secure under the machine. If this does not correct the issue, see the service manual.
Bag not filling	Loose connection to air bag and valve. Possible internal hose connection issue.	While the bag not filling is normal to some degree, you can check to see if it is an issue by covering the mask for 10 seconds to see if it fills. Then start breathing normally. If the bag still does not fill, this may mean the air pump is not working properly and can be dangerous/problematic. Without the air pump, H_2 concentrations can rise above 4%. Discontinue use and see the supplemental service manual for repair information.

Issue	Likely Cause	Solution
No bubbles in tank	Low concentration setting causes only a few bubbles. Other potential cause: PEM not producing	Increase concentration to 4%. If that still does not work, STOP use and see the supplemental service manual for repair information. Running the machine without proper water flow could damage the machine.
Weak air flow	Clogged HEPA filter or pump issue	Replace HEPA filter, restart machine. If issue continues, see the supplemental service manual for repair information.
Knob unresponsive	Firmware error or loose connection	Power cycle device, if issue continues, see the supplemental service manual for repair information.

12. Warranty & Support

Your InhaleH_2 Unit includes a three-year warranty covering workmanship and assembly quality. The warranty does not cover damage resulting from:

1. Misuse or improper operation
2. Use of any liquid other than distilled water
3. Unauthorized repairs or modifications

For additional resources and support, visit: InhaleH2.com/support

support@inhaleH2.com

Toll-free: 855-291-2422

International: +1-630-344-9914

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www.inhaleH2.com