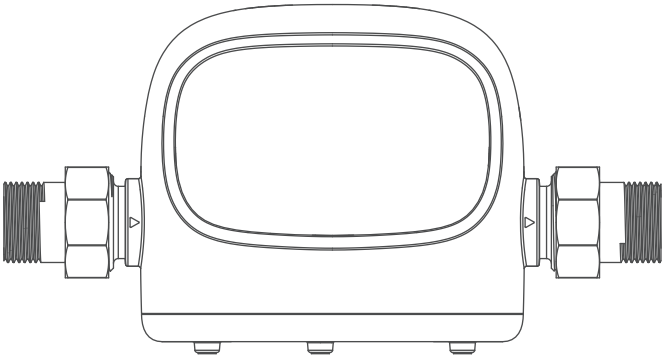
Waterdrop

# Instruction Manual

Please keep this Instruction Manual for future reference.



## Automatic Water Shutoff

If you have any questions or concerns when installing, operating or maintaining your product call our toll free number:

**1-888-352-3558 (U.S.)**

or send mails to

**service@waterdropfilter.com**

WD-WHM

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# Before Installation

## Inspect the Package

Open the box and take out the system housing, all the components and connection fittings. Inspect them according to the parts list to ensure nothing is left out or damaged during shipping. If there are any parts cracked or broken, please feel free to contact our customer service for help:

**TEL: +1-888-352-3558 (U.S.)** **E-mail: service@waterdropfilter.com**

## Product Features

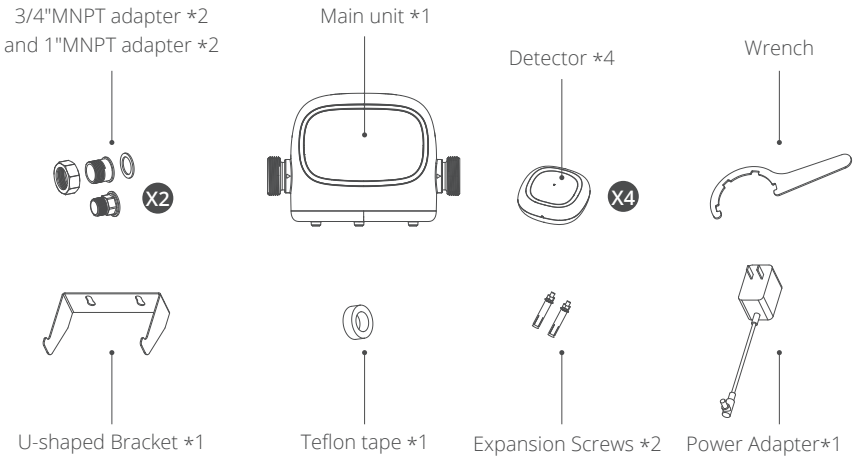
This machine is equipped with a leak protection function. It utilizes an internal flow meter and branch detector to monitor the presence of leaks in real-time within the house. When a leak is detected, it can promptly shut off the water source to prevent potential property damage for the user.

## Specifications

To achieve the optimal performance, it is highly recommended to use the system within the operational parameters.

| | |
|---|---|
| Model | WD-WHM |
| Feed Water Temperature | 40-100 °F / 4-38 °C |
| Feed Water Pressure | 14.5-72 psi/0.1-0.5 MPa |
| Feed Water Requirement | Municipal Tap Water |
| Rated Power | 5 W |
| System Voltage | 100-240 V |
| Rated Frequency | 50/60 Hz |

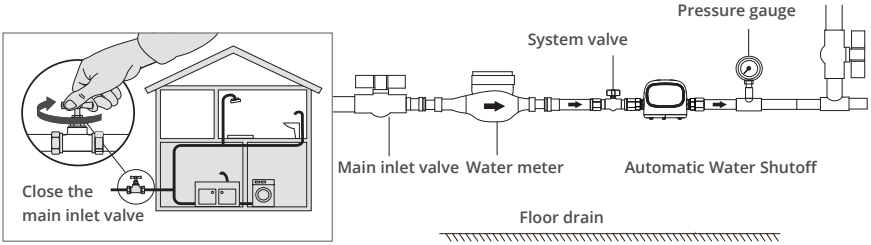
## Parts List



# Installation Tips

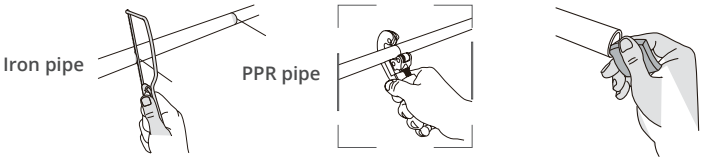
1. Close the main water inlet valve and open the outlet of the household equipment to drain the residual water in the pipes. During installation, please ensure that the direction of water flow aligns with the direction of water flow in the pipes.

**NOTE:** To avoid interruptions to your water supply due to special circumstances such as power outages, it is recommended to use a three-way fitting to directly connect the pipeline at both ends of the machine, allowing the water supply to function normally during a power failure.

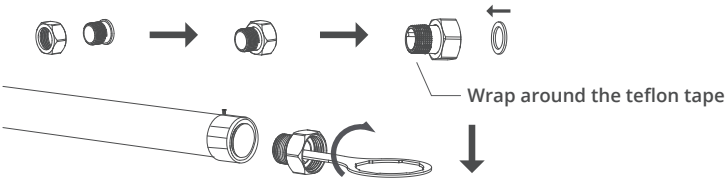



2. Use a PPR pipe cutter to trim the domestic water pipe to a length corresponding to the distance between the inlet and outlet of this product. If the current fittings are not suitable, please purchase the appropriate quick-connect fittings for the connection on your own.If the water pipe is made of iron, use a stainless steel saw to cut it to the appropriate length. At the same time, it is necessary to thread the corresponding threads required for installation at the iron pipe end.

**NOTE:** Please measure the length of the pipe that needs to be cut carefully, both excessive length and insufficient length will prevent proper installation. Before cutting, place a water container below the cutting point to prevent residual water in the pipe from wetting the floor.

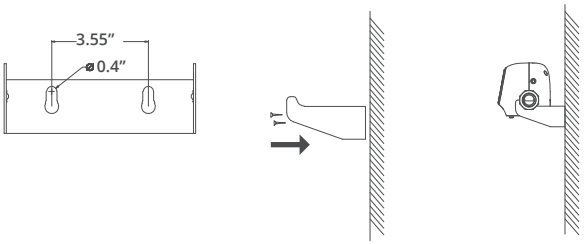



3. Open the packaging and take out the flexible joint assembly. As shown in the diagram, assemble the tongue-shaped joint (choose either a 1" or 3/4" MNPT adapter based on the pipe diameter) and nut first. Then, wrap the outer threads of the tongue-shaped joint thoroughly with raw material tape. After that, use the wrench provided in the accessories. As shown in the diagram, insert the small end of the wrench into the tongue-shaped flexible joint and rotate the wrench to tighten the assembled tongue-shaped joint component with one end of the water pipe. Install the joint component at the other end using the same method.



4. Place the white gasket (polytetrafluoroethylene gasket) inside the nut, and then tighten the nut with the copper head component.

5. Installation of Product Bracket: After measuring the position of the pre-filter with a ruler, take out the included U-shaped bracket. According to the hole spacing shown in the diagram, drill holes with a spacing of 3.55”. Once the holes are drilled, insert the expansion tube, use expansion screws to secure the U-shaped bracket, tighten the fixing screws, and finally, hang the pre-filter on the U-shaped bracket, as shown in the diagram.




6. Slowly open the water inlet valve until water is discharged from the household water equipment, then completely close the water outlet. Pay attention to check if there is any leakage or slow seepage between the various components of the pre-filter. Additionally, you can open and close the drainage valve multiple times, carefully observing. If any leakage or seepage is detected, immediately check whether it is tightened. It is recommended to observe for more than 5 minutes.

# Startup Guide

## Principle of Operation

1. By setting a single uninterrupted water usage flow through this machine, users can choose different levels of water consumption or unlimited usage. When the set value of the single uninterrupted water usage flow is reached, the machine will sound an alarm, cut off the water supply, preventing issues such as leaks or unclosed faucets.
2. The detector performs targeted monitoring. If a leak occurs, the detector's circuit will transmit a signal, causing the indicator light to flash. This leak signal is then conveyed to the main unit, which triggers an alarm sound. Simultaneously, the main unit automatically closes the ball valve to cut off the water supply, preventing further leakage.

## Operation Method

**Step 1: Power on self-check**

Connect the power supply, the ball valve self-checks, and wait for the startup self-check to complete

**Step 2: Set functional parameters**

- **Single maximum water usage setting: Recommended setting is 150 gallons (default).**To avoid the risks of leakage and filter blockage, some parameters have already been set for the product. You can also adjust these settings according to the actual water usage in your household by following the instructions below. Here is the method for setting the parameters. Press and hold the "set" button for 3 seconds to enter the single maximum water quantity setting. The main screen displays the current single maximum water usage. Press the "select" button to adjust the setting, and long-press to continuously change the setting within the range of 30 to 300 gallons. Adjust to OFF to cancel the single maximum water usage setting. After 3 seconds of inactivity, the current setting is automatically saved, exit the setting, and enter standby mode. Alternatively, press the set button to switch to the next setting page and save the current setting.
- **Single maximum water usage duration setting: Recommended setting is 120 minutes (factory default).**Press and hold the "set" button for 3 seconds to enter the function options. Press the "set" button again to enter the single maximum water usage duration setting. The main screen displays the set single maximum water usage duration. Press the "select" button to adjust the setting, and long-press to continuously change the setting within the range of 30 to 180 minutes. Adjust to OFF to cancel the single maximum water usage duration setting. After 3 seconds of inactivity, the current setting is automatically saved, exit the setting, and enter standby mode. Alternatively, press the set button to switch to the next setting page and save the current setting.

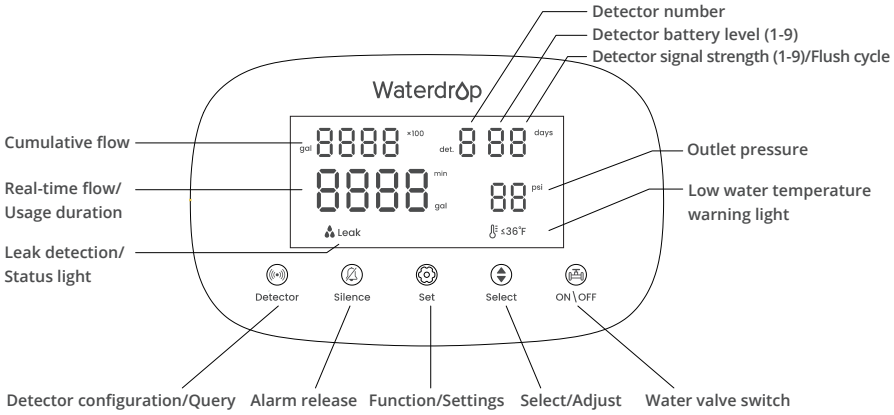
**Step 3: placement of detector**

- The detector is already connected by default, and the main unit corresponds to the detector number in the query.
- Please place the detector in areas prone to leaks, such as the kitchen or bathroom. If a leak is detected, the detector sends a wireless signal, and the main unit triggers an alarm while cutting off the water supply.
- After the initial setup, pour water at the current location to check if it triggers the main unit alarm. Press the "Detector" button to check the detector's battery level and signal status sequentially. It is advised to use when the signal is greater than 2.

**NOTE:** It is recommended for communication scenarios to be indoor, with a communication distance within 100 meters. Large-scale metal obstructions and high-power appliances may cause interference. Communication distances exceeding two floors are not recommended.

# Owner's Manual

## Program Usage




### 1. Power-on self-test

- After the power is turned on, the entire display screen blinks once, accompanied by a beep from the buzzer, entering the self-check of the whole system.
- During the self-check process, the water inlet solenoid valve is first closed and then opened; main screen T1 blinks, and the rest of the display areas go off.
- After the self-check is completed and enters the standby wake-up state, if there is no button operation, the entire screen will go off after 60 seconds, entering sleep mode.

### 2. Button operations

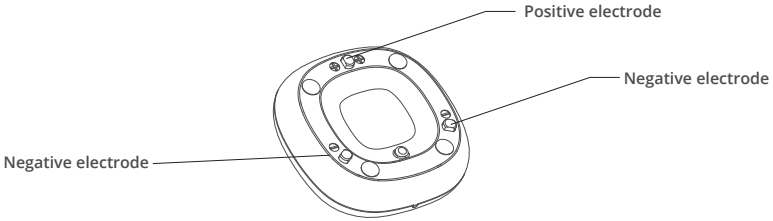
- " ": In standby mode, press and hold for 3 seconds, a beep sounds, entering the detector matching mode; press to view the detector status.
- " ": In alarm mode, press to silence the alarm; press and hold for 3 seconds to clear the fault code.
- " ": In standby mode, press and hold for 3 seconds to enter the function options (parameter setting, leak detection).
- " ": In setting mode, press to adjust parameters.
- " ": In standby mode, press and hold for 1.5 seconds to open or close the water-inlet ball valve.

### 3. Detector pairing / Detector status query

- The factory detectors are pre-paired.
- Detector pairing operation: In standby mode, press and hold " " for 3 seconds, a beep sounds, entering the detector matching mode. The main screen displays detector number L001, and the detector status area shows 1--, indicating the ongoing matching of detector 1. Simultaneously, press and hold the detector leak detection point "+/-". After the main unit receives the signal, the beep indicates successful pairing, and the status displays real-time battery level and signal strength for detector 1. Press the " " button to switch to the desired detector number, sequentially match the remaining detectors. The maximum number of detectors for pairing is 8. After pairing is complete, wait for 15 seconds to automatically exit, or press and hold the " " button for 3 seconds to exit pairing.

**NOTE:** In detector pairing mode, press and hold " " for 3 seconds to exit pairing mode, and press and hold " " for 3 seconds to clear the current detector's configuration.

- After detector pairing is complete, place the detector in areas prone to water leakage such as the kitchen or bathroom. If a leak is detected, the detector sends a wireless signal, triggering an alarm on the main unit and cutting off the water supply. After initial placement, pour water in the current location and check for triggering of the main unit alarm. Check the detector signal status, and it is recommended to use it when the signal is greater than 2.
- **Detector status query:** In standby mode, press the " " button, and the screen displays detector battery level and signal strength information. Press continuously to query the status of multiple detectors. The battery level and signal strength range from 1 to 9.




**NOTE:** Each detector has 2 negative poles and 1 positive pole. During pairing, use your fingers to simultaneously hold down the positive pole and any one of the negative poles (it is recommended to have moist hands).

**4. Alarm disarm / System reset**

- **Fault/Alarm disarm:** When the system detects a fault or water leakage (continuous flow or detector detects water leakage alarm), press the " " button to disarm the buzzer alarm. After the fault is resolved, long-press the " " button for 3 seconds to clear the fault code and reset the system. Alternatively, you can directly long-press the " " button for 3 seconds to reset the system.
- In standby wake-up state (not in alarm state), long-touch the " " button for 8 seconds to restart the entire system (similar to a power cycle). Paired detectors and the set single maximum water usage will still be retained, while the cumulative flow will be reset to zero.

- **5. Function settings**

- **Single maximum water usage setting (Factory default: 150 gallons)**

In standby mode, long-press the " " button for 3 seconds, a beep sounds, entering the single maximum water quantity setting. The main screen displays the current single maximum water usage, and the "gal" indicator lights up. Press the " " button to change the setting value, long-press to continuously change the setting value. The setting range is 30 gallons to 300 gallons, increasing by 30 gallons each time. OFF indicates unlimited. After 3 seconds of inactivity, exit the setting and enter standby mode.

- **Single maximum water usage duration setting (Factory default: 120 minutes)**

In standby mode, long-press the " " button for 3 seconds, a beep sounds, entering the single maximum water quantity setting. Press the " " button to enter the single maximum water usage duration setting. The main screen displays the set single maximum water usage duration, and the "min" indicator lights up. Press the " " button to change the setting value, long-press to continuously change the setting value. The setting range is 30 minutes to 180 minutes, increasing by 30 minutes to 180 minutes, increasing by 30 minutes each time. OFF indicates unlimited. After 3 seconds of inactivity, exit the setting and enter standby mode.

## 6. Special functions

- **Leak detection**

In standby mode, press and hold the " " button for 3 seconds, and the buzzer will sound. Then, press the " " button continuously to enter the " Leak" detection function. The main screen displays the leak detection countdown "cd30", and the "min" indicator lights up. The real-time water pressure is displayed, and the "psi" indicator lights up. Press the " " button to initiate the leak detection function. If the pressure does not drop below 7.3 psi within 30 minutes, indicating no leakage, the system will automatically exit the leak detection and return to standby mode. During the leak detection process, you can also press the " " button to manually exit. If the pressure drops below 7.3 psi within 30 minutes, indicating a leak, the system will enter leak alarm mode, and the main screen will display fault code E003.

- **Water valve switching function (Default: enabled)**

In standby mode, press and hold the " " button for 1.5 seconds, and the buzzer will sound. This allows for the operation of opening and closing the inflow ball valve. When the valve is open, the " " button light is on, and when the valve is closed, the " " button light goes off. During the switching process, it blinks.

- **Low temperature prompt**

When the water temperature is lower than 36°F, the status light flashes to prompt.

## 7. Leak alarm

- **Single-use water exceeds alarm:** When continuous water usage exceeds the set value, the water inlet solenoid valve starts to close. The indicator light blinks during the closing process and goes off when closed. At this moment, the screen displays **E001**, and the buzzer emits a warning sound. Press " " to disarm the buzzer alarm. After troubleshooting, long-press " " for 3 seconds to reset the system, reopen the water inlet solenoid valve, and enter normal operation mode.
- **Single-use water exceeds time alarm:** When continuous water usage exceeds the set value, the water inlet solenoid valve starts to close. The indicator light blinks during the closing process and goes off when closed. At this point, the leak indicator light blinks, and the screen displays E002. The buzzer emits a warning sound. Press " " to disarm the buzzer alarm. After troubleshooting, long-press " " for 3 seconds to reset the system, reopen the water inlet solenoid valve, and enter normal operation mode.
- **Leak detection alarm:** During leak detection, if the pressure drops below 7.3 psi within 30 minutes, indicating a leak, the system will enter leak alarm mode. The main screen displays fault code E003, and the buzzer emits a warning sound. Press " " to disarm the buzzer alarm. After troubleshooting, long-press " " for 3 seconds to reset the system, reopen the water inlet solenoid valve, and enter normal operation mode.
- **Detector detection alarm:** When a detector detects a leak, it sends a signal to the main unit. The main unit triggers an alarm, and the screen displays L0+detector number (L001, L002). The water inlet solenoid valve starts to close, and the indicator light blinks during the closing process, going off when closed. The buzzer emits a warning sound. Press " " to disarm the buzzer alarm. Check for and eliminate the leak issue at the corresponding detector bottom. After completion, long-press " " for 3 seconds to reset the system, reopen the water inlet solenoid valve, and enter normal operation mode. If the detector isn't promptly addressed, the detector buzzer will sound for 5 minutes every 2 hours.

**8. Power-off memory / Power control**

After a power outage and restart, the system will return to its pre-power-off state (e.g., if the system was in an alarm state before the power outage, it will resume the alarm state after restart).

The unit operates with an external power adapter supplying 5V/1A. In case of a power adapter supplying 5V/1A, it can timely shut down the drain motor in the event of a fault. If the power is suddenly cut off while the motor is running, it will maintain the current action. For example, if the power is cut off suddenly during the opening process, it will continue to open. If the power is cut off suddenly during the closing process, it will continue to close.

## Fault Alarm

| Fault code | Solution |
|---|---|
| E001<br>E002 | **E001 Single-use water exceeds alarm**<br>**E002 Single-use water exceeds time alarm**<br>Upon entering the alarm, immediately close the water inlet ball valve. Press " " to disarm the buzzer alarm. After troubleshooting, long-press " " for 3 seconds to clear the fault code and enter normal operation mode. |
| E003 | **Leak test alarm**<br>Press " " to disarm the buzzer alarm. After troubleshooting, long-press " " for 3 seconds to clear the fault code and enter normal operation mode. |
| E004<br>E005 | **E004 Water inlet ball valve fails to close alarm**<br>**E005 Water inlet ball valve fails to open alarm**<br>Press " " to disarm the buzzer alarm. After troubleshooting, long-press " " for 3 seconds to clear the fault code. Perform a system restart and self-check. If the fault persists, please contact customer support. |
| E008 | **Detector low battery alarm**<br>The main unit enters the alarm state. Press " " to disarm the buzzer alarm. After replacing the battery, long-press " " for 3 seconds to clear the fault code. |
| E009 | **Detector weak or lost signal alarm**<br>Upon entering the alarm, press " " to disarm the buzzer alarm. Adjust the detector to an appropriate location, then long-press " " for 3 seconds to clear the fault code. |
| L001,<br>L002... | **detector leak detection alarm**<br>After the alarm, the main unit continuously buzzes, and the detector buzzes for 5 minutes every 2 hours. Simultaneously, the water inlet ball valve is closed. Press " " to disarm the buzzer alarm. After troubleshooting, long-press " " for 3 seconds to clear the fault code and open the water inlet ball valve. |

# Maintenance and Upkeep

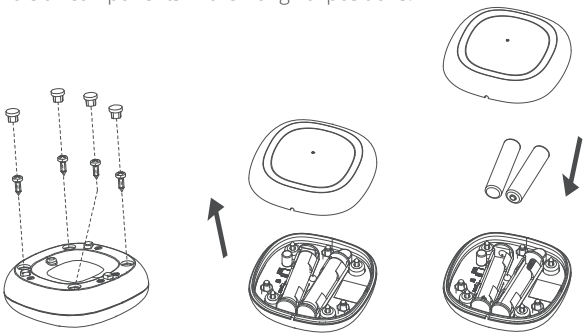
**1. Replacing detector battery**

Step 1: Remove the 4 silicone plugs at the bottom of the detector and unscrew the 4 screws using a Phillips screwdriver.

Step 2: Lift the upper shell of the detector.

Step 3: Remove the old battery from the detector and install the new battery **(Two AAA batteries).**

Step 4: Reassemble all components in their original positions.



# Troubleshooting

| Issue | Possible causes | Solutions |
|---|---|---|
| No outlet water | Verify if there is water at the water source. | Check if there is water in the water source. |
| | Verify if the main water valve is open. | Check and open the main valve. |
| | Check if the indicator lights on the main unit are illuminated. | If the indicator light is not on, press the Power Button to open the water inlet valve. |
| Low outlet flow | Check if the water inlet valve is fully open. | Fully open the main water inlet valve. |
| Water leakage at the joint | Confirm if any components on the filter have been disassembled manually. | Check if the sealing ring is misaligned or detached. |
| | Loose components. | Wrap thread seal tape at the threaded connection. |
| | Insufficient thread seal tape wrapped at the threaded connection. | Rewrap thread seal tape and tighten with a wrench. |
| | Rubber ring at the leakage point is aged or damaged. | Replace the rubber sealing ring. |

# Limited Product Warranty

The Waterdrop Automatic Water Shutoff (model number: WD-WHM) offers a 1-year warranty covering defects in materials and workmanship from the original date of purchase. If the product proves to be defective within 1 year from the date of purchase, call 1-888-352-3558, Monday to Friday, from 8:00 AM-5:00 PM (PST). During the warranty period, we will replace or repair any part deemed defective if the product has not been subjected to tampering, alteration, or improper use after delivery and has not been repaired by the manufacturer. The product is not warranted against misuse, use in abnormal operation temperature conditions, conditions outside listed operating parameters, use in commercial operations, or any other manner outside the product specifications set forth in the owner's manual. Our obligation does not include the cost of transportation. We are not responsible for damage in transit, and claims for such damage should be presented to the carrier by the customer.
Should service be required or if you have any questions regarding how to use your product, please call our customer service at 1-888-352-3558, Monday to Friday, from 8:00 AM-5:00 PM (PST). We have a professional customer service team and will take care of your problem on time.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with minimum distance 20cm between the radiator & your body.

Waterdrop

Filter Better · Live Healthier

**Manufacturer Technical Support**

**Tel:** 1-888-352-3558 (U.S.)

**E-mail:** service@waterdropfilter.com

24/7 365 Service

Made in China V001

Qingdao Ecopure Filter Co., Ltd.

# 漏保说明书

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| 伊可普 | 青岛伊可普电器有限公司包材设计图纸 |
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**印刷品技术要求** IMPORTANT PRINTING CAUTION

1. 印刷要求 □覆光膜 □覆亚膜 □UV油 □吸塑油 □油 □丝印
2. 材质要求 封面封底200g铜版纸，内页120g铜版纸
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