





Welcome home to

**watelo**

You are one step closer to  
cleaner water!

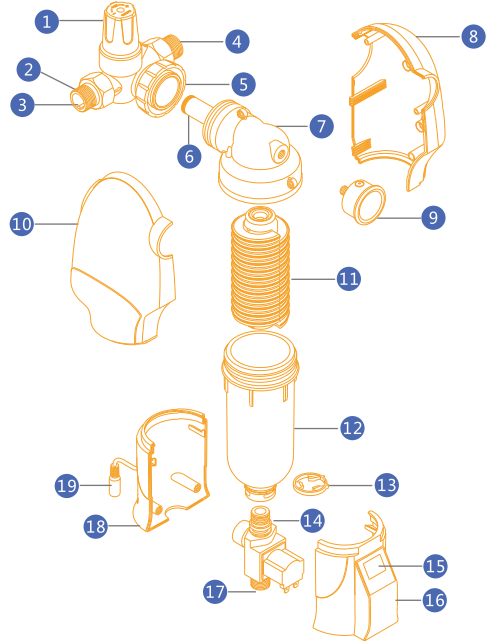
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# THE PRINCIPLE OF PERFORMANCE

## Structure Diagrams

- 1 Pressure Regulator Valve
- 2 G 3/4" connector
- 3 Inlet
- 4 Outlet
- 5 Nut
- 6 Outlet manifold
- 7 Housing end cap
- 8 Up-right cover
- 9 Pressure gauge
- 10 Up-left cover
- 11 Strainer
- 12 Transparent housing
- 13 Clamp ring
- 14 Flush solenoid valve
- 15 LED display screen
- 16 Front cover
- 17 Flush port
- 18 Back cover
- 19 Power connector



## Function & Feature



The intelligent pre-filter system, also known as the "pre-filter," serves the purpose of regulating water pressure. It comes with factory default settings and includes a pressure gauge for real-time pressure monitoring. When water pressure exceeds safe levels, the pre-filter can lower high water pressure and mitigate sudden pressure fluctuations by adjusting the pressure stabilizer valve knob. Additionally, when water

usage ceases, the pre-filter rapidly raises the static pressure behind the valve. This action automatically prevents water pressure from surpassing 58 PSI, ensuring safe pressure control and preventing the risk of water leakage due to water hammer effects. This system is especially valuable for individuals dealing with high and erratic water pressure.

### Patented Pre-Filter

Thorough cleaning of the Vortex filter system is performed.

### Accurate Regulation of Water Pressure

By using a pressure regulator valve, you can accurately manage water pressure, achieve pressure reduction, ensure pressure stability, and provide high-pressure protection.

A pressure regulation system with a pilot-operated pressure stabilization structure offers precise pressure control, effectively addressing the issue of diaphragm type pressure regulators failing due to diaphragm rupture.

### Long service life

Extensive strainer filtration, extended operational lifespan, and resistance to clogging.

### Outlet water pressure monitoring

The pressure gauge is employed for the purpose of observing water pressure.

### Easily visible when in use

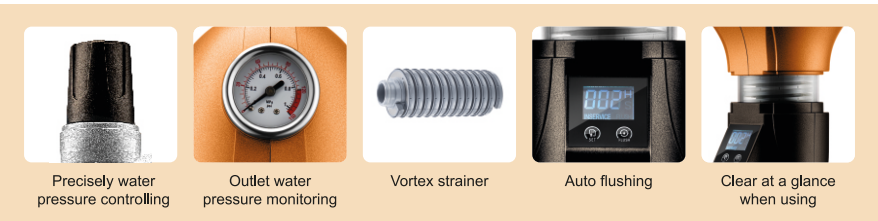
A clear filter housing for enhanced visibility of the filtration process.

### Automatic flush function

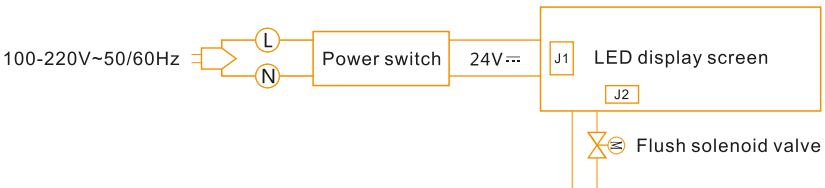
Complete automated flushing, eliminating the need for manual upkeep.

### Multiple interface connection

Effortless installation with a versatile 360° multi-mounting interface.



## Electrical diagrams



## Product Parameter

Product Name: Pre Filter	Item No: WATELO-PF50
Filter type: Stainless Steel Strainer	Filtration Accuracy: 50µm
Flow Rate: 6m³/h	Inlet Pressure: 0.1-0.4MPa
Application: Municipal Tap Water	Temperature:5°C~38°C
Voltage/Frequency: 100-220V ~ 50/60Hz	Rated Power: 5.8W
Product Size: 202x136x375(mm)	Anti Electric Shock Type: III

### Remarks:

The initial flow rate, which mimics the real water usage of a user, corresponds to the actual flow rate of the water purification system at the inspection center. This value can serve as a reference when users choose products.

## Introduction of filter cartridge

Type	Specification	Material	Qty
SUS strainer	50µm	Stainless steel 316	1 pc

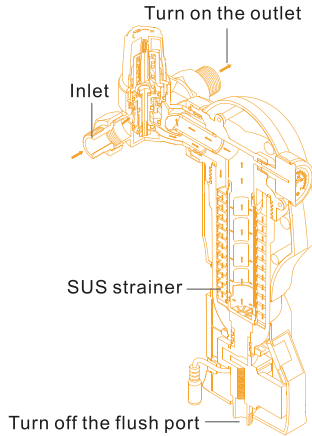
## Filter cartridge lifespan:

Over time, as the water purification system is continuously used, the water flow will gradually decrease. It is essential to replace the filter cartridge periodically to maintain the water flow at the standard level.

Type	Replace after	Parts diagram
SUS strainer	5 years	

## Water Production Principle:

In the water production mode, open the outlet and close the flush port. Source water initially enters the external surface of the strainer, then proceeds to its interior for filtration, eliminating larger particle impurities. The purified water is subsequently discharged from the outlet, as illustrated in Picture 1.



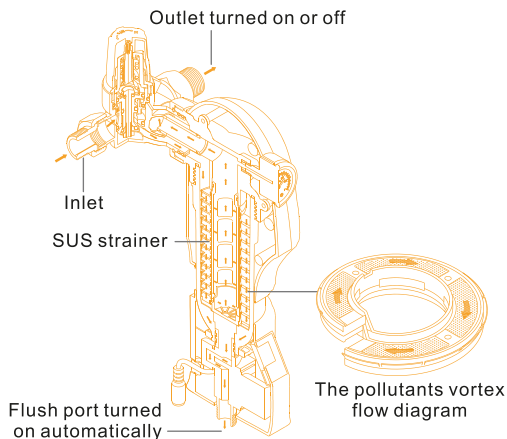
Pic.1 Water production principle

## Flush Principle

Following the use of a PF50 pre-filter for a certain duration, the strainer accumulates a significant amount of pollutants. If the strainer is not flushed promptly, it can become clogged, leading to a secondary pollution issue.

Pre-filter flushing: The flush solenoid valve opens automatically based on the programmed flushing cycle.

Subsequently, the flush solenoid valve closes automatically, as depicted in Picture 2.



Pic.2 Flush principle



# INSTALLATION

## Installation Notice

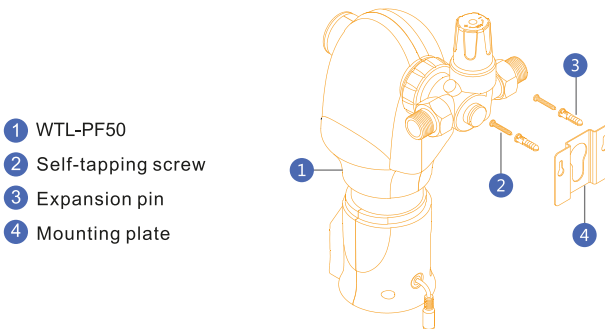
- 1.Ensure that installation is performed by qualified professionals. Verify the completeness of pre-filter accessories and the pre-filter's functionality.
- 2.Position the pre-filter system near a floor drain so that the sewage pipe can reach it.
- 3.Avoid outdoor installation and keep the pre-filter away from sources of ultraviolet light, heat, fuel, and various chemicals.
- 4.Ensure that all water-related pipelines, joints, and faucets comply with national standards.
- 5.Conduct a thorough post-installation inspection to check for any leaks in all joint positions and assess the pressure gauge readings.

## Installation Steps

For household water filtration, this product is typically installed at the household total inlet, located behind the water meter. The installation guidelines below use PPR pipes as a reference. In the case of household water pipes connected with metal hard pipes, make additional pipe additions as necessary according to the specific conditions.

### Securing the Pre-filter

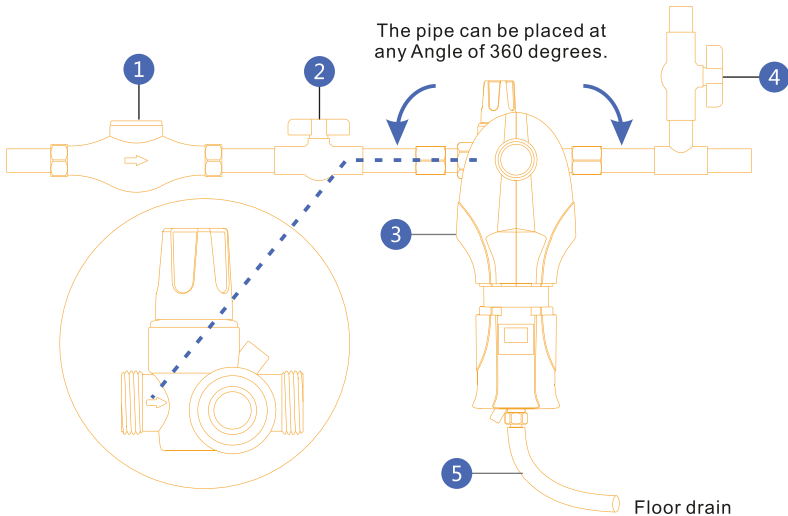
- 1.Choose the installation location based on the product's dimensions, ensuring a minimum distance of 300mm between the drainage connector and the ground. This arrangement allows for easy disassembly of the transparent housing for strainer cleaning and facilitates efficient sewage discharge. Use a hammer drill to create two holes in the wall. Insert expansion pins into the wall and tap them flush.
- 2.Align the mounting plate screw with the hole for the expansion pin. Use two self-tapping screws to fasten the mounting plate securely to the wall. Pay close attention to ensure the screws are securely in place.
- 3.Attach the pre-filter to the mounting plate (refer to Pic.3 for guidance).



Pic.3 diagram of pre filter fixing

## Installation of Water Pipeline

1. Begin by closing the main water inlet valve, and open the outlet to drain any remaining water from the system.
  2. Connect one end of the PPR pipe to the main water inlet valve through welding. Insert a 1/2" or 3/8" inch outer connector into a 1-inch nut, attach the outer end of the PPR pipe to the 1/2" or 3/8" inch outer connector.
  3. Weld the other end of the PPR pipe to the branch water valve. Insert a random 1/2" or 3/8" inch outer connector into a 1-inch nut, connect the outer end of the PPR pipe to the 1/2" or 3/8" inch outer connector, place a 1-inch gasket, and screw the 1-inch nut into the outlet of the pre-filter.
- Note: Ensure that the water flow direction aligns with the arrow on the product, and the pipe can be oriented at any angle within 360 degrees.**
4. Attach the stainless steel braided hose to the flush port.
  5. Slowly open the main water inlet valve, allowing the source water to flow through the pre-filter to all the equipment. Open the outlet valve of household equipment, let water flow out, and then close all the outlets. Monitor the pressure gauge and all joint connections for any potential leaks. It is recommended to run water for 10 minutes to check for leaks after installation (as depicted in Pic.4).

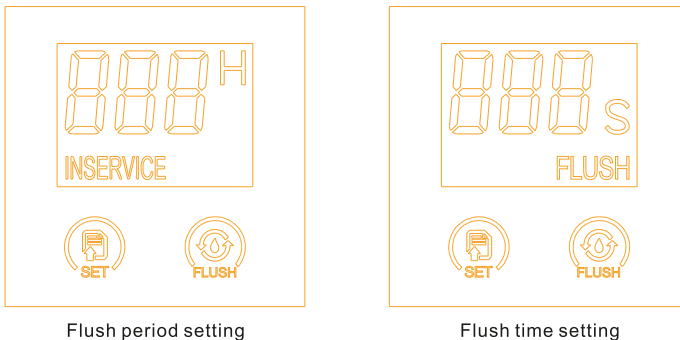


Pic4. pipeline installation diagram

- |                      |                                |              |
|----------------------|--------------------------------|--------------|
| 1 Water meter        | 2 Total water inlet valve      | 3 Pre filter |
| 4 Branch water valve | 5 Stainless steel braided hose |              |

## Setting Auto-Flush Parameters

1. Once you've connected the power adapter, the LED display will illuminate. By default, the auto flush is preconfigured to occur every 240 hours, which will be displayed on the screen. If there's no activity, the screen will go black/off. To reactivate the screen, simply press either the "SET" or "FLUSH" button.
2. To customize the auto flush schedule, follow these steps:
  - a. Simultaneously press and hold the "SET" and "FLUSH" buttons for at least 3 seconds to enter the flush period adjustment mode. The displayed number will blink, and you can modify the hours by pressing the "SET" button to navigate and the "FLUSH" button to adjust the number (ranging from 0 to 9).
  - b. The auto flush period is measured in hours, while the flush time is in seconds. After configuring the hours, hold down the "SET" button to proceed with setting the flush time. The default flush period is 240 hours, but you can adjust it to any value between 1 and 999 hours. The flush time can also be set anywhere between 1 and 999 seconds.
  - c. Once you've set the flush time, press and hold both the "SET" and "FLUSH" buttons simultaneously to save the parameter settings. The unit will then return to its operational state (Main Screen).
3. For a manual test of the flush function, press the "FLUSH" button to enter flush mode, and then press it again to activate the flush process. The countdown will begin according to the seconds you've configured, and the unit will stop flushing when finished. If additional flushing is needed, simply repeat the process.
4. Some important considerations during the parameter setup:
  - a. If there is no activity for 15 seconds, the unit will revert to the main screen and turn off, with any ongoing parameter adjustments not saved.
  - b. All saved parameter settings will be retained and won't be lost even if the power is disconnected.
  - c. To keep the LED screen always on, press and hold the "FLUSH" button for at least 3 seconds. Conversely, to turn off the LED screen, press and hold the "FLUSH" button for another 3 seconds.



Pic.5 Auto flushing parameters setting

# USAGE AND MAINTENANCE

## Notice

1. This item is designed for use with water from municipal, city taps, and wells. It should not be used in freezing conditions or with water exceeding 38°C in temperature.
2. It is advisable to perform a manual test of the strainer's flushing function on a monthly basis to ensure it is working correctly.
3. During routine cleaning and maintenance, take care to preserve the integrity of all components. When servicing the item, it is essential to use original replacement parts to maintain its performance.

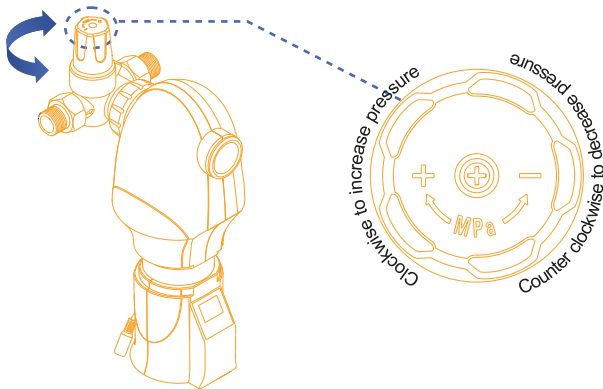
## Method

Once you've installed the system, open the main water inlet valve. This activates the pre-filter, and you can monitor the water pressure. If the water pressure becomes too low or too high, it's advisable to have a professional installer adjust the pressure regulator valve to bring it within the normal range of 0.1-0.4 MPa.

Over time, you may notice impurities that have been captured in the transparent housing. These impurities can affect the water output and the pressure of your home water equipment. To address this, it's necessary to flush out the accumulated impurities.

1. If the incoming water pressure is excessively high or low, or if there is a reduced flow when you open a faucet or other water appliance, you can address this by making adjustments to the pressure regulator valve on the pre-filter. When you activate the "FLUSH" function, the pressure gauge will display the current water pressure after all the water has been drained from the flush port.

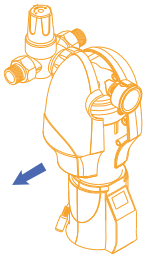
To fine-tune the water pressure, turn the pressure regulator valve clockwise to raise the outlet pressure. Conversely, turning it counterclockwise will lower the outlet water pressure. This adjustment is depicted in Picture 6 for reference.



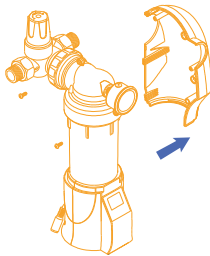
Pic.6 pressure regulator valve adjustment diagram

2. If the strainer has gathered adhesive residues or debris, or if it has been in operation for around half a year, and regular flushing fails to restore its cleaning effectiveness, causing a reduction in water flow and household water appliance pressure, you have the option to detach the strainer. For cleaning purposes, follow the instructions shown in Picture 7, utilizing a cleaning solution and a brush.

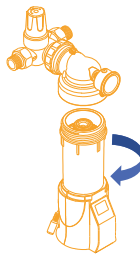
- 1) Begin by removing the upper-left cover, and then use a screwdriver to detach the upper-right cover.
  - 2) Next, disassemble the transparent housing components and extract the strainer. Rotate the lower fixed end cap to access and disassemble each vortex mesh of the strainer. Clean and remove any impurities adhering to the strainer using a brush.
  - 3) Once cleaned, reassemble all the vortex mesh elements onto the strainer's shaft and securely fasten them to the end cap.
  - 4) Place the strainer components into the transparent housing and screw it into the housing's end cap.
  - 5) Secure the upper-right cover using two screws, and finally, install the upper-left cover.
- Additionally, it is recommended to keep the water inlet valve open for more than 3 minutes to confirm the absence of any leaks after completing the assembly.



Take off the up-left cover



Use the screwdriver to take off the up-right cover



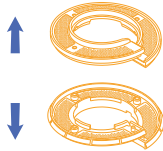
Take off the transparent housing



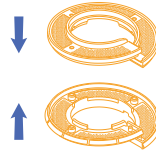
Take out the vortex strainer



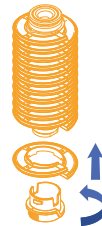
Disassemble the vortex mesh of strainer



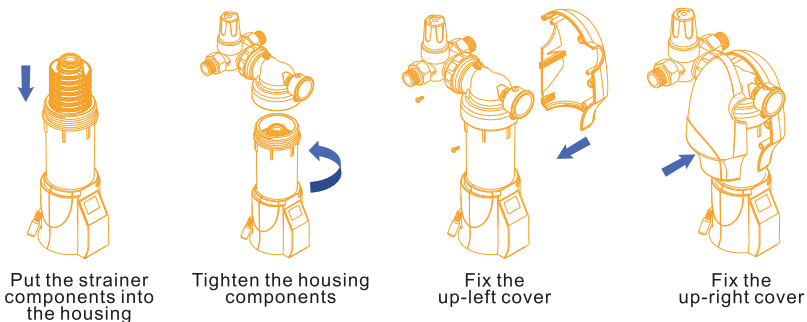
Clean and remove the impurities



Assemble the vortex mesh



Assemble the strainer components



Pic.7 disassemble&assemble strainer diagram

## Malfunctions and Handling

The following table is a list of possible malfunctions and their causes. Please refer to general troubleshooting methods or call 1 (844) -784-4411 for support.

Malfunction	Troubleshooting	Handling
Pressure values are not displayed	The pressure gauge is broken	Replace the pressure gauge
Deep purified water does not come out	Whether the source water is shut down	Wait to recover the source water
	Whether the water inlet valve is turned on	Turn on the water inlet valve
Less purified water runs from the faucet	Whether the total water inlet valve is turned on completely	Turn on the total water inlet valve completely
	Strainer is blocked	Cleaning the strainer
Leakage in the joint	The parts disassembled by self	Check whether the sealing ring falls off or is misplaced
	The parts in leakage position is loosen	Re tightened the parts
	The sealing ring in leakage position is aging or broken	Replace the sealing ring
Leakage in the joint of pressure gauge	The sealing spacer in pressure gauge is aging or broken	Replace the sealing spacer

## WHAT'S IN THE BOX?

WateLO PF50 Pre Filter	Screw Kit	G 1" Nut
G 3/4" Connector	Sealing spacer	Mounting Plate
Power Adapter	Manual	

## YOUR HARDWARE WARRANTY



### **WATELO One (1) Year Limited Warranty** for your WTL - PF50 WATELO Branded Products Only

#### **WHAT IS COVERED BY THIS WARRANTY?**

WATELO provides a warranty for the Pre Filter product and its included accessories as originally packaged, protecting against any defects in materials and workmanship when used under normal conditions, following the guidelines specified in the user manual. This standard warranty remains valid for a duration of ONE (1) YEAR starting from the date of purchase by the end-user (referred to as the Warranty Period). The guidelines set forth by WATELO encompass various aspects, including but not limited to information found in technical specifications, user manuals, and service communications.

The manufacturer is not responsible for repairing or replacing the unit if there is evidence of improper installation or operation, or if the unit has been tampered with in any way. Additionally, the warranty does not cover damages caused by external factors or natural disasters. Furthermore, it's important to note that the warranty only applies to the product itself and does not extend to the water system's components (such as pipes and faucets) or other appliances.

Regarding the WATELO Pre Filter, it contains a limited number of serviceable parts, which include the shut-off valve, pressure regulating valve core, and the power adaptor. In the case of a valid warranty claim, WATELO will replace the damaged part. If the damaged part is not one of the three serviceable components, the customer will always receive a new product instead of a reconditioned or refurbished one.



**EXTEND YOUR WARRANTY** when you register your PF-50 through our official website at: [www.watelo.com/register](http://www.watelo.com/register) when you register your product within 30 days from your purchase date.

# watelo™



## Your Innovative Water Solution

Watelo is committed to developing advanced water solutions and filtration systems that guarantee the utmost water cleanliness and safety. By choosing Watelo, you can have peace of mind and focus on what matters most - enjoying life with pure water while safeguarding your home and family.

[www.watelo.com](http://www.watelo.com)

☎ 1 (844) -784-4411