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› Watts Premier RO Pure Plus VOC 4-Stage Reverse Osmosis System (Model WP531417) User Manual

Watts Premier WP531417

Watts Premier RO Pure Plus VOC 4-Stage Reverse Osmosis System

Model: WP531417 - User Manual

1. INTRODUCTION

The Watts Premier RO Pure Plus VOC 4-Stage Reverse Osmosis System is designed to provide clean, great-tasting drinking water by effectively reducing various impurities. This compact unit fits conveniently under most counter spaces and features a user-friendly design for installation and maintenance.

The system utilizes a multi-stage filtration process to ensure high-quality water:

- **Stage 1: 5-Micron Sediment Filter** - Reduces dirt, silt, and rust particles.
- **Stage 2: 5-Micron Carbon Block Filter** - Reduces chlorine taste and odors.
- **Stage 3: 50 GPD Membrane** - Reduces dissolved solids and contaminants such as chromium, arsenic, copper, lead, cysts (Giardia, Cryptosporidium).
- **Stage 4: VOC Carbon Block Final Polishing Filter** - Removes Volatile Organic Compounds (VOCs) including MTBEs, Atrazine, Benzene, Chloroform, Lindane, and Xylenes.

RO Pure Plus Reverse Osmosis System



Stage 1:

Sediment - A 5 Micron Sediment Filter traps sediment and other particles like dirt, silt and rust which affect the taste and appearance of your water.

Stage 2:

Carbon Block - A 5 Micron Carbon Block Filter reducing Chlorine, and other materials that cause bad taste and odor.



Stage 3:

50 GPD Membrane - A Semipermeable Membrane removes TDS, Sodium and a wide range of contaminants such as Chromium, Arsenic, Copper, Lead as well as Cysts, such as Giardia and Cryptosporidium.

Stage 4:

VOC (Volatile Organic Compound) Carbon Block - A high quality VOC Final Polishing Filter after the water storage tank to remove MTBE's, Atraine, Benene, Chloroform, Lindane and other VOC's from your drinking water.



This image illustrates the four distinct filtration stages of the RO Pure Plus system, detailing the function of each filter in purifying water.

2. SYSTEM COMPONENTS

The Watts Premier RO Pure Plus system includes the following main components:

- RO Pure Plus Module with pre-installed filters (Sediment, Carbon Block, RO Membrane, VOC Filter)
- 3-Gallon Metal Storage Tank
- Brushed Nickel Top-Mount Twist Air-Gap Faucet
- Parts Bag (containing tubing, fittings, drain saddle, adapt-a-valve, etc.)



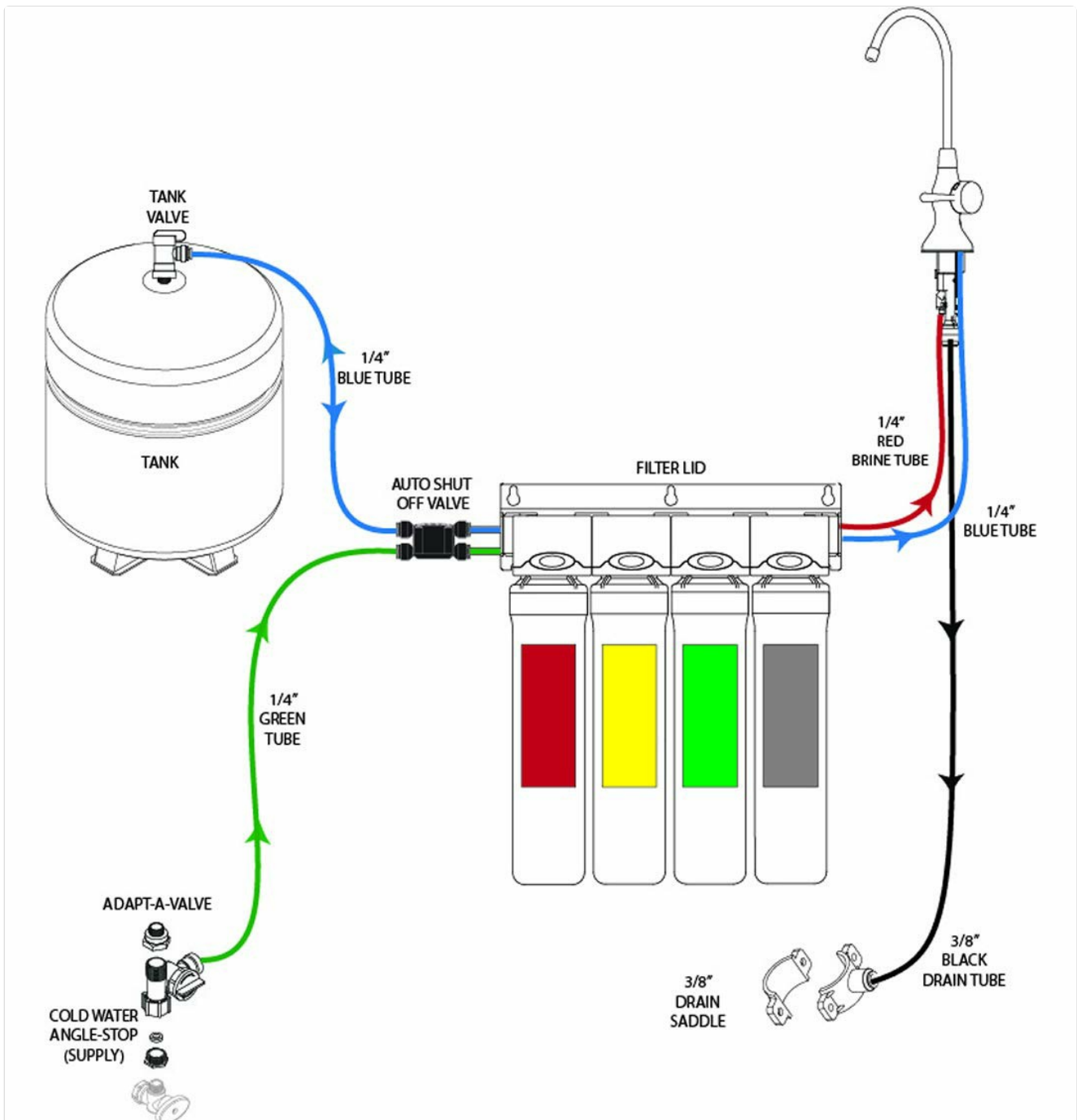
This image displays all the components included with the Watts Premier RO Pure Plus system, such as the filter module, storage tank, faucet, and various installation parts.

3. SETUP AND INSTALLATION

This system is designed for under-sink installation and operates using water pressure. While installation is generally straightforward, it is recommended to consult the full installation instructions provided with the product. Basic plumbing knowledge is beneficial.

3.1. Installation Overview

The system connects to your cold water supply, with filtered water dispensed through the dedicated faucet and wastewater directed to the drain. Ensure adequate space under your sink for the filtration module (approximately 15"L x 14"W x 15"H) and the storage tank.



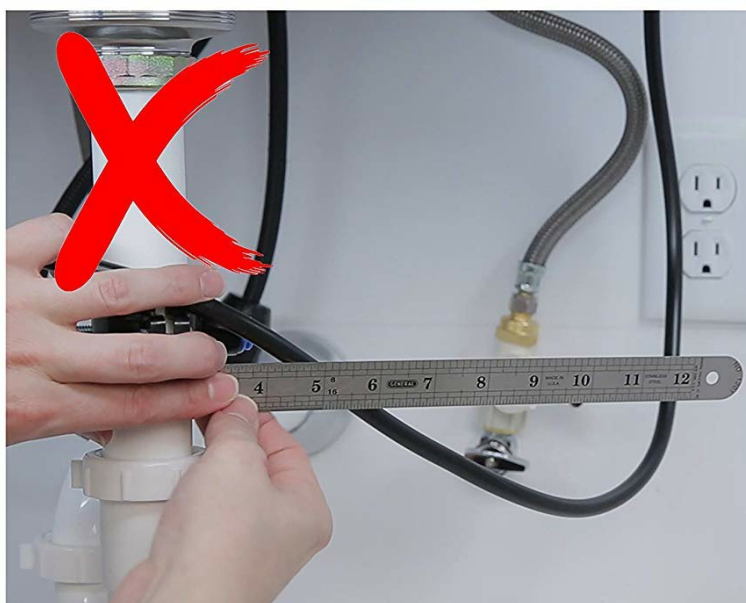
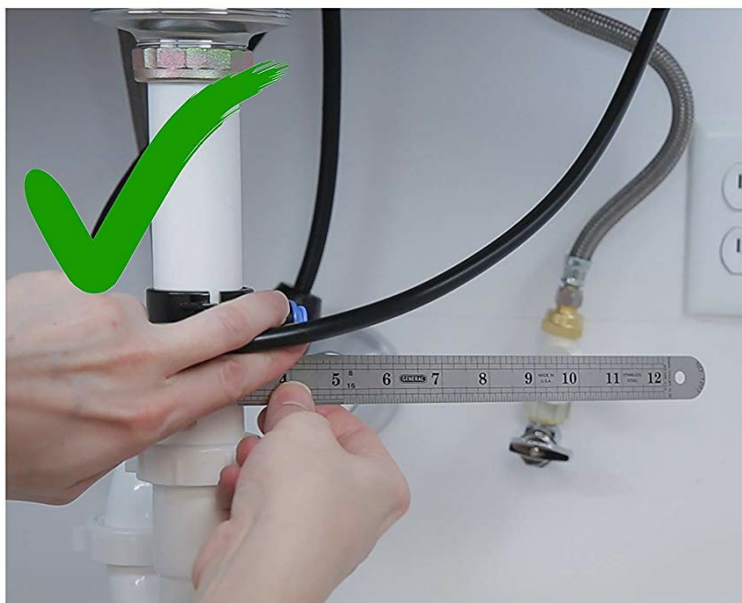
This diagram illustrates the complete plumbing connections for the RO system, showing how the cold water supply, filter module, storage tank, faucet, and drain saddle are interconnected.

3.2. Drain Saddle Installation

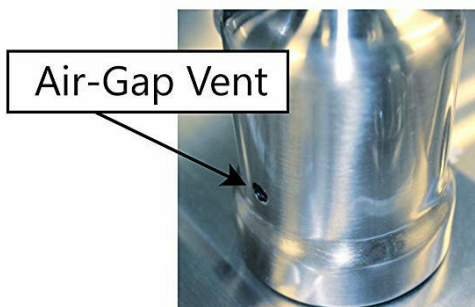
Proper drain saddle installation is crucial for preventing leaks and ensuring efficient wastewater disposal. The black drain line must have a downward slope from the faucet to the drain saddle. It should not drop below the drain saddle connection point.

Proper Drain Saddle Installation

The black drain line should be in a downward slope from the faucet, connected to the drain saddle. It should not drop below the ruler as shown in the picture.



If the drain line is hanging below the drain saddle you can get a leak at the air-gap vent located at the back of the faucet.



This image provides visual guidance on the correct installation of the drain saddle, emphasizing the necessary downward slope of the drain line to prevent issues.

3.3. Post-Installation Flushing

After installation, it is essential to flush the system thoroughly before consuming water. This process removes air and any manufacturing residues. Fill the holding tank completely, then drain it entirely. Repeat this process a minimum of four times over a 24-hour period. This ensures optimal water quality and prevents a "plastic" taste.

3.4. Leak Check

After turning on the water supply, carefully check all connections for leaks. Continue to monitor for leaks regularly for the first few days after installation.

4. OPERATION

The Watts Premier RO Pure Plus system operates automatically using your home's water pressure. Once installed and flushed, the system will fill the storage tank with purified water. To dispense water, simply open the dedicated RO faucet. The system will automatically refill the tank as water is used.

A slight gurgling or trickling sound from the drain line during filtration is normal. This indicates that the system is discharging concentrated wastewater, a standard part of the reverse osmosis process.

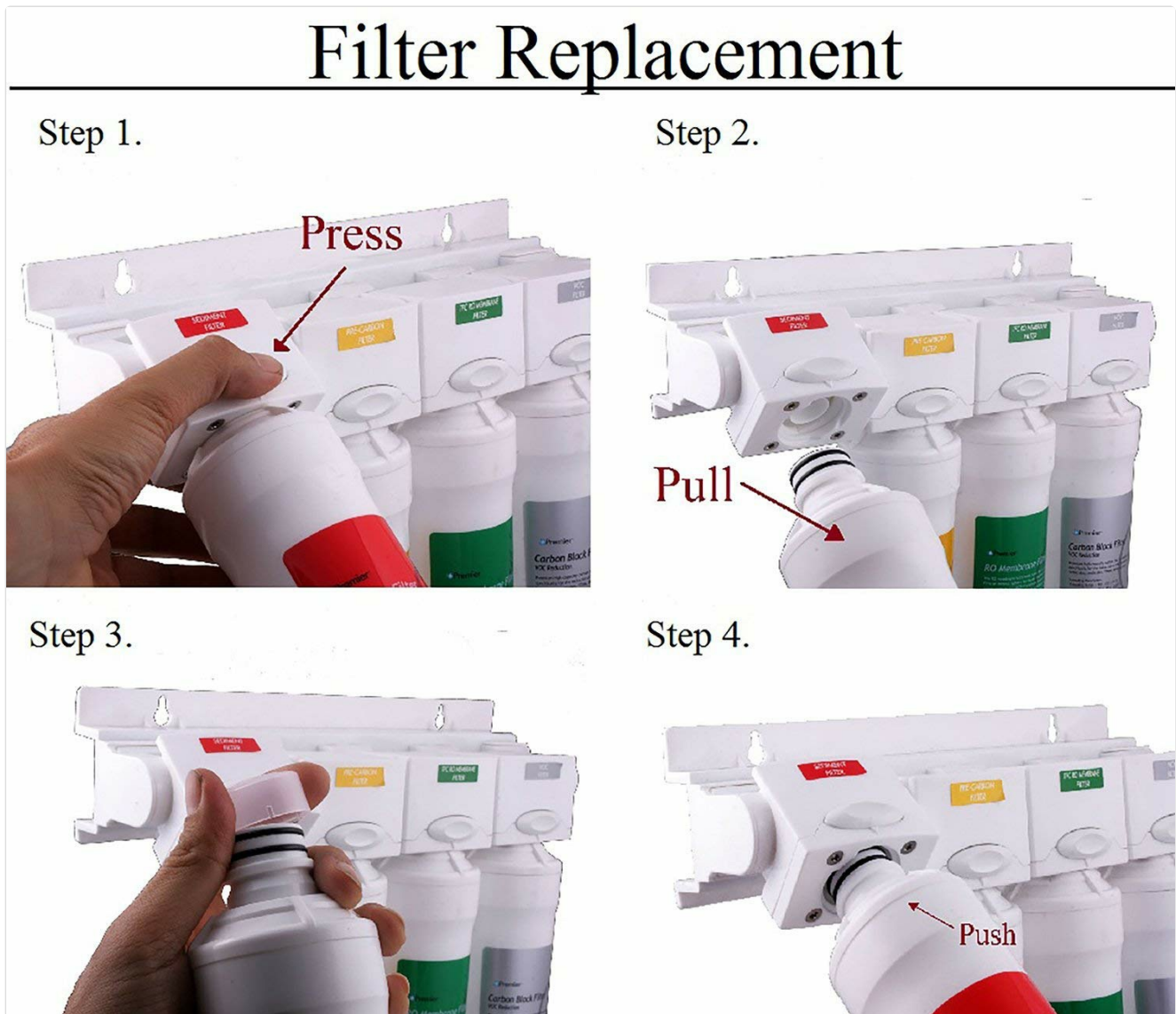
5. MAINTENANCE AND FILTER REPLACEMENT

Regular filter replacement is crucial for maintaining optimal system performance and water quality. Filter life can vary based on local water conditions and usage patterns.

5.1. Recommended Filter Replacement Schedule

- **Sediment and Carbon Pre-filters (Red and Yellow):** Every 6 months
- **VOC Filter (Gray):** Once a year
- **RO Membrane (Green):** Every 2 to 5 years

The system's faucet may include an indicator light that changes color to signal when filter replacement is due. Additionally, a significant drop in water production or a change in water taste can indicate that filters need replacement.



This image provides a step-by-step guide for replacing the quick-change filters: press the button, pull the old filter, insert the new filter, and push to secure.

5.2. Filter Replacement Procedure

The pre-installed filters feature a quick push-button release mechanism for hassle-free replacement without special tools:

1. Turn off the water supply to the RO system.
2. Press the release button on top of the filter housing.
3. Twist and pull the old filter cartridge downwards to remove it.
4. Insert the new filter cartridge, aligning it with the housing, and push it upwards until it clicks into place.
5. Turn on the water supply and check for leaks.

5.3. Compatible Filter Kits

Ensure you use genuine Watts Premier replacement filters for optimal performance and to maintain your warranty.



This image shows different filter kits designed for the RO Pure Plus system, such as the Bi-Annual Filter Kit (531102), Annual Filter Kit (531109), and multi-pack options (531160, 531161).

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your RO Pure Plus system.

6.1. Low Water Production or Slow Flow

- **Clogged Filters:** Sediment and carbon pre-filters can become clogged, especially with heavy use or poor water quality. Replace them according to the recommended schedule or if flow significantly decreases.
- **Low Water Pressure:** The system requires adequate incoming water pressure (minimum 40 PSI, maximum 80 PSI). Check your household water pressure.
- **Depleted RO Membrane:** The RO membrane can become fouled over time. If pre-filters are new and pressure is good, the membrane may need replacement (typically every 2-5 years). A TDS (Total Dissolved

Solids) meter can help determine membrane efficiency; replace if TDS readings are consistently above 010 PPM.

- **Air in Storage Tank:** Ensure the air pressure in the storage tank is correct (usually 5-7 PSI when empty).

6.2. Leaks

- **Loose Connections:** Ensure all tubing is fully inserted into quick-connect fittings. Push firmly until seated.
- **Air-Gap Faucet Leaks:** Leaks from the air-gap vent on the faucet are often caused by improper drain line installation.

Preventing Air Gap RO Faucet Leaks Caused By Incorrect Drainage

RO systems are engineered to prevent cross contamination between the drain and potable water lines. When the water used to clean the RO membrane is unable to drain, it can back up and leak at the other end of the connection.



NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of an RO system.

When troubleshooting a leak in an air gap faucet, check for these common causes:

1. The tubing between the faucet and drain saddle is drooping below the drain saddle or kinked, preventing water from draining through the drain saddle connection.
2. The drain saddle connection point is not aligned with the hole drilled in the tailpiece.
3. The hole drilled in the drainage tailpiece is too small. The hole should be 1/4 inch in diameter.
4. The drain saddle was installed too close to a garbage disposal. This can cause the drain opening to plug with debris.
5. Standing water in the tailpipe. If the drainage system is functioning properly you should only have standing water in the p-trap. Check for a blockage in the drainage system or vent piping.

This image highlights the RO faucet air gap and lists common reasons for leaks, primarily related to incorrect drainage setup. Common causes for air-gap faucet leaks include:

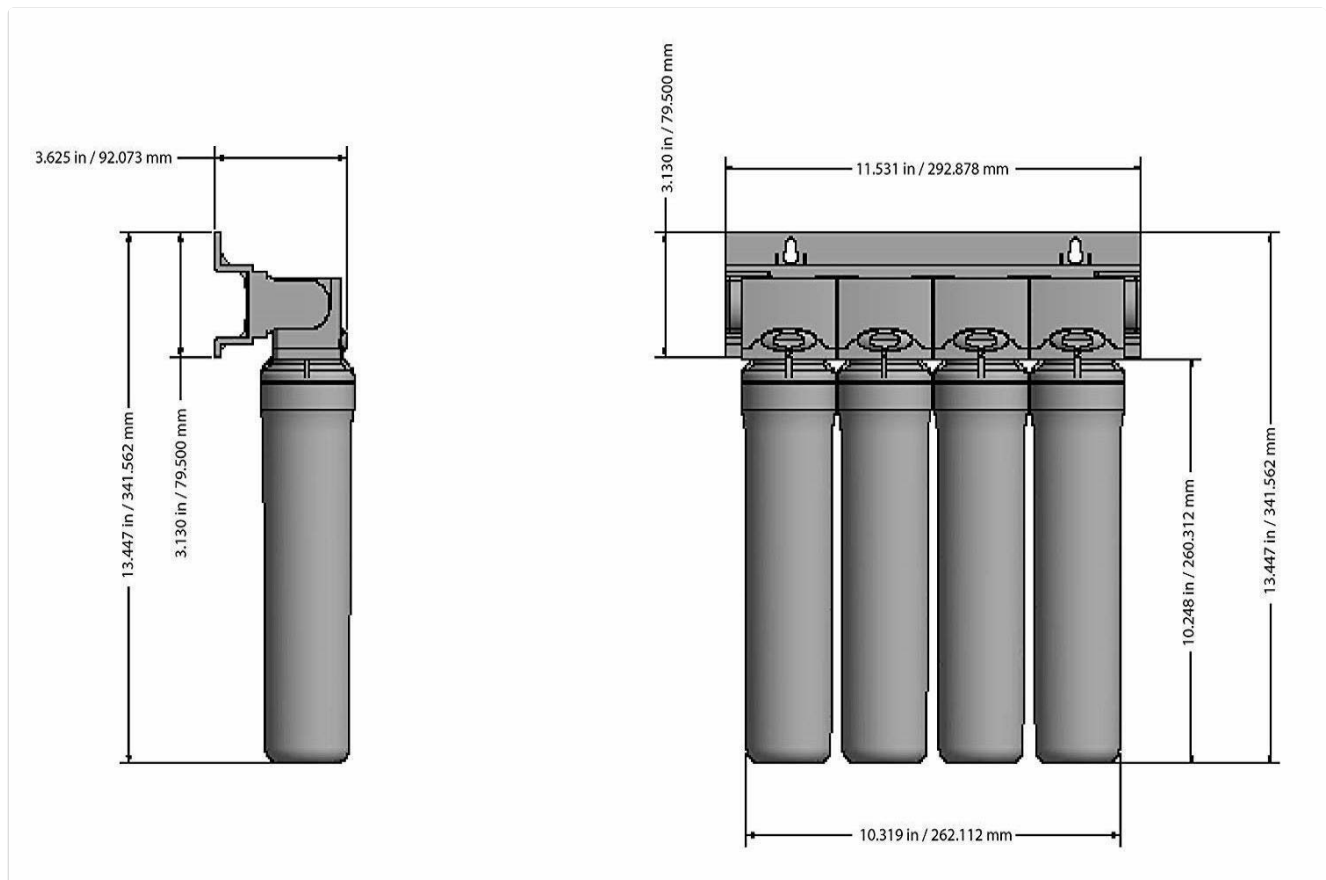
- Drain tubing is sagging or kinked, preventing proper drainage.
- Drain saddle connection point is not aligned with the hole drilled in the tailpiece.
- Drainage tailpiece hole is too small (should be 1/4 inch diameter).
- Drain saddle installed too close to a garbage disposal, causing debris to plug the drain opening.
- Standing water in the p-trap, indicating a blockage in the drainage system or vent piping.

6.3. Unusual Taste or Odor

- **Incomplete Flushing:** Ensure the system was flushed adequately after installation or filter changes (refer to Section 3.3).
- **Expired Carbon Filters:** Carbon filters have a limited capacity to absorb chlorine and VOCs. Replace them as recommended.

7. SPECIFICATIONS

Feature	Specification
Model Number	WP531417
Product Dimensions (L x W x H)	15" x 14" x 15"
Item Weight	16.3 Pounds
Installation Type	Under-sink (Compact design)
Power Source	Water Pressure
Operating Pressure Range	Maximum 80 PSI (Note: Product specifications list 100 PSI, but description states 80 PSI. Adhere to lower value for safety.)
Lower Temperature Rating	40 Degrees Fahrenheit
Certifications	NSF/ANSI Standards 53, 58, and 372



This technical drawing provides detailed dimensions of the filtration module, useful for planning under-sink installation space.

8. WARRANTY INFORMATION

Watts Premier products are manufactured to high-quality standards. For specific warranty details, please refer to the warranty card included with your product or visit the official Watts Premier website. Keep your proof of purchase for warranty claims.

9. CUSTOMER SUPPORT

For technical assistance, replacement parts, or further inquiries, please contact Watts Premier customer support. Contact information can typically be found on the product packaging, the official Watts Premier website, or by referring to the documentation included with your system.

You can also visit the Watts Premier store on Amazon for additional product information and compatible accessories:
Watts Premier Store

For general information about Watts products, you may visit: go.watts.com/UKLDB
