CASTLEGUARD
WATER FILTRATION SYSTEMS





# SINGLE TANK UPFLOW CARBON FILTRATION SYSTEM

## Installation / Operation Manual

Model #'s: CG-C-10, CG-C-15 & CG-C-20

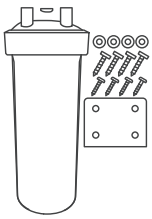
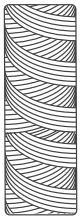
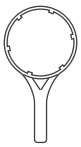
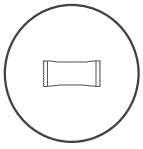
**CastleGuardWater.com**

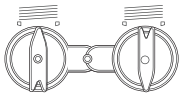
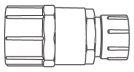
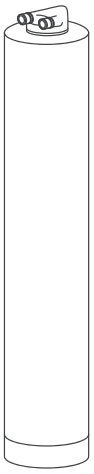
Have questions? Call us: 888-316-1832

# WELCOME TO CASTLEGUARD

Congratulations on your purchase of the CastleGuard Whole House Water Filter System. CastleGuard uses only the highest quality of granular activated and catalytic carbons, blended with KDF-55, that target a wide array of contaminants commonly found in municipal and well water supplies. Our systems are manufactured in an up-flow design with Vortech tanks, giving the influent water optimal contact time with media, and eliminating the concern of media channeling. This install does not require drain line connections or electrical connections.

**Note:** The parts supplied are intended to accommodate a variety of water supply lines. Additional fittings may be needed to fit to your plumbing. Visit CastleGuard.com to view our full line of installation kits.

| Parts | Descriptions | Qty |
|---|---|---|
|  | MIPT 1" Elbow Fittings | 2 |
|  | 20" Sediment Filter System: Blue Filter Housing, Mounting Bracket, Phillips Head Screws (4., Bolt Head Screws (4., and Washers (4. | 1 |
|  | Sediment Filter: 20", 5-Micron Polyspun Sediment Filter | 1 |
|  | Sediment Filter Spanner Wrench | 1 |
|  | O-Ring & Lubricant | 1 |

| Parts | Descriptions | Qty |
|---|---|---|
|  | Bypass Valve: In/Out Bypass Valve with Red Arrow Handles | 2 |
|  | Hose Bib Assembly | 1 |
|  | CastleGuard Vortech Media Tank & Tank Head | 1 |

**Note:** Drawings are not to scale. Additional fittings will be needed to adapt to your plumbing.

# INSTALLATION MATERIALS AND OPTIONS

The purchaser / end user is responsible for providing some install materials in order to complete full installation. These may include:

- Copper Piping & Fittings
- PVC Piping & Fittings
- PEX Piping & Fittings
- Bypass Valves
- Adapters

**Note:** Your CastleGuard Water System can be installed using various materials and components, in standard or customer layouts. Materials that may be used to complete install include Copper, PVC, PEX and Stainless Flexible / Corrugated Water Connectors.

## SYSTEMS LAYOUT OPTIONS

If you are installing your CastleGuard Carbon System on municipal water source, flow order will be as follows;

**Source Water Feed Line > Carbon Tank > Sediment Filter > Feed Line to Home**

If you are installing your CastleGuard Carbon System on private well water source, flow order will be as follows;

**Source Water Feed Line > Sediment Filter > Carbon Tank > Feed Line to Home**

If you are installing your CastleGuard Carbon System in combination with a whole house water filter or Salt-Free Conditioner, flow order will be as follows;

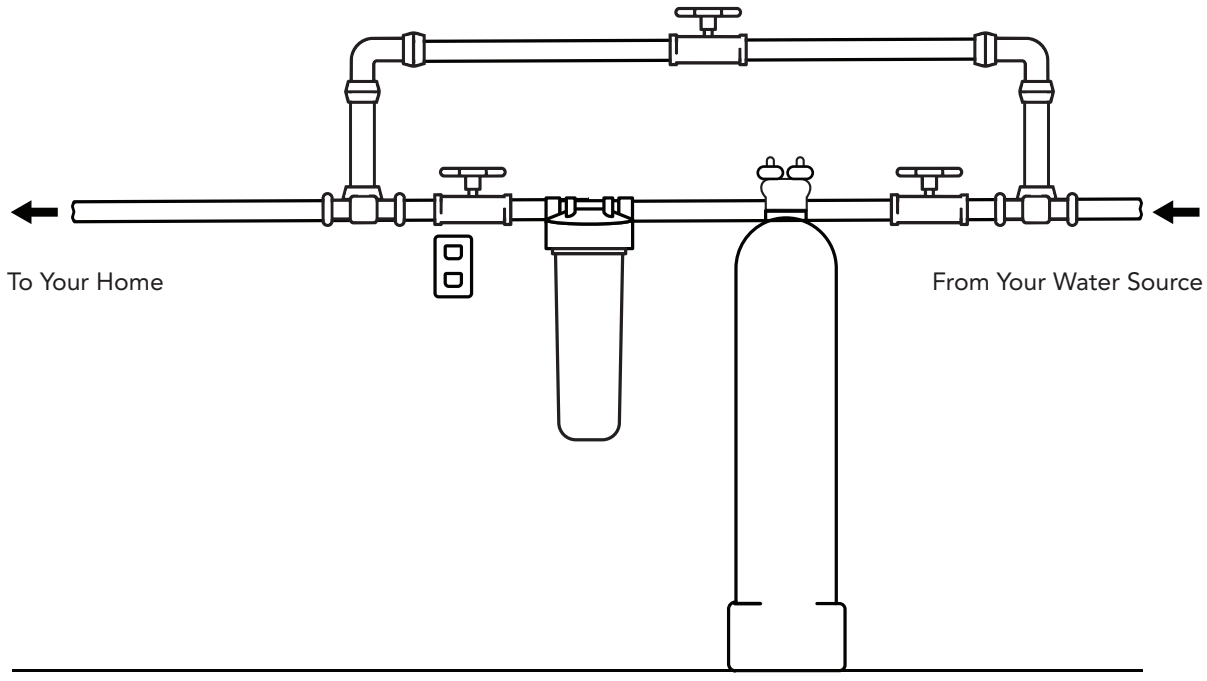
**Source Water Feed Line > Carbon Tank > Sediment Filter > Water Softener or Conditioner > Feed Line to Home**

Optional components, such as, full system bypass, additional sediment filtration, UV Purification and/or pH Neutralizers can be added as well if desired, and you can contact CastleGuard support for consultation as needed.

**Note:** CastleGuard recommends a full system 3-valve bypass, commonly referred to as a bypass loop, be install around the system. This will allow for ease of sediment of media replacement when the time comes. The bypass will allow you to service your CastleGuard system without turning off the main water line / valve.

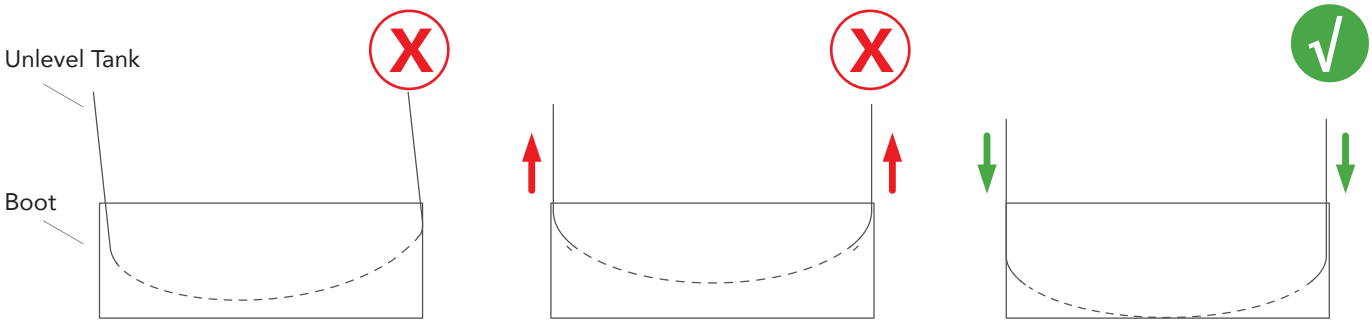
### Single Tank Single Tank Upflow Carbon Filtration System

- **CG-C-10** - Carbon Filtration System
- **CG-FH-1-20** - 5-Micron Sediment Filter System



**Unbox and Level Your Tank:**

Your media tank has a tank level boot on the bottom. If your tank is not sitting straight and level, cautiously lift the tank upward a few inches and tap towards the ground until the tank stands vertical without assistance and is fully seated in the tank boot.




**Step By Step Installation:**

1. Unscrew the tank cap at the top of the tank. This is used only for shipping and will no longer be needed. This prevents pre-install media from leaving the tank during shipping. **Note: Depending on your tank size, your system may arrive with the Clack inlet / outlet tank valve already pre-installed. If that is how your tank arrives, move forward to install Step 7.**
2. Remove and discard the blue cap on the top of the distributor tube from inside the tank.
3. Identify the tank head, with white upper basket pre-installed.
4. Under the tank head is a black O-ring. Lubricate O-ring with a small amount of silicone lubricant.
5. Install the tank head by sliding the upper basket female opening over the distributor tube in the tank, pressing down until the tank head threads will catch.
6. Screw the tank head onto the tank clockwise until tight. The use of a blunt tool in one of the tank head openings for leverage may assist in tightening.

**Note:** It is important to make sure you have properly identified the INLET and OUTLET sides of the tank head and valves, as indicated. You must also know which direction water is flowing from the feed line you are installing to.

# INSTALLATION

## Carbon Media Pre-Soak (24-48 hours Prior to Installation Recommended:

7. Insert the bypass assembly into the tank head by pressing in place and fully tightening the valve connector rings. Note: It is important to identify the designated INLET and OUTLET direction of the tank head as marked, and position the bypass handles (shaped like arrows accordingly.
8. Attach the included MIPT 1" Elbow fittings (included onto the bypass assembly. If you choose to use optional straight fittings, use those here in place of the elbows provided.
9. Using the provided hose bib attachment, screw the large end onto the INLET side of the elbow fitting, with the other end screwed onto a water hose.
10. Turn the water on in a low flow but smooth rate until water begins to exit the OUTLET side of the tank. Turn off the water and disconnect the hose bib attachment.

**Note:** If you are pre-soaking and flushing the media in a basement of interior location, you may wish to purchase a 2nd hose bib attachment and use another water hose as an external drain line during initial set up.

11. Turn the tank bypass valves to the closed "bypass" position. Allow the carbon media to soak for a minimum of 24 hours, recommended 48 hours.

## Carbon Media Flush:

12. After proper pre-soak of the carbon media, attach the hose bib assembly to the INLET side of the tank.
13. Turn the bypass valves back into service flow position, then turn on the water on a low flow volume. Water will initially appear black or grey as carbon dust and fines are flushed from the media bed. This is normal and expected.
14. Allow water to pass through the tank and exit the OUTLET valve for 5-7 minutes, or until the water runs clear, then turn the water off.
15. Remove the hose bib attachment from the INLET side and attach on the OUTLET side adapter.
16. Turn the water back on in smooth low flow volume, allowing the water to backflush in the opposite direction for approximately 5 minutes.
17. Once the backflush is completed, turn the bypass valves back into the closed bypass position.

## Prepare and Install the Included Sediment Filter System:

**Note:** Your CastleGuard whole house filtration system includes a 4.5" x 20" Sediment Filter System with a 5-micron filter cartridge. This component is used to remove sand, sediment and micro plastics from your water to the 5-micron pore size, providing an overall cleaner and higher quality of water for your home / business. This component can be installed in a pre or post position in relation to your carbon tank. For municipal water it is recommended to be installed in the post position, down flow of the tank.

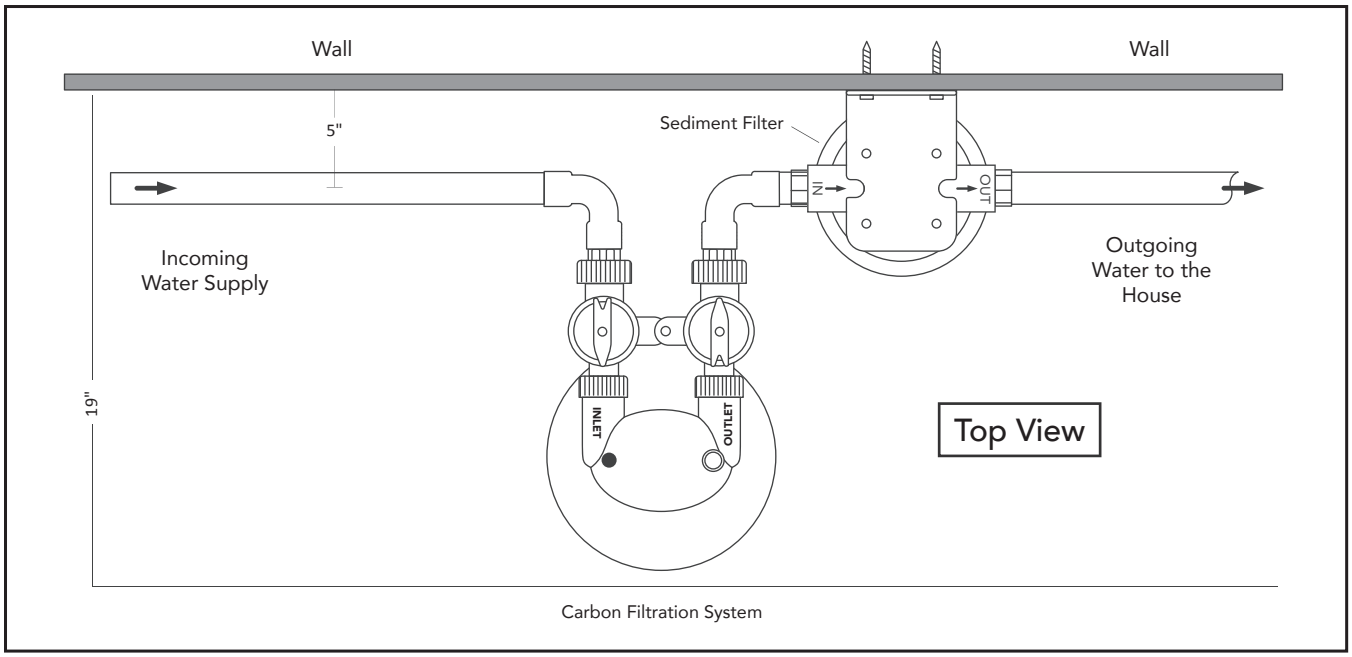
18. Unscrew the black lid from the blue filter housing.
19. Place the included O-Ring into the top groove of the filter housing.
20. Use a small amount of the provided lubricant to lubricate the O-Ring with your finger.
21. Turn the O-ring over in the grove and lubricate the other side as well.
22. Place the included 5-micron sediment filter into the filter housing.

23. Replace the black lid onto the blue housing an tighten firmly.
24. Use 1" PVC nipples (not included., and install into the Inlet and Outlet side of the black filter housing. Tighten completely without damaging threads. It is recommended to use plumbers thread tape on all PVC threads.
25. Use a level to mark and pre-drill hole for installing the include sediment filter bracket to the wall. Allow for appropriate space to include piping to your carbon tank and/or other components.
26. Use included hardware (bolts and washers to secure the sediment filter bracket to the wall, and sediment filter black top to the bracket. Note: Be sure to orient the INLET and OUTLET directions of the black filter top housing correctly.

**Note:** A Shut Off Valve (1" PVC Ball Valve or full system bypass loop with shut off valves, is recommended for periodic filter replacements and/or maintenance.

27. Move your Carbon tank into install position, next to the Sediment Filter, with the install connectors facing the wall.
28. Connect your inlet feed line (copper, PVC, PEX, flex connector lines to the INLET side of the carbon filter tank, and tighten fully.
29. Connect your OUTLET line to the OUTLET valve of the carbon tank.
30. Connect your OUTLET feed line from the Carbon tank to the INLET of the mounted Sediment Filter.
31. Connect your OUTLET feed line from the OUTLET side of the Sediment Filter to the return line side of your main water service line going into the home / business.

## Incoming Water from Left-Side




Carbon Filtration System

## INSTALLATION

32. Prior to turning on your water supply, verify all connections are tightened appropriately. Use the included Spanner Wrench to snug the blue sediment filter housing to the top of the black head.
33. Open a faucet on the (cold side completely in the home or business, to ensure there is no pressure in the line. Leave in the open position for now.
34. Ensure that the tank valves are in BYPASS POSITION, turn the main water feed back on and allow water to flow through the install lines, bypass, and sediment filter into the home.
35. While allowing water to run through the system, check all connections for leaks.
36. The tank bypass can be turned into the service flow position if no leaks are identified.
37. Allow water to run through the system and into the home for at least 10 minutes, using only the open faucet from step #33. You may see a small amount of carbon dust or sediments from the flow initially, this is normal.
38. Once water has been flowing through the system and out of the faucet for at least 10 minutes, and you have verified that the water is clear and there are not leaks, you can shut the faucet off, as install is now complete.

**Note:** Leaks from connections with O-Rings are generally due to components not being tightened enough, or over tightening and bunching the O-Rings. When addressing these leaks, DO NOT attempt to tighten or adjust components while under pressure. Turn the main water supply off, open a faucet down flow of the system, leave open until all water and pressure is released, and then make adjustments to address leaks. Once leaks have been address, repeat steps 34-38.