CASTLEGUARD
WATER FILTRATION SYSTEMS



WHOLE HOUSE SALT-FREE CONDITIONER SYSTEMS

Installation / Operation Manual

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

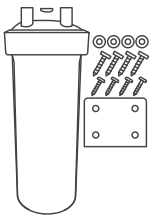
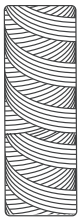
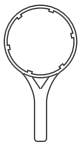
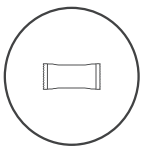
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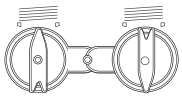
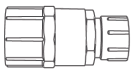
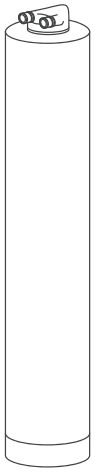
Have questions? Call us: 888-316-1832

WELCOME TO CASTLEGUARD

Congratulations on your purchase of the CastleGuard Whole House Salt-Free Conditioner System. CastleGuard uses only the highest quality resin media for our Salt-Free Conditioner systems. 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: When using the Salt-Free Conditioner on municipal / county treated water source, it is strongly recommended to use a whole house carbon filter system prior to the conditioner, as it is important to remove chlorine and chloramines from the water prior to the conditioner. This system is not recommended for use on untreated well water without proper pre-treatment and evaluation of water conditions. Please consult with a Water Treatment Specialist at CastleGuard Water Systems prior to use on private well water.

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

Source Water Feed Line > Sediment Filter > Salt-Free Conditioner Tank > Feed Line to Home

If you are installing your CastleGuard Salt-Free Conditioner system as a combo along with the CastleGuard Whole House Carbon Filter, flow order will be as follows;

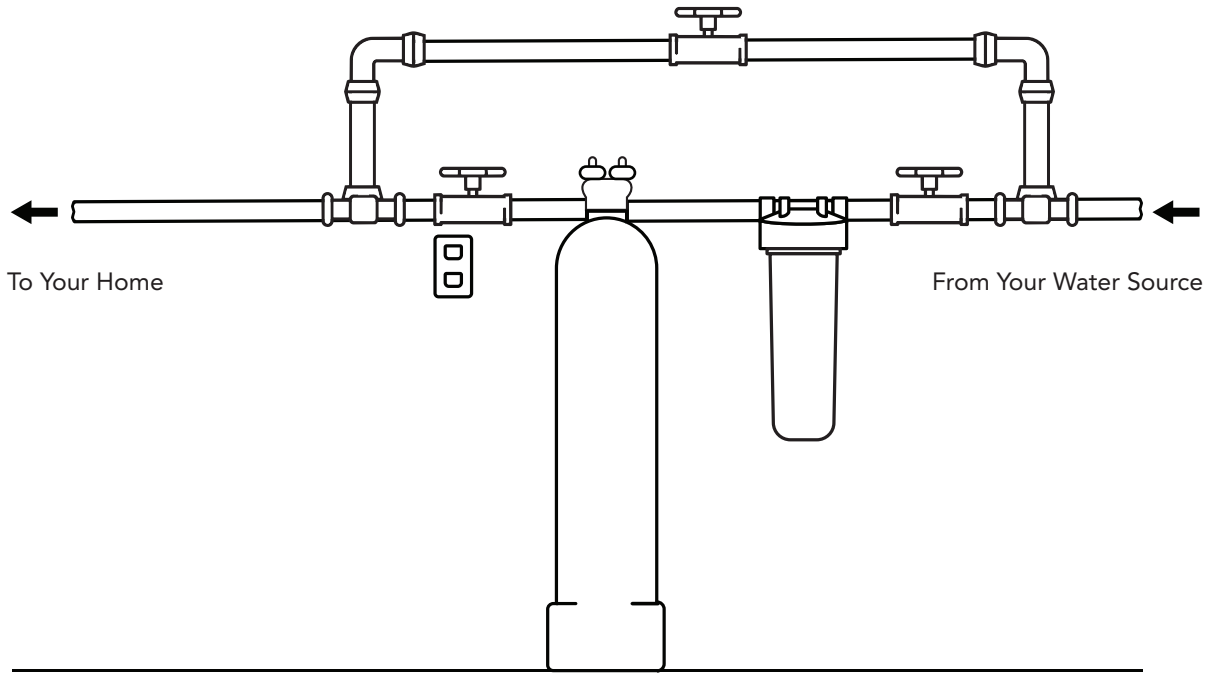
Source Water Feed Line > Carbon Tank > Sediment Filter > Conditioner > Feed Line to Home

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 or media replacement when the time comes. The bypass will allow you to service your CastleGuard system without turning off the main water line / valve.

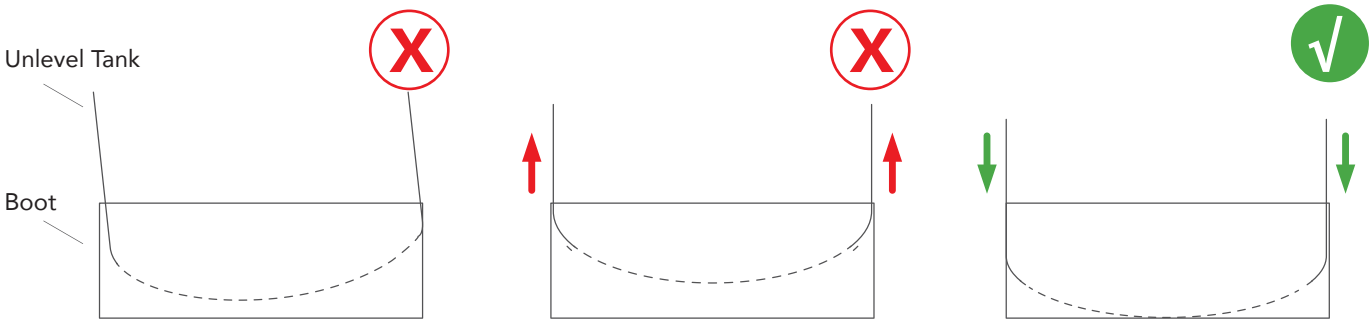
Single Tank Upflow Salt-Free Conditioner

- **CG-SF-10** - Salt-Free Water Conditioner
- **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 unti 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

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 conditioner media to soak for a minimum of 24 hours, recommended 48 hours.

Media Flush:

12. After proper pre-soak of the conditioner 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 may initially appear cloudy. 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 Salt-Free Conditioner 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 conditioner tank. It is recommended for the sediment filter to be installed in a pre position in relation to the salt-free conditioner 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 and 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 conditioner 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.

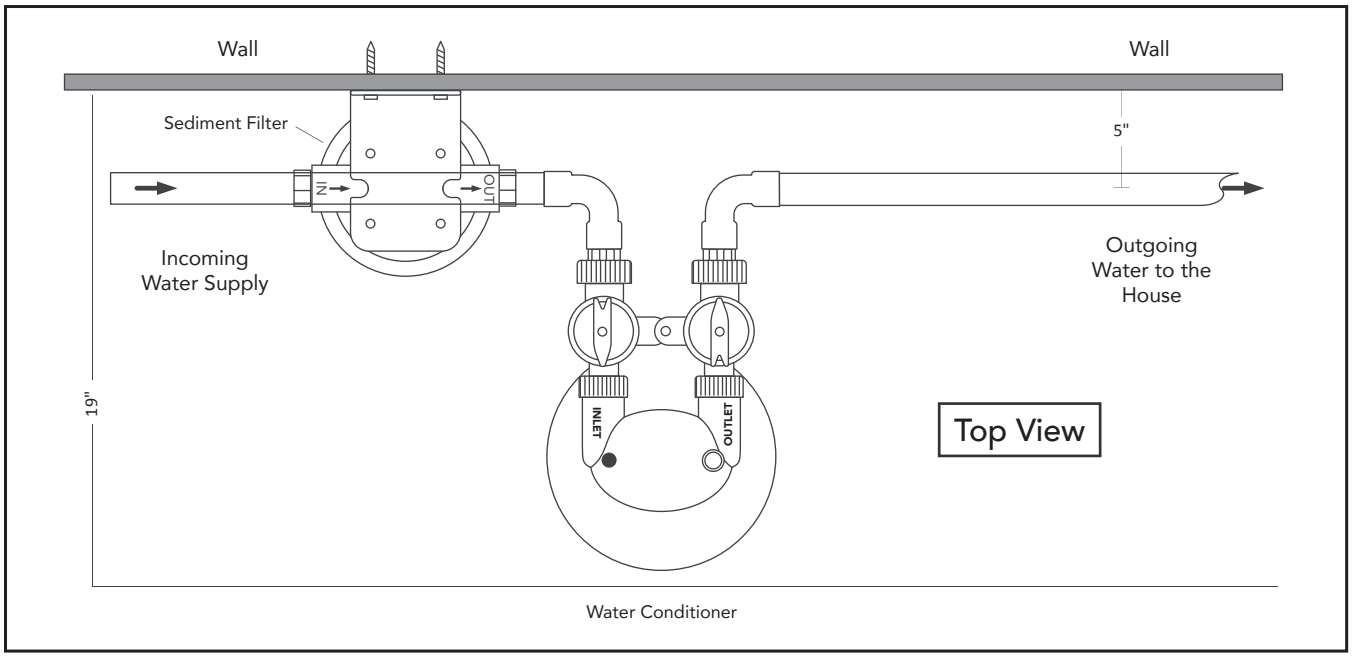
Note: A Shut Off Valve (1" PVC Ball Valve or full system bypass loop with shut off valves, is recommended for periodic filter replacements and/or maintenance.

27. Move your Conditioner tank into install position, after the Sediment Filter, with the install connectors facing the wall.

28. Connect your INLET feed line to the INLET side of the Sediment Filter, using your choice of copper, PVC, PEX or Flexible corrugated connector lines / material.

29. Connect your OUTLET line from the Sediment Filter to the INLET connector of the Conditioner tank.

Incoming Water from Left-Side



INSTALLATION

30. Connect your OUTLET line from the Conditioner to the return line side of your main water service line going into the home / business.
31. 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.
32. Open a faucet completely on the cold side in the home or business, to ensure there is no pressure in the line. Leave in the open position for now.
33. 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, sediment filter, and bypass into the home.
34. While allowing water to run through the system, check all connections for leaks.
35. The tank bypass can be turned into the service flow position if no leaks are identified.
36. Allow water to run through the system and into the home for at least 10 minutes, using only the open faucet from step #32. You may see a small amount of cloudy water or sediments from the flow initially, this is normal and will quickly clear.
37. 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 no 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.