

Installation, Operation and Maintenance Manual

Backwashing Carbon Systems Chlorine, Taste, and Odor Reduction

NCS - 948
NCS-1054
NCS-1252



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WARRANTY REGISTRATION

We appreciate your purchase of the Next Backwashing Carbon System. Under proper conditions you will have years of trouble-free performance from this product.

The laws of the United States do not require consumers to return warranty cards or registration cards to be covered by an implied warranty, however, you must keep a copy of your receipt.

At Next Filtration we support your rights as a consumer. We hope you will take the time to fill out the warranty registration below in order to insure that we have documentation showing that you have purchased the system and that a qualified technician installed it. The information provided will be kept in strict confidence and will never be available to marketing companies. Next Filtration offers a one (1) year limited warranty for Carbon Systems.

LIMITED WARRANTY

Next Filtration Technologies Inc. warrants the Carbon system as follows:

- The Tank is warranted to be free of defects in materials and workmanship for 10 years from the date of original installation.
- The Head is warranted to be free of defects in materials and workmanship for five years from date of original installation.

Conditions

1. The Backwashing Carbon system must be installed and serviced by an authorized Next Filtration Technologies Inc. dealer, licensed plumber, or other entity approved by Next.
2. Any component failure must not result from abuse, fire, freezing or other acts of nature, violence, or improper installation.
3. Equipment must be installed and operated in compliance with the local plumbing codes, and on an approved water supply.
4. Equipment is limited to use at water pressures not to exceed 100 PSI and temperatures not to exceed 110 degrees F.
5. Do Not Use on water that is has bacteria or is contaminated with coliform or e.coli.
6. Information, including model number, serial number, and date of installation, must be provided for any claims pertaining to equipment in warranty.
7. Defective parts are subject to inspection by either Next Filtration Technologies, Inc. or any authorized representative before final commitment of warranty adjustment is made.
8. Next Filtration Technologies Inc. reserves the right to make changes or substitutions in parts or equipment with material of equal quality or value and of then current production.
9. This warranty does not cover labor, shipping charges, damages caused by delays of consequential damages or other causes beyond our control. Warranty does not cover pipes, fixtures or appliances. Warranty extends to the actual water conditioner components only.
10. This warranty is to the original purchaser and is not transferable to any subsequent owner(s).
11. No other guarantees or warranty, expressed or implied, is applicable to our product. No repair or replacement made under the terms of the warranty shall extend this warranty.

Limitations

Our obligation under this warranty with respect to the tank or valve is limited to furnishing a replacement for, or at our option, repairing any part or parts to our satisfaction that prove defective within the warranty period stated above. Such replacement parts will be delivered to the owner F.O.B. nearest factory, at no cost, excluding freight and local labor charges, if any.

The carbon media is not covered under these warranties.

Next Filtration Technologies Inc. shall not be liable for freight, handling or labor charges, or consequential damages.

INTRODUCTION

Thank you for purchasing a Next Filtration Backwashing Carbon System. Your new system will provide you with high quality treated water for many years, backed by some of the most experienced water professionals in the industry.

All of our high quality Carbon systems with less than 2" connections come with a printed Clack WS1 Service manual with detailed instructions relative to all of the features offered by the Clack valve. This Installation guide will help you understand how the system works and it is intended to help guide the installation professional throughout the installation and commissioning of your new system.

The Clack service manual covers all types of systems that use these very reliable valves, including water softeners and particulate removal filters, so there is some information in your Clack service manual that does not pertain to either of the Next Filtration systems you may have purchased. This additional guide is intended to be specifically relative to your new Next Filtration product.

If you are going to install the Next Filtration system, we ask that you read this installation guide before you begin.

WARNING!

Read these instructions carefully and determine the location of all system components before beginning installation.

Check all applicable plumbing, building, and electrical codes for installation compliance. Install the system on the main water supply. The use of plumbers tape and/or pipe thread seal paste will be needed on all threaded connections.

To condition all water in the home, install the filter system close to the water supply inlet, and upstream of all other plumbing connections, except outside water pipes. Outside faucets should remain on unfiltered water.

Systems that contain electronic components cannot be installed outside in uncovered areas.

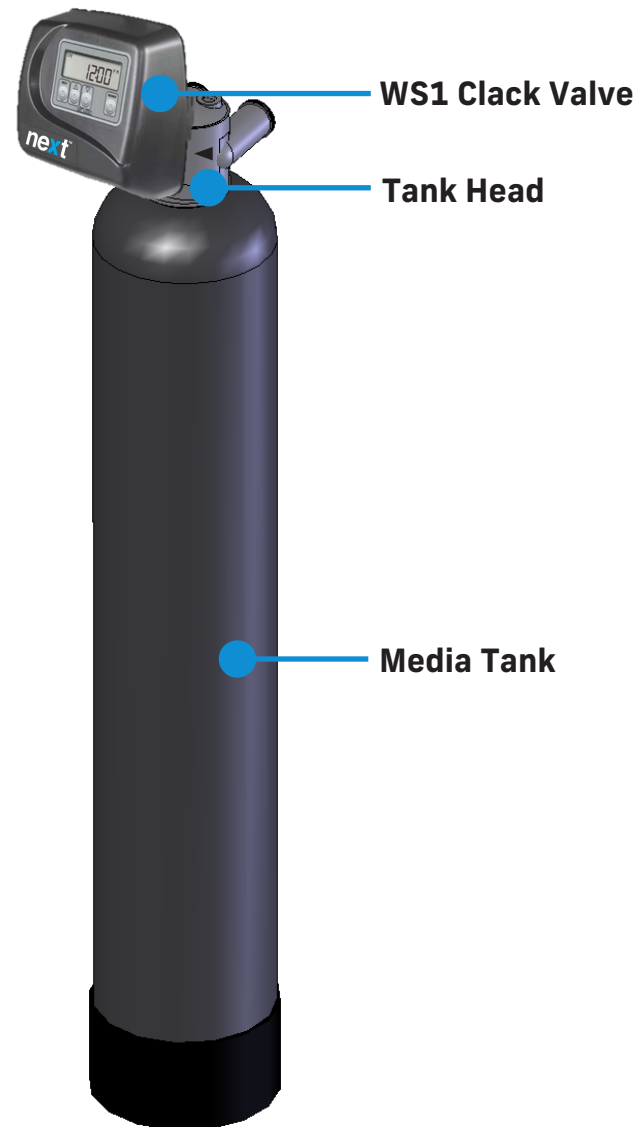
Chlorine's Side Effects:

- Essential for disinfecting water, ensuring it's safe and clean but may cause long-term health effects.
- Can cause undesirable taste, odor, and skin irritation for some individuals.

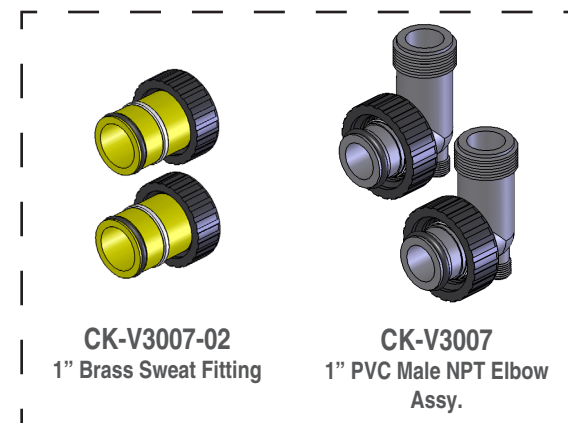
Whole-Home Carbon System Benefits:

- Effectively removes chlorine, enhancing water taste and eliminating odors.
- Alleviates skin irritations and allergic reactions related to chlorine.
- Enjoy showers without the harshness of chlorine.

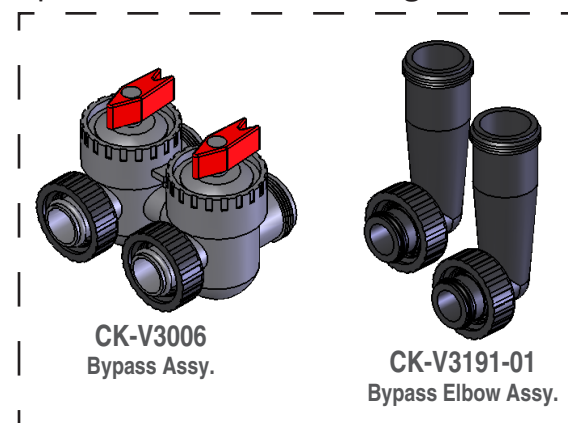
SYSTEM OVERVIEW



Typical Connection Fittings



Optional Connection Fittings



How The Water Flows through your System

The water enters the top of the tank (red arrows) and flows down through the Carbon media and up the distributor and out to your home. The downflow type Carbon removes sediment and a wide range of chemicals. The Carbon is backwashed periodically to remove dirt and sediment removed by the mechanical filtration action of the carbon bed. This reclassifies the carbon and extends the useful life.

PRE-INSTALLATION:

1. Review your packing list and make sure you have received all the parts before installation. Note* Next Filtration expects that a qualified professional will be making this installation so connector details are not provided.
2. If you have an electric water heater and intend to turn off the main feed water supply to the home, please make sure to disconnect the power to the water heater to avoid accidental draining while it is still powered as damage can occur.
3. Select a suitable location for the new water treatment system. Make sure the surface is dry and level. Avoid installations that will be subjected to freezing temperatures or direct sunlight. The Next Filtration Systems require a minimum of 20 PSI to operate properly. If your pressure exceeds 100 PSI, a pressure regulator is required to protect the system. Never connect directly to a water source higher than 100 PSI in pressure.
4. Get all of your plumbing parts together before beginning installation, and make sure you have received all of your packages before beginning or scheduling an installation. Installation typically takes 3 to 5 hours. However, after installation the Carbon Filter must be allowed to run through a complete backwash and rinse cycle.
5. Once the system is installed, you must run it through a complete backwash and rinse cycle. Initially you may see very small particles of carbon in your water, if this is the case, a second backwash and rinse cycle is recommended. If any other discoloration is noticed as you may find with installations in older homes, or on older plumbing systems, this should clear up within a day or two.
6. If this installation will be done using copper, do not sweat the copper pipe directly to the control valve or the bypass valve. Use the sweat fitting option and do not connect to any of the plastic valve parts while the copper is hot.
7. Our preferred connections use Falcon Stainless flexible connectors that match up perfectly with the by-pass provided and has a quick connect to the copper or plastic feed pipe.
8. Next Carbon systems come with Clack by-pass valves that allow you to easily place the system in bypass and service it when necessary. No union fittings are necessary.
9. The Drain connection can be directed above or below the system as the backwash takes place under pressure. Please ensure that the drain connection meets all local plumbing codes.

Piping & Drain Installation Recommendations:

1. If this is a well water installation, the system must be installed after the pressure tank. When installing on city supplied water, we recommend installing on the main line with the included by-pass to insure you filter all of the water used in the home.
2. It is very important to get the main connections to your new Next Filtration system correct. The port on the Clack WS1 valve marked "Inlet" should be connected to the plumbing coming into the home from the city. The port marked "Outlet" should be connected to the plumbing going to the entire home. As you face the front of the control valve the water enters on the right and exits the system on the left. These ports will be directly connected to the included bypass valve which is also market with arrows. All Next Filtration Carbon systems are connected in the same way as all conventional water systems.

Installation of Your System in Copper or Metal Piping Systems

If your new filter system is to be installed in a metal (conductive) plumbing system, i.e., copper, or galvanized steel pipe, the plastic components of the system will interrupt the electrical continuity of the plumbing system.

As a result, any stray currents from improperly grounded appliances downstream or potential galvanic activity in the plumbing system can no longer ground through the contiguous metal plumbing.

Some homes may have been built in accordance with building codes, which encouraged the grounding of electrical appliances through the plumbing system. Consequently, the installation of a bypass consisting of the same material as the existing plumbing, or a grounded "jumper wire" bridging the equipment and reestablishing the contiguous conductive nature of the plumbing system must be installed prior to your systems use.

This is simple and easy step to take if you are installing your water treatment system into copper piping.

A simple ground jumper wire with a pipe clamp can be purchased at any Home Center, or hardware store etc. for a few dollars.

Please consult a licensed electrician before attempting to install.

WATER PRESSURE

A minimum of 20 pounds of water pressure is required for proper operation of the system. The stated operating pressure range is 15 psi - 100 psi (103 kPa - 689 kPa).

BYPASS VALVE

The bypass valve enables the customer to bypass the system in situations of emergency leaks in the equipment, service calls and/or outdoor water use.

TEMPERATURE OPERATING RANGES

Operating Temperature Range: 40° F - 110° F (4.4° C - 43° C)

Storage Range: The computer board can be stored at 20° C (-4° F) - 70° C (158° F).

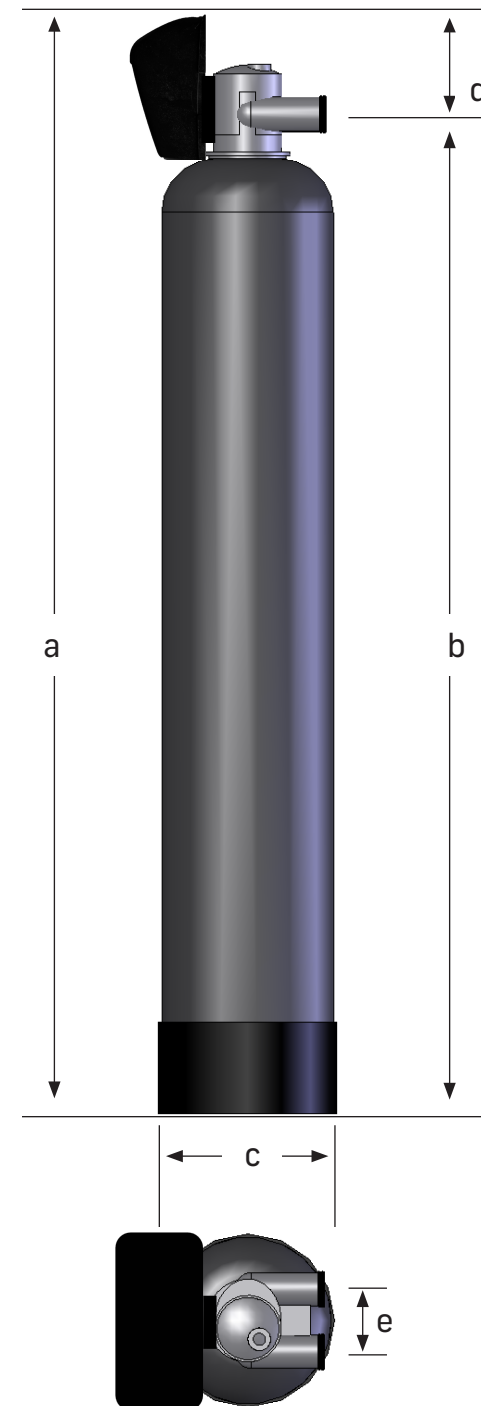
Humidity: The computer board operates properly with relative humidity 10% - 95%, non-condensing.

ENVIRONMENTAL REQUIREMENTS

Location: The water filter and control cannot be exposed to outdoor elements, such as direct sunlight or atmospheric precipitation. The system may be installed in a covered, open-air structure such as a carport, residential or commercial building.

EQUIPMENT SPECIFICATION

Next Carbon systems are complete, self-contained, loaded with media and ready to use. A simple inlet and outlet connection is all that is required for installation. Please review operating pressures, temperatures and water chemistry limitations to ensure compatibility.



Specifications

Inlet/Outlet Connection	3/4" - 1.25" (multiple options)
Temperature	40° - 110°F
pH	6.5 to 8.5
Oils, Sediments	Remove prior to system
Iron	Keep free of, or low for Max. Life
Turbidity	Keep free of, or low for Max. Life
Water Pressure	15 min., 100 max (PSI)

Mechanical Specs.

	744	844	948	1054	1252
Max Service Flow (gpm)	n/a	n/a	16	20	30
Carbon (ft ³)	n/a	n/a	1	1.5	2
Approx. Service Weight (lbs)	n/a	n/a	129	168	235

Dimensions (nominal - inches)

	744	844	948	1054	1252
a	n/a	n/a	56	62	60
b	n/a	n/a	50	56	54
c	n/a	n/a	9	10	12
d	n/a	n/a	6.0	6.0	6.0
e	n/a	n/a	3.0	3.0	3.0

CAUTION!

When adding a filtration system to homes/buildings supplied by well water, the system should be installed following the pressure tank. DO NOT USE this system for pneumatic or hydropneumatic applications. If you are using a booster pump, then install this system following the booster pump.

! IMPORTANT NOTE FOR INSTALLATION

- Do not install this system where water is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
- This system must be installed in an area that is not affected by extreme heat, cold or the elements. If the system is located outdoors, protect the unit from direct sunlight. Cannot be installed outside if temperatures can reach below freezing.
- The selected installation area must be adequate for easy service of all parts.
- This system must be installed in accordance with all applicable state and local laws and regulations.
- This system is designed to treat cold water only and can be installed on any cold water supply.

SAFETY PRECAUTIONS

- To prevent accident or injury, do not hoist the unit over your shoulder. Use a hand truck to transport the unit.
- Do not lay the unit on its side during transportation and/or installation.
- Wear safety glasses and work gloves during installation and service.

TEST THE RAW WATER

- If water contains iron, manganese or hydrogen sulfide, a separate iron removal system is suggested to be installed prior to the system. Consult with your dealer.

! CAUTION!

- Do not let the system freeze. Damage to the tank may result.
- System must be operated in a vertical position. Do not lay it down during operation. If pre-assembled keep in the vertical position.
- A bypass valve should be installed on every system to facilitate installation and service.
- Observe all local plumbing and building codes when installing the system.

i ANNUAL MAINTENANCE INSTRUCTIONS

- Clean the backwash flow control.
- Verify that the flow meter is functioning correctly. Clean the impeller, if necessary.
- Verify the programming of the control. Reprogram, if necessary.
- Verify the minimum and maximum water pressure. Install a pressure reducer, if necessary.

INSTALLATION INSTRUCTIONS - PLEASE FIRST READ PRE-INSTALLATION SECTION

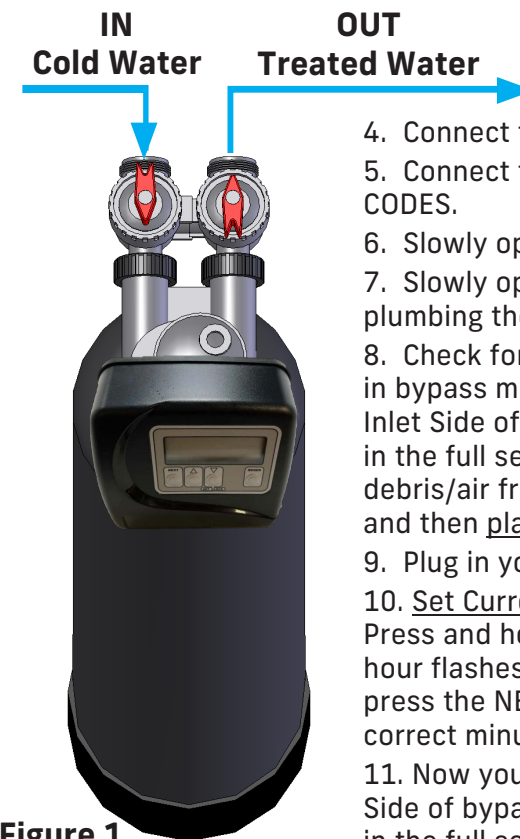
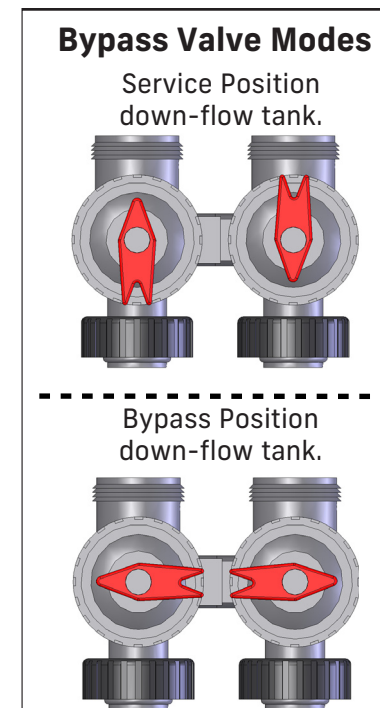


Figure 1.
948 shown with
optional bypass assy..



1. Place system in desired location on a level-smooth surface.
2. Turn off the water and drain the plumbing.
3. Connect Cold Water supply to the inlet of the Carbon system
4. Connect the Outlet of system to the cold water supply to the home.
5. Connect the drain line to a proper location; adhere to ALL LOCAL and STATE CODES.
6. Slowly open the supply valve to the system while still in bypass position.
7. Slowly open all fixtures downstream from the system to relieve any air in the plumbing then close them. This can be done one at a time.
8. Check for leaks. Repair as needed. *When turning the water on, leave system in bypass mode and then turn water on to the house and check for leaks. Open Inlet Side of bypass valve first then slowly open Outlet Side of bypass until it is in the full service position. Run cold water in bathtub or outdoor faucet to flush debris/air from the lines. Run water until all air is now purged from the system and then place the system back into bypass.
9. Plug in your Clack WS1 control valve to an outlet.
10. Set Current Time of Day. Press NEXT button until of time of day is displayed. Press and hold the Up or Down button until the SET indicator is displayed and the hour flashes. Press Up or Down button until the correct hour is displayed. Then press the NEXT button. The minutes will flash. Press Up or Down button until the correct minute is displayed. Press NEXT button to return to the Display Screens.
11. Now you can slowly turn bypass valve to the service position. First open Inlet Side of bypass valve. Second slowly open the Outlet Side of the bypass until it is in the full service position.
12. Press REGEN button for several seconds which starts a manual backwash.
13. There should be no Carbon media coming out of the drain line, but the water will be gray or dirty looking. At this point the Carbon will be in a backwash mode, which is the first of two cycles it goes through during backwash (also called regeneration"). Backwash takes 14 minutes. The next cycle is the rinse which takes 5-8 minutes depending on the setting.
14. After the backwash and rinse cycles are complete, repeat process by pressing REGEN button again for several seconds. If water is gray or discolored after the carbon filter, press REGEN again and backwash and rinse for a third time if needed.
15. Note it is normal for some small amount of Carbon dust and fines to come out during the backwash, although you do not want to see a large amount of media coming out, which would mean you have very high water pressure, or the drain flow control for the Clack WS1 is missing.
16. If possible verify that the backwash flow is 5 gallons per minute, which is the recommended backwash flow rate for 1.0 and 1.5 cubic foot models. If you have a 2.5 cubic foot Carbon it should be backwashing at 10 gallons per minute. You can run the drain hose to a bucket and using a watch verify the flow rate in GPM. An adequate backwash is critical to properly clean the Carbon media and prevent it from cementing together.
17. Refer to your Clack WS1 service manual for more information about how your control valve is programmed if desired.