Thank you for purchasing a Clean Water System! With proper installation and a little routine maintenance your system will be providing chlorine free water for many years.

Please review this start-up guide entirely before beginning to install your system, and follow the steps outlined for best results.

Minimum pressure of 30 PSI recommended.
Maximum pressure recommended 80 PSI.
For indoor installation only.
Protect from sunlight, rain, and freezing.

SEDIMENT MEDIA CONTAINS DUST.
USE MASK TO AVOID BREATHING DUST.
OK to wet down media with spray bottle

To connect drain line to drain, use an air-gap connection

Questions?
Call us toll-free: 1-888-600-5426 or 1-831-462-8500
Email us: support@cleanwaterstore.com
See more information on our website: www.cleanwaterstore.com/resources
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### Packing Lists

**All systems include:**
7500-S control valve; power supply; funnel for adding media through the top; drain line flow control; and items included in one of the following options:

**Find Your Size System to See What is Included:**

<table>
<thead>
<tr>
<th>Sediment Filter 0.75 cubic foot size</th>
<th>Sediment Filter 2.0 cubic foot size</th>
</tr>
</thead>
<tbody>
<tr>
<td>8” x 44” filter tank with distributor tube</td>
<td>12” x 52” filter tank with distributor tube</td>
</tr>
<tr>
<td>8 lbs. filter gravel</td>
<td>20 lbs. filter gravel</td>
</tr>
<tr>
<td>0.75 cubic foot of Chemsorb Filter Media.</td>
<td>2.0 cubic foot of Chemsorb Filter Media</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sediment Filter 1.0 cubic foot size</th>
<th>Sediment Filter 2.5 cubic foot size</th>
</tr>
</thead>
<tbody>
<tr>
<td>9” x 48” filter tank with distributor tube</td>
<td>13” x 54” filter tank with distributor tube</td>
</tr>
<tr>
<td>12 lbs. filter gravel</td>
<td>35 lbs. filter gravel</td>
</tr>
<tr>
<td>1 cubic foot of Chemsorb Filter Media</td>
<td>2.5 cubic foot of Chemsorb Filter Media</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sediment Filter 1.5 cubic foot size</th>
<th>Sediment Filter 3.0 cubic foot size</th>
</tr>
</thead>
<tbody>
<tr>
<td>10” x 54” filter tank with distributor tube</td>
<td>14” x 65” filter tank with distributor tube</td>
</tr>
<tr>
<td>16 lbs. Filter gravel</td>
<td>40 lbs. filter gravel</td>
</tr>
<tr>
<td>1.5 cubic foot of Chemsorb Filter Media</td>
<td>3.0 cubic foot of Chemsorb Filter Media</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sediment Filter 2.0 cubic foot size</th>
<th>Sediment Filter 4.0 cubic foot size</th>
</tr>
</thead>
<tbody>
<tr>
<td>12” x 52” filter tank with distributor tube</td>
<td>16” x 65” filter tank with distributor tube</td>
</tr>
<tr>
<td>20 lbs. filter gravel</td>
<td>50 lbs. filter gravel</td>
</tr>
<tr>
<td>2.0 cubic foot of Chemsorb Filter Media</td>
<td>4.0 cubic foot of Chemsorb Filter Media</td>
</tr>
</tbody>
</table>

**What to Do if Your Tank is Not Level Out of the Box:**

Your black filter tank base is not glued to the bottom of your tank. Occasionally tank bases will become crooked during shipment.

If you find that your tank does not sit level on the floor, you can easily adjust it by holding the empty tank and rapping it on a concrete or solid floor once or twice to level.
Pre-Installation:

1. Review your packing list and make sure you have received all the parts before beginning installation.

2. If you are going to be turning off the water to the house and you have an electric water heater, shut off the power to the water heater before beginning installation in case water heater is accidentally drained.

3. Pick a suitable location for your filter system on a dry level spot where it won’t be exposed to freezing temperatures. A minimum of 20 PSI is required. Maximum pressure is 90 PSI.

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 Sediment Filter must be allowed to run through a complete backwash and rinse cycle.

5. After the system is installed and running, your water may be discolored, or full of sediment or rust, particularly if this is older or corroded piping. This typically clears up over a day or two.

Best Practices for Piping & Drain Installation:

1. Make sure to connect the Inlet from your water source and outlet, following arrows on control valve. Connect the External Flow Control fitting onto the Drain line.

2. Make sure there is a working gate or ball valve before the 7500 Sediment Filter and also one after. A hose bib (which is a faucet to which you can attach a garden hose) is strongly recommended after the Sediment Filter and before the second ball valve.

3. Your 7500-S Sediment Backwash Filter must be backwashed and rinsed several times on start-up. During the initial backwashes and rinses, keep the valve AFTER the system closed. After backwashing and rinsing, open up hose bib after system and before closed valve, and run the water. If water is not clear, perform additional backwash and rinses.

4. If you will be using copper piping, do not sweat the copper pipe directly on to the 7500-S control valve. Avoid heating up the control valve plastic with the torch.

5. You should install unions and a bypass around the valve, so that you can remove it and still have water (See Build Your Bypass).

6. To connect drain line to drain, use an air-gap connection, so that if your sewer or septic tank backs up, it cannot cross connect with the drain tubing.
Installation of Your System in to 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.
How Your Sediment Filter Works:

Water enters the top of the tank and flows down through the media and up the distributor tube.

The downflow type Sediment Filter removes sediment and can be backwashed, which cleans and reclassifies the Sediment, preventing channeling.

During backwash the flow of water is reversed and water flows down the distributor tube and up through the media, lifting and expanding the Sediment media.

During the backwash the Sediment is cleaned by the action of the water flowing through it.
Assembly and Installation Instructions:

1. Wrap the top of distributor tube with electrical or duct tape so that no gravel or Sediment media will go down the distributor tube when adding the media.

2. Add the filter gravel that came with your order. You want the gravel to cover the bottom distributor screen before adding the Sediment media.

3. Next add Sediment media. The tank should be about 2/3rds full of media, do not fill more than 2/3rds, even if there is some media left over.

4. Remove cap or tape from top of distributor tube. Be careful not to pull up distributor tube when removing cap or tape.

5. Fill tank completely with water. This will allow the Sediment Filter media to settle and reduce the need of purging the air out of the tank later.

6. Add a small amount of silicone grease to the inner O-ring, where the distribution tube goes.

7. Screw on control valve until tight, by hand.

8. Do not use pipe-joint compound, vegetable oil, Teflon tape, or Vaseline or other petroleum greases to lubricate tank threads (where the control valve threads on to the tank, do not lubricate those threads).

9. Install INLET to Inlet port, and OUTLET from filter to the outlet (see arrows, marked on control valve)

10. Install drain line flow control on drain line from 7500-S control valve.

11. Install piping to drain. Be sure to use an air gap so the drain is not connected directly to the drain or sewer, to avoid cross connection. Do NOT install check valve on drain, use air gap (a gap of air of 2” between end of drain tubing coming from 7500-S control valve and opening to the drain pipe to sewer or septic tank.

12. NOTE: for 2.0 CF sizes and up, use 1” piping for drain. For sizes smaller than 2.0 CF, it is OK to use 5/8” or ¾’ OD plastic tubing.
The 7500-S Does not come with a pre-made bypass; you can build one yourself with PVC pipe or can also purchase our kit. Flex lines may be used where the unions shown where the Elbow Connector is, you could have slip by male fittings, then flex lines, then male nipples, and then you do not have to worry about plumbing it with too much pipe deflection- this must be avoided, as pipe deflection will put undue pressure on the control valve threads which may then crack. Reword this

Next, you will need to program the system to work as a Sediment Filter. There are a few settings that must be changed before the system can be put into service. Plug in the control valve and continue to the programming instructions.
Programming Overview:

Note: Indicator and button locations may vary between models

1. Menu/Confirm
2. Return/Manual regeneration override
3. Enquiry/Setting
4. Power Indicator
5. Time of day
6. Not Used
7. Not Used
8. Day
9. Scroll up
10. Scroll down
11. Minutes
12. Button Lock
13. Fast Rinse
14. Not used
15. Not used
16. Backwash
17. In Service/Working
18. Regeneration cycle in process

*IMPORTANT*: Before any operation, the valve menu must be unlocked. Press and hold both the Up and Down buttons for approximately 5 seconds. A sound will indicate the menu is unlocked. The menu will re-lock automatically after 1 minute of inactivity.

Digital Display Icons and the four Service Buttons: In addition to the Dynamic Display Stripe (explained immediately below this) there are six digital icons on the display that will indicate “where the valve is”. They are as follows:

Blue Key Icon: Indicates that the buttons are locked; press and hold both scroll buttons to unlock.
Blue Clock-face Icon: Indicates that the red digital display is showing the Current Clock Time.

Green Hourglass Icon: Indicates the system is in normal Service (Filtering) Mode.

Blue Wrench Icon: This indicates that you are in the programming menu and can change the values.

Green Backwash Icon: arrow pointing up, underneath a green bar. This indicates that you are programming the Backwash step, or that the filter is in backwash.

Green Rapid Rinse Icon: arrow pointing down above green bar. This indicates that you are programming the Rapid Rinse step, or that the filter is in Rapid Rinse.

Dynamic Display Stripe: On the left side of the digital display, there are eight bars that light up from red to green in a “going up” pattern. When the valve is in Service Mode, you will see that bar display flashing.

Sample Displays Showing Service Mode and Backwash and Fast (or Rapid) Rinse Modes:

Four Service Buttons: Left to right, Menu/Confirm, Manual/Return, Scroll Down, Scroll Up.

Up and Down Arrows: When the Blue Key Icon is lit, press and hold both buttons to unlock. When the Dynamic Display Stipe is blinking, pushing the up/down buttons has no effect. When the Green Wrench icon is lit, pressing either up/down arrow will scroll through the menu options.

Menu/Confirm Button (the button on the far left, an empty square with an arrow pointing left): This is the button you press (after you have unlocked the screen) that puts you in the Service Menu, so you can program the valve. The first time you press it, the Dynamic Display Stripe goes away, and the Blue Wrench icon appears.
Manual/ Return Button: Second from left, button icon is a “pointing index finger” with a left-pointing arrow underneath.

After unlocking the display, pressing this button in Service Mode (Dynamic Display Stripe is running) will start a backwash cycle.

Pressing this button when in Program Mode will return you to the Service Mode.

A. Time of day indicator

• When the blue Clock Icon is lit, the digital display is showing the current time. That time is displayed in 24-hour format, i.e. 13:00 is 1:00 pm.

B. Button lock indicator

• When the b Key Icon is lit, the buttons are locked. Press and hold both the Up and Down arrows to unlock. Buttons will lock 60 seconds after the last time a button is pressed.

C. Program mode indicator (shown on drawing as Enquiry/ Setting) is the Blue Wrench Icon. To activate this Icon from Service Mode, press and release the Menu/Confirm button (button on far left, with a square and an arrow pointing left) and the green Wrench Icon will be lit.

• When the green Wrench Icon is flashing, whatever parameter that is selected (set clock time, set cycle step, etc.) can now be adjusted by using the Scroll buttons.

For example, when you press it the first time, the Dynamic Service Stripe goes away, the Green Wrench Icon is lit, and the other icon that is lit is the Blue Clock Icon- that means that whatever digits are on the red display, they are stating the clock time (in 24 hour mode).
Program the 7500 S Valve

Turn On Valve:

Plug the valve in, and wait for the Service Screen to come on, the Dynamic Display Strip is blinking and the numbers 3101 will flash briefly, indicating you have a filter valve and not a softener type valve.

Unlock

When first powered up the valve will not be locked, but after several minutes will lock. During the programming if you need to unlock, and the blue Key Icon on right is lit, press and hold both Scroll Buttons to unlock. The valve will beep, and the blue key Icon will disappear.

Set Time

Press the Menu/Confirm button (far left) once and the blue wrench icon and time clock icon will display.

Press the Menu/Confirm button again to set the time. The hours digit will flash. Adjust the hours with the scroll arrows. Clock time is 24-Hour (or Military Time), so 1 pm is 13:00, two pm is 14:00, etc....

Press the Menu/Confirm button when done. The time you set will now be displayed, and not flashing.

Press the Scroll Down button to continue, A-00 will display.

Valve Type

A-00 is correct setting for time clock (non-flow meter) valve, do not change. Press the Scroll Down button to continue.

Set Regeneration Time of Day or Night

Set this to 2:00, which means 2:00 AM, in order for filter system to regenerate (backwash and rinse) at 2:00 or other time when no water is being used. Note that during the 10 – 20 regeneration no water will be able to be used in house, the valve stops water flow to house.

Press the Scroll Down button to continue. Display will read 1 – 01
Set Days Between Backwash

Display will read 1 – 01. Press the Menu/Confirm button and days will flash. Using the up or down arrow adjust to number of Days between Backwash.

For Sediment Backwash filters, we recommend 4 – 6 days. This can be changed later. If you find you have pressure loss (meaning the sediment filter material needs backwashing) adjust to more frequent backwashes up to 1 per day.

Press the Menu/Confirm button.

Press the Scroll Down button to continue, F – 00 will display.

Set Number of Consecutive Backwash Cycles (not used)

Leave at F – 00. If you ever wanted the filter to go into another backwash/rinse cycle immediately following a backwash/rinse cycle, this can be set to F – 01. However, this is rarely used and a single backwash and rinse regeneration cycle is usually enough.

Press the Scroll Down button to continue, 2 – 10 will display.

Set Length of Backwash Cycle

2 – 10 refers to the minutes the system will go into or be in backwash mode. Leave this at 10 but can be set to 8 or increased to 12 or 14 etc if a shorter or longer backwash is desired.

To change Press the Menu/Confirm button and using up or down arrows adjust the minutes.

Press the Scroll Down button to continue, 3 – 10 will display.

Set Length of Rinse Cycle

3 – 10 refers to the minutes the system will go into or be in rinse to drain mode (after backwash cycle). This can be set to 8 minutes. To change Press the Menu/Confirm button and using up or down arrows adjust the minutes.

Press the Scroll Down button to continue, b - 01 will display. Press the Menu/Confirm button.
Set Output Signal Relay Controllers (Generally not used)

Underneath the valve are two relay outputs, one is normally closed contacts and one is normally open contacts. These can be set to be normally open or normally closed. For this setting you don’t need to do anything and can be left at b-01.

Press the Menu/Confirm button.

Normal Operation

Now the display will cycle between:

- Current time of Day
- Days Left in Backwash Cycle
- Time of Regeneration

Display will be locked, and blue Key icon will display.

Initial Backwash:

1. After programming, the system must be run through an initial backwash.

2. Close Inlet ball valve B and Outlet valve C, and open the bypass valve A, to turn off water before starting.

3. From the initial valve menu, press the UP and DOWN buttons at same time to unlock. Then press the Green Return/Manual Regeneration button (second button from left) and a the valve will enter backwash mode. The backwash icon will be lit, and the time will count down.

4. When the backwash icon is displayed, slowly open the inlet valve B to a quarter position to make the water flow into the resin tank; you should be able to hear air escaping from the drain pipeline. After all the air is out of the pipeline, open inlet valve B and clean the foreign materials in the tank until the water is clean.
5  Verify that the backwash flow rate coming out of the drain line corresponds with the size of your system below. You can easily run the drain hose to a bucket and using a watch verify the flow rate in gallons per minute. An adequate backwash is critical to properly clean the Sediment media and prevent it from fouling or channeling.

<table>
<thead>
<tr>
<th>Capacity</th>
<th>GPM</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.75 CF</td>
<td>5</td>
</tr>
<tr>
<td>1.0 CF</td>
<td>5</td>
</tr>
<tr>
<td>1.5 CF</td>
<td>5</td>
</tr>
<tr>
<td>2.0 CF</td>
<td>7</td>
</tr>
<tr>
<td>2.5 CF</td>
<td>7</td>
</tr>
<tr>
<td>3.0 CF</td>
<td>15</td>
</tr>
</tbody>
</table>

6  After the backwash, the system will automatically go into the fast rinse stage. Both stages will last for as long as you have programmed that cycle step. The control valve will return to service status (indicated by the up-flowing meter on the left) after the backwash and rinse are complete.

7  Make sure to backwash and rinse the filter several times to clean up media, repeated backwash/rinse cycles may be needed when filter is first put on line with new media, to clean up media and rinse out fines and dust from the naturally mined sediment media.

    Congratulations, you are done setting up your valve!
Maintenance:

Normal Operation

- Normal service display alternates between service days, time of day and scheduled rinsing time.
- Days remaining until the next service will count down from the day value to 1 day remaining.
- Once the count reaches 1, a service cycle will be initiated at the next designated rinsing time.

Troubleshooting the 7500 S Sediment Filter:

Backwash Flow Rate

One problem that may occur is if you do not have enough backwash flow rate to properly clean the Sediment filter.

You can verify the backwash flow rate by running the drain line into a bucket and timing it when the 7500 S is in Cycle 1 or backwash. A 1.0 or 1.5 cubic foot system should have 5 gallons per minute and a 2.5 cubic foot system should have 10 gallons per minute of backwash.