



PELICAN HIGH FLOW SALT-FREE WATER SOFTENER ALTERNATIVE  
NS1465-P | NS1665-P | NS1865-P | NS2472-P



## TABLE OF CONTENTS

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IMPORTANT INFORMATION .....	2
WATER CONDITIONS FOR OPERATION .....	2
CUSTOMER SERVICE CONTACT INFORMATION .....	2
PRODUCT OPERATION AND SPECIFICATIONS .....	3
COMPLETE PARTS LIST .....	3
INSTALLATION	
INSTALLATION OVERVIEW .....	4
WATER SOFTENER ALTERNATIVE TANK INSTALLATION .....	5
MEDIA SOAK .....	6
COMPLETE THE INSTALLATION .....	6
WHAT TO EXPECT WITH YOUR NEW WATER SOFTENER / CONDITIONER .....	7
TROUBLESHOOTING .....	8
PRODUCT WARRANTY & REGISTRATION FORM .....	9
PRODUCT CERTIFICATIONS .....	10

## IMPORTANT INFORMATION

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- 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 water softener alternative close to the water supply inlet, and upstream of all other plumbing connections, except outside water pipes. Outside faucets should remain on hard water to avoid wasting conditioned water.
- Systems that contain electronic components cannot be installed outside in uncovered areas.

### WARNING

Installing this system in a metal (conductive) plumbing system, i.e., copper or galvanized metal, will interrupt the continuity of the plumbing system and grounding source in some homes. If your home's electrical appliances are grounded through the plumbing system, you will need to install a bypass that consists of the same material as the existing plumbing or a grounded "jumper wire" to bridge the equipment and re-establish the contiguous conductive nature of the plumbing before using this Pentair system. Failure to do so can result in errant electricity from improperly grounded appliances or potential galvanic activity in the plumbing system, which could increase the risk of fire or injury while using your home appliances. Please consult a licensed electrician before attempting to install.

### CAUTION

When adding a filtration/softening 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.** If you have questions, please call customer service.

## WATER CONDITIONS FOR OPERATION

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- The water should be free of hydrogen sulfide, a dissolved gas with a characteristic smell of rotten eggs. If present, it can coat the catalytic surface of the media and interfere with the process. The gas should be removed through adequate pretreatment.
- The water should be free of hydrocarbons, oils, and lubricants. If present, they can coat the catalytic surface of the media and interfere with the process. Remove through adequate pretreatment.
- The water should contain less than 1 mg/l of phosphates. Phosphates sequester dissolved hardness molecules, preventing them from forming crystals which may coat the catalytic media surface and interfere with the process.
- The copper level in the water supply should be below the MCL of 1.3mg/L. If copper is present above this level, it can attach to the surface of the catalytic media and interfere with the process.

### Customer Service Contact Information Section

**Homeowners** Phone: 877.842.1635

**Professionals** Phone: 877.842.1635



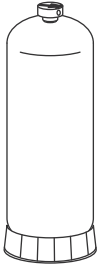


## PRODUCT OPERATION AND SPECIFICATIONS

Specification Description	NS1465-P	NS1665-P	NS1865-P	NS2472-P
Rated Service Flow	40 GPM	55 GPM	70 GPM	120 GPM
Minimum Working Pressure	25 PSI			
Maximum Working Pressure	80 PSI			
Maximum Vacuum	5 inch/127 mm Hg			
Operating Temperatures	36°F - 120°F			
pH Range	7 - 11			

The PENTAIR® HIGH FLOW WATER SOFTENER ALTERNATIVE WITH NATURSOFT® SALT-FREE TECHNOLOGY will be effective on water supplies with a maximum hardness of 75 Grains per Gallon (GPG) or 1,282 ppm. All iron/manganese, sulfur and tannin should be removed prior to system installation for best results.

## COMPLETE PARTS LIST

**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 [pentair.com](http://pentair.com) to view our full line of installation kits.

Part	Description	Qty.	Part	Description	Qty.
	PVC Adaptor: 1½" to 1" Threaded PVC Adaptor Note: For Use with Tank Head	2		PVC Adaptor: 1" to ¾" Threaded PVC Adaptor Note: For Use with Tank Head	2
	Tank	1		Bags of Media (18"-24")	1
				Bags of Gravel NS 1865-P (boxes) NS 2472-P (boxes)	2 6

**Note:** Drawings are not to scale.

**Note:** 14" & 16" Systems come pre-assembled.

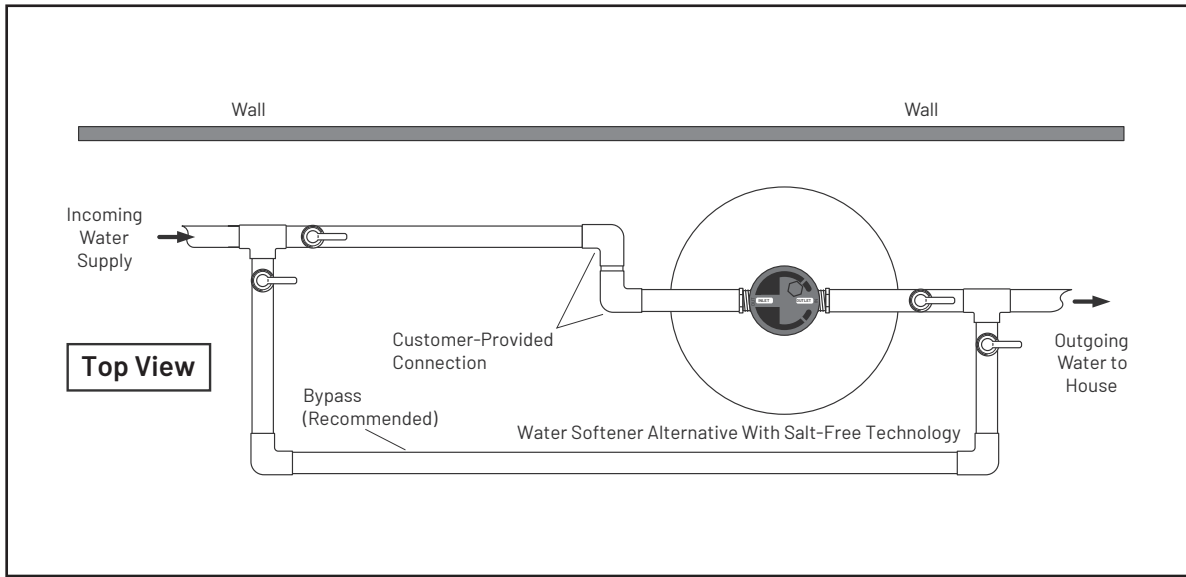
**Note:** Additional fittings will be needed to adapt to your plumbing.

### Media Load (18" & 24" Systems Only)

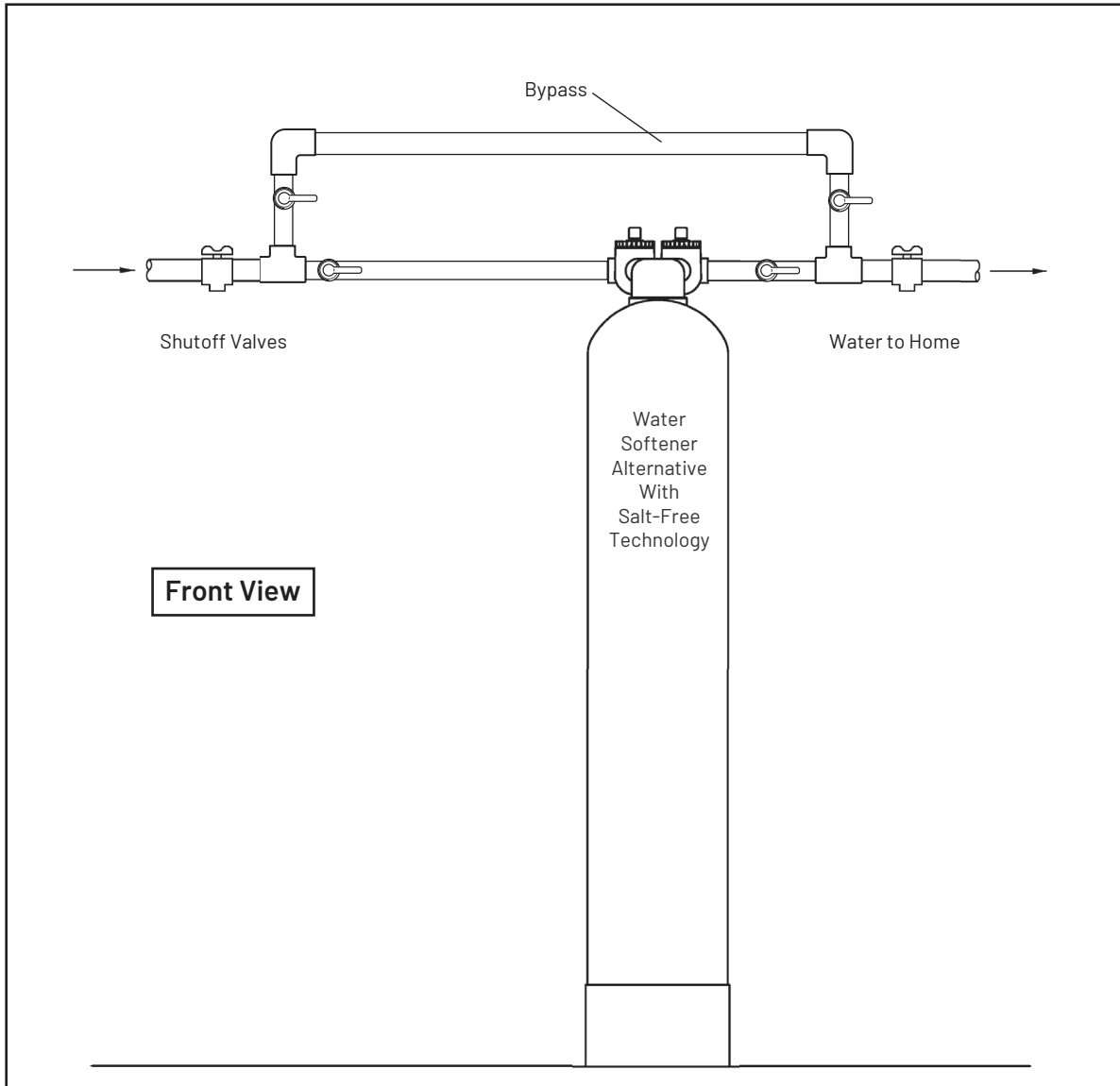
**Note:** Two people are recommended to complete these steps.

1. If the head is attached to the tank, unscrew it and set aside.
2. There will be a distributor tube inside the tank. Place a piece of painters tape on top of the distributor tube to avoid media spilling into the tube.
3. Place the provided funnel securely in the tank and hold in place.
4. Load all of the provided gravel into the tank (heavy bags, tan rock).
5. Load all of the provided Natursoft® media into the tank (white media).
6. Clean the top of the tank and the threads, and remove the painter's tape.
7. Screw the head back to the tank, ensuring the upper basket attaches over the distributor tube.

# INSTALLATION OVERVIEW



**Note:** The plumber should follow the stickers on the head.



# WATER SOFTENER ALTERNATIVE TANK INSTALLATION

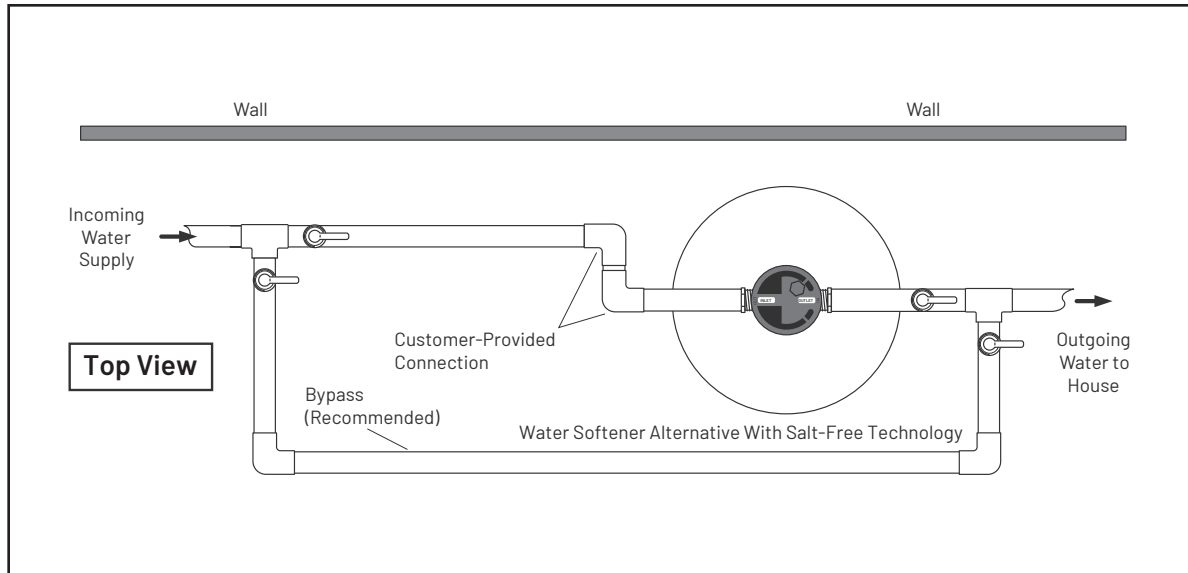
## 1. Level the Water Softener Alternative

**Note:** See "Troubleshooting" section on tips for leveling the tank.



### Notice

If the tank is not level, lift the tank straight up 6 inches and tap it on the ground until the tank stands vertically. The bottom of the tank is round and the boot allows the tank to stand upright.



2. Determine the size and material of your incoming water supply line and choose the appropriate fittings required to connect it to the filter head.
3. Install the fitting onto the INLET and OUTLET sides of the filter head.
4. Connect the incoming water supply to the INLET side of the filter head.
5. Connect the outgoing water supply to the OUTLET side of the filter head.

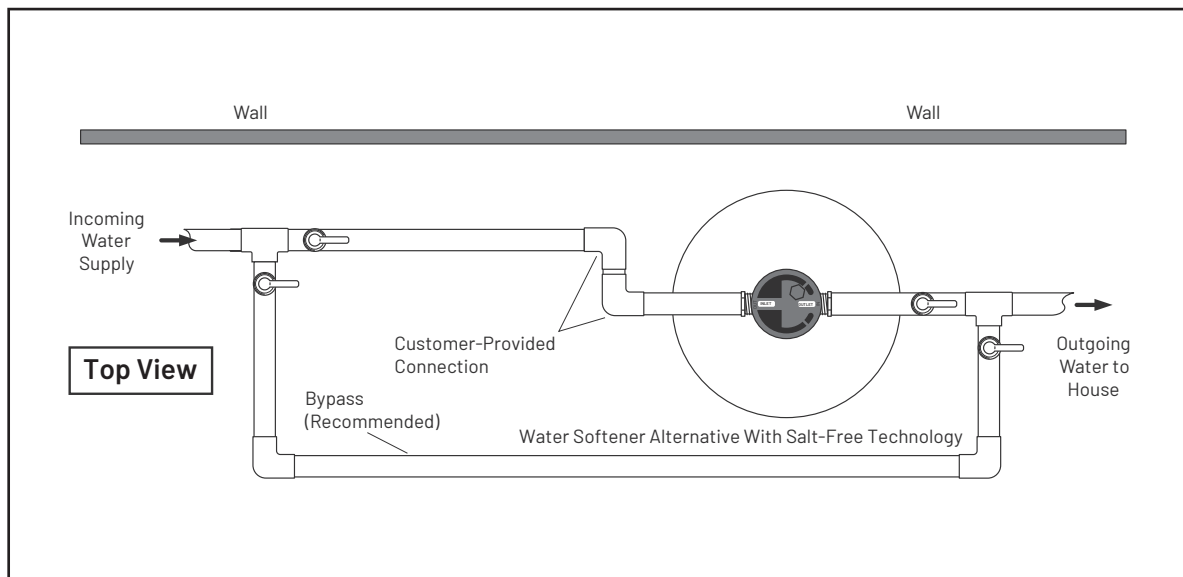


### Caution

Do not overtighten any of the fittings during installation.

## MEDIA SOAK

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1. Open a cold water faucet or test spigot close to the downstream of the Water Softener.
2. Turn the water back on at the main shutoff valve allowing the system to fill with water. The air being displaced will escape through the open fixture downstream.
3. Fill the Water Softener Alternative Tank full until water comes out of the downstream fixture. Bypass the tank using the bypass installed around the system. This will allow you to isolate the system and restore water supply to the home/building during the media soak.
4. Allow the tank to soak for at least 60 minutes

### Media Flush/Condition

1. After the tank has soaked for 60 minutes, turn the main water supply back on or turn the bypass valves back into their original position.
2. Flush the system by running water for five (5) minutes at a high flow rate of 5 GPM (this can be achieved by using a bath tub or more than three (3) faucets).

**Note: The flush water may have a milky look to it. This is normal as calcium carbonate fines are flushed from the system.**

3. Rinse the system by reducing the flow rate to  $\frac{1}{2}$  GPM and run water for 60 minutes (this can be achieved by turning one faucet  $\frac{1}{4}$  of the way on).

## COMPLETE THE INSTALLATION

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1. Turn on the main water supply and check for leaks.

### Clean your Hot Water Heater

Cleaning and restoring the plumbing system is a major benefit of the NaturSoft® system. In order to minimize the time required to complete the descaling process, we strongly recommend cleaning your hot water heater three (3) weeks after installation of your water softener alternative system.

- Turn off the heat source, attach a hose to the drain valve at the bottom of the tank and flush the heater by opening the drain valve. After the water heater is completely filled with water, turn the heat source back on.
- Alternatively, open several fixtures in the home and let water run simultaneously for a couple of minutes. Focus on the hot water side and high flows like the bathtubs. This method is not quite as effective, but can be done if desired.

## WHAT TO EXPECT WITH YOUR NEW WATER SOFTENER ALTERNATIVE SYSTEM

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### **If you have never had a water softener:**

You will experience naturally soft water immediately after the installation. Most detergents will work better with treated water and you will be able to reduce the amount you use. However, there may be mineral deposits and hard water scale coating the inside of your pipes and fixtures. Over the first few weeks, this hard water scale will dissolve, detach itself from the pipes, and come out of your faucets. This descaling process is temporary and will steadily diminish. During these first weeks, you will notice:

- **Reduced softness of the water.** This will be particularly evident when using hot water. The water can pick up more than ten grains of mineral content per gallon between the water softener alternative system and the faucet as it travels through the water heater and the plumbing.
- **Mineral silt in the water.** Since the existing limestone scale is softened and dissolved as part of the water softener alternative effect, it will detach in small chunks ranging in size from very fine silt to pieces larger than a grain of sand. The larger pieces may be big enough to build up in the aerator screens of your fixtures. Considerable silt-like accumulations may be visible on shower heads, so clean them weekly for the first four (4) weeks. Higher flow rates will shear off more of the existing hard water scale than will lower flow rates. Descaling activity will be most obvious in bathtubs which have high flow and hot water. You may see milky water with sand-like grit, and possibly sediment or iron in the bath tub.
- **The water line supplying fixtures which experience the most use will be cleaned the quickest and will be the first to return to providing you the full benefits you experienced immediately following installation; rarely used fixtures will take longer.**

### **If you had a traditional water softener:**

A traditional water softener turns dissolved mineral hardness (calcium bicarbonate) into dissolved sodium bicarbonate. The water softener alternative technology maintains the healthy mineral content of the water without adding the bicarbonate. You will notice:

- **In a traditional water softener,** the absence of the calcium and the presence of sodium bicarbonate makes the water feel slick and slimy. If you miss the slick feeling, add some baking soda (sodium bicarbonate) to your bath water.
- **The water spots are more visible.** A water softener replaces calcium with sodium. The water spotting that a traditional water softener leaves behind is a salt haze that wipes off very easily and is far less noticeable than spots caused by minerals. The water softener alternative treatment results in reduced spotting compared to untreated water, but more visible spots than produced by traditional, chemically-treated softened water. The water softener alternative mineral spots are much easier to clean than spots from untreated water.
- **Soap curd forms with certain products.** Oil-based soaps will react with calcium minerals to form a sticky film. Detergent-based cleaners like shampoos, shower gels, dish soaps, and laundry detergents will react very slightly or not at all. Most detergents will work better with treated water, but you will notice very little improvement when using regular bar soap or oil-based products since the minerals are largely still able to react with the fats in the soap to form the curd.
- **There is some mineral silt in the bathtub.** Depending on the water chemistry of your water supply, you may still have some hard water scale deposits in your plumbing system.

### **If you have a dishwasher:**

Generally, the water softener alternative system removes mineral hardness from solution and forms microcrystals; it does not physically remove the natural minerals from the water. Harsh chemicals, specifically acidic (low pH) detergents or rinse agents, can redissolve these crystals. This reduces the desired effect. Also, dishwashers are supplied by the hot water side of a building's plumbing system, so for the first few weeks, the water hardness inside the dishwasher will be higher than normal. For both of these reasons, you should adjust the combination and amounts of detergents and rinse agents. Gel packs offer a great alternative since they contain detergents and rinse agents in predetermined amounts.

### **If you have glass shower doors:**

Years of untreated hardness can etch the surface of your glass allowing for soap scum and minerals to get stuck in your glass. We recommend cleaning the glass surface thoroughly with a descaling cleaner such as CLR® Cleaning Products then applying a few coatings of Rain-X® to seal the pores on the glass surface. This process will fill the pores in the glass and allow the water to bead.

# TROUBLESHOOTING

Problem	Solution
Water leaking at the top of the tank around the head.	You may need to turn the head to tighten it. The tank head is preinstalled hand-tight, do not overtighten the head (simply turn it snug).
The tank leans to one side or is not level.	If the tank is not level, lift the tank straight up six (6) inches and tap it on the ground until the tank stands vertically. The bottom of the tank is round and the boot allows the tank to stand upright.
<p>The diagrams illustrate the process of leveling the tank. The top row shows an unlevel tank with a curved boot. The middle diagram shows the tank being lifted (indicated by an upward arrow). The right diagram shows the tank being lowered (indicated by a downward arrow) until it is level. The bottom row shows a similar process, but the final state shows a level tank and an unlevel boot, indicating the boot should be replaced.</p>	
Water pressure is slowing.	It is recommended that the sediment filter be replaced every 6-9 months depending on the amount of sediment present in the water supply. If the system has been working properly and the pressure is slowing, it may be time to change the sediment filter. Check the sediment filter and replace if necessary.

**Notice:** If you have experienced a Boil Alert or require your system to be sanitized, please go to [pentair.com/assets/pwsboilalert](http://pentair.com/assets/pwsboilalert) for product sanitization instructions.



## PRODUCT WARRANTY AND REGISTRATION FORM

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For details on your Pentair product warranty, please visit [pentair.com/assets/residential-filtration-warranty](http://pentair.com/assets/residential-filtration-warranty).

### Warranty Registration Form

Send in this Warranty Registration Form to validate your warranty or visit [pentair.com/register-warranty](http://pentair.com/register-warranty) to complete the warranty registration form online.

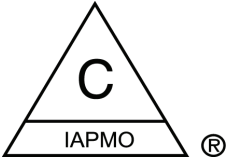
Date Item(s) were Received:	Order ID#:	Model:
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Dealer Purchased From:		
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Address:	_____	
City:	State:	Zip:
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**Send to:**

Pentair  
2361 Mason Avenue, Suite 100  
Daytona Beach, FL 32117  
Phone: 1.877.842.1635

## PRODUCT CERTIFICATIONS

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Pentair NaturSoft®-Custom – IAPMO tested and certified under NSF/ANSI61 for material safety.



The NaturSoft® system is DVGW DW-9191 certified for 99.6% hard water scale prevention.



### **WARNING**

Do not use where water is microbiologically unsafe or with water of unknown quality without proper disinfection before or after the filter/softener system.





2361 Mason Ave | Suite 100 | Daytona Beach, FL 32117 | United States  
P: 877.842.1635 | Technical Services: 877.842.1635 | [pentair.com/homewater](http://pentair.com/homewater)

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