

FRESHWATER® DOSING SYSTEM

FAQs

Table of Contents

GLOSSARY

OPERATION

START-UP

TROUBLESHOOTING

GLOSSARY

Chemical Carrier: The Chemical Cartridge holder mounted to the underside of the filter lid.

Chemical Cartridge: One of three containers marked and labeled to hold dosing chemicals and installed in the Chemical Carrier under the filter lid.

Dose: To add chemicals to the spa. The Dose button in the pH menu is used to start a pH dose.

Dosing Pump Controller: The controller and pumps for the Dosing System located in the equipment compartment.

Dosing Menu: A page on the spa control panel found under the Water Care / Sensor menu for controlling the scheduled phosphate dosing.

Error in Dosing: An error message for the Dosing System indicating that the dosing pump was not able to operate correctly.

Filter Bucket: Location in the spa on the bartop where the spa filters are found.

Filter Lid: The cover over the filter bucket and filters.

FreshWater pH Up: pH increasing chemical.

FreshWater pH Down: pH decreasing chemical.

FreshWater Phosphate Remover: Chemical for removing phosphate.

pH+ Cartridge: Chemical cartridge containing dry FreshWater pH Up.

pH- Cartridge: Chemical cartridge containing dry FreshWater pH Down.

Liquid Cartridge: Chemical cartridge containing FreshWater Phosphate Remover.

Pass-thru: A fitting located within the filter bucket side wall where the chemical carrier connects to the spa and the dosing pump controller.

OPERATION

Where does the FreshWater pH Up and FreshWater pH Down dose into the spa?

The concentrated FreshWater pH Up and FreshWater pH Down dispense into the spa out of the cartridges mounted under the filter lid.

Where does the FreshWater Phosphate Remover dose into the spa?

The FreshWater Phosphate Remover dispenses out of the Pass-thru wall fitting in the filter bucket.

How does the system dose dry chemical?

The Dosing System adds spa water to the dry FreshWater pH Up and FreshWater pH Down in the Chemical Cartridge. After 24 hours, the spa water dissolves the chemical. Pressing the Dose button adds new spa water through the dry chemicals while pushing concentrate out the dispensing port in the Chemical Cartridge.

Can the Dosing System dose with the filter lid off?

No, the filter lid must remain mounted on the filter bucket during dosing. Running the dosing with the lid and cartridges placed upside down on the spa bartop or floating in the spa will result in solid pH chemical being pushed out of the cartridge and potentially blocking the injector. The phosphate cartridge will not drain when upside down.

Can the water level be above the cartridges?

Yes. The cartridges are sealed and can operate underwater.

When does the spa prompt to refill the cartridges?

The spa will request a cartridge refill for two reasons. First, the system monitors the number of doses and recommends a refill when the cartridges should be depleted. Additionally, the FreshWater IQ Smart Monitoring System will monitor the spa water after each dose and look for the corresponding change in the pH. If the FreshWater IQ Smart Monitoring System does not observe a change, it will request a refill.

How many doses can the system deliver until the cartridges need to be refilled?

The pH cartridges are designed to provide approximately 10 doses each. The phosphate remover cartridge will provide approximately 30 doses depending on the size of the spa.

What happens when “Yes” to “Add pH Up to the pH+ cartridge” is selected?

The spa will wait 10 minutes for the cartridge to be filled and then prompt for confirmation if the cartridge was refilled.

What happens when “No” to “Add pH Up to the pH+ cartridge” is selected?

If a refill is declined, the spa will continue to monitor the system and remind the user again 3 days later to refill the cartridge.

What happens when “Yes” to “Did you refill the pH+ cartridge?” is selected?

After confirming the cartridge was refilled, the Dosing System will reset the cartridge status and operate the priming sequence for the pH cartridge as needed.

What happens when “No” to “Did you refill the pH+ cartridge?” is selected?

The spa will issue a new refill request after 24 hours.

How does one turn on / off the FreshWater Phosphate Remover scheduled dosing?

Enter the Dosing Control Panel in the sensor detail page and press the Tools icon or Dose button depending on model. Toggle on the phosphate dosing. The first maintenance dose is automatically scheduled four weeks after starting the system. For spas with faster phosphate buildup, a two-week dosing interval can be selected.

Why does the FreshWater IQ system dose phosphate remover?

Managing phosphate levels is essential because high phosphates increase chlorine demand. If levels get too high, the chlorine generated by the FreshWater Salt System, even at the highest setting of 10, may not be enough. Test for phosphates every month in both your spa and the tap water to determine if the spa is accumulating phosphates. If your spa is not accumulating phosphates, you don't need to activate the Dosing System or load the cartridge. However, if phosphate levels rise by more than 300 ppb per month, a maintenance dose can be scheduled for every 2 to 4 weeks to help keep levels in check. The Dosing System adds small, automatic doses that won't interfere with the Smart Monitoring System. If a large corrective dose is needed, it's best to temporarily turn off the smart monitoring feature during treatment.

Is it required to turn off the FreshWater IQ Smart Monitoring System when the FreshWater IQ Dosing System adds a maintenance dose of FreshWater Phosphate Remover once every two or four weeks?

No. The dose is very small and intended to treat 300 ppb. As long as there is phosphate in the water, the remover will act on the phosphates and not the sensor. If unused phosphate remover builds up in the spa, it can affect the Smart Monitor Sensor and cause the chlorine reading to show lower than actual.

Does the spa shut off the Smart Monitoring Sensor during a phosphate dose?

No. The regular phosphate dose is small, just enough to treat 300 ppb, and won't interfere with the sensor. If phosphates are present, the remover targets them, not the sensor. However, for larger manual treatments (to remove 500–2000 ppb), it's recommended to temporarily turn off the Smart Monitoring Sensor. These corrective doses typically take about three days and require daily filter cleaning. Turning off the sensor helps prevent inaccurate readings or potential damage during the process.

How much phosphate remover is being dosed?

The system will dose between 5 – 10 ml depending on the size of the spa. This is less than a quarter fluid ounce.

Do the filters need to be cleaned every day for 3 days after the FreshWater IQ Dosing System adds a maintenance dose of phosphate remover to the spa?

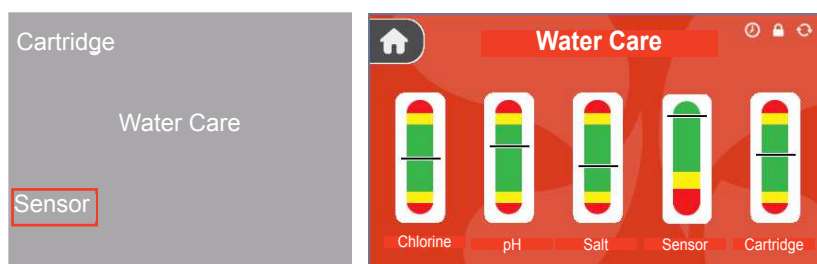
Because the amount of FreshWater Phosphate Remover is so small and typically added monthly, it is not necessary to clean the filters 3 days in a row after treatment. Following the recommended monthly filter cleaning schedule will address any build up in the filter.

What goes in the “Liquid” cartridge?

The liquid cartridge should only be filled with FreshWater Phosphate Remover. No other chemical/product should be added to the liquid cartridge.

Where is the Dosing System control panel?

The Dosing System control panel is located in the Sensor Detail page in the Water Care menu.



Can other brands of phosphate remover be used in the Liquid cartridge?

The FreshWater IQ Dosing System is designed and calibrated for use with FreshWater Phosphate Remover. Other brands of remover are of different concentrations and will not dose properly.

When do the cartridges need to be filled?

Fill the cartridges when instructed to do so by the Dosing System.

How often can dosing occur?

The system is designed to deliver a single dose not more often than once every 24 hours.

How can a high green pH display be lowered to a middle green pH?

If the pH is in the green in the Smart Monitor dashboard, it is not necessary to adjust the water. A manual dose can be added via the Dosing control menu if required.

Is it possible to dose twice in a day?

Although the system is designed to dose once every 24 hours to allow the water to adjust and the cartridge to generate fresh concentrate, the Dose button will reappear in 12 hours, providing the option 12 hours after a dose is made.

How much chemical is the FreshWater IQ Dosing System adding per dose?

The Dose button will make an equivalent liquid dose to what is displayed on screen.

What should be done when the control panel is providing an amount of pH chemical to dose?

The recommendation is presented for those wanting to add chemicals from a bottle. The Dose button will make an equivalent liquid dose when pressed.

What if the Smart Monitoring System shows that a refill is needed and there is still material in the cartridge?

It is possible that the Smart Monitoring System may ask for a refill before the cartridge is empty. In that case, top off the cartridge with the appropriate chemical, reinstall, and confirm it has been refilled. It is not necessary to remove all of the solid residual chemicals from the cartridge.

How is the FreshWater IQ Dosing System winterized?

When winterizing the spa, it is important to also winterize the Dosing System. Remove the cartridges and empty them by disposing of the chemicals per local code. Operate the manual on-demand dosing option for the phosphate remover until liquid stops being dispensed from the wall mounted port.

START-UP

Where are the chemical cartridges located in the spa?

The Chemical Carrier and cartridges are mounted to the underside of the filter lid.

Which chemicals should be used in the FreshWater IQ Dosing System cartridges?

For proper system operation, only use FreshWater pH Up, FreshWater pH Down, and FreshWater Phosphate Remover as indicated on the cartridge labels.

How are the cartridges filled or refilled?

Refill the cartridges when prompted by the spa. First lift the filter lid off the spa, flip over, and place on the spa bartop. Using two hands, lift the cartridge release tab and slide the cartridge back and then lift from the carrier. Unscrew the cap. Using the funnel provided, fill the cartridge. Rinse and dry the funnel between use. The pH cartridge should be filled to 1" or 2.5cm to the top. The phosphate cartridge should be filled completely. Apply the cap, snap the cartridge back into the carrier, and replace the lid on the filter bucket.

What is the priming process?

The pH priming process draws spa water into the plumbing line and cartridge to fill it and start the creation of the concentrated dosing solution.

How does the system prime?

The system will automatically prime the pH cartridges and lines after a refill request has been confirmed by the user.

How long is the priming process?

Priming will take between 3 and 5 minutes to fill the lines and the cartridge with water..

How is the Phosphate Remover Dosing System operated?

Start by navigating to the Dosing control panel and turning on phosphate dosing. Leave the dosing interval set to the default of every four weeks. The spa will prompt you to fill the cartridge, and about 10 minutes later, it will ask you to confirm that the cartridge has been filled. The first time you use the system, you'll need to manually prime it to load the lines with product. After that, the system will automatically dose every four weeks. For more detailed instructions, refer to the FreshWater® IQ Dosing System Owner's Manual.

Is it necessary to prime the phosphate remover?

Yes, only once. The liquid phosphate remover system will require a manual priming process to fill the delivery lines the first time the cartridge and system is used.

How is the phosphate remover system manually primed after filling for the first time?

Turn on the liquid phosphate dosing system and follow the prompts to fill and confirm filling the cartridge. Once confirmed, you may prime the system. Enter the Dosing control panel and press the manual Dose button for phosphate to run the pump. Wait for the pump to complete and then press again. It will take approximately 12 doses for a small spa (200 – 350 gallons / 760 – 1325 liters) and 6 doses for a large spa (350 – 600 gallons / 1325 – 2275 liters). The volume needed to fill the dispensing lines is the same for all models. Because the dose amount is smaller for small spas, more doses are needed to prime the system than large spas.

TROUBLESHOOTING

How can one check that the correct cartridge is dispensing when a dose is requested?

To test the system, start by removing all cartridges and making a note of which port is assigned to each product. After placing the filter lid upside down on the filter compartment/bar top, go to the Dosing control menu and manually trigger a pH Up dose. Watch the cartridge assembly to see which port dispenses the product. Then, do the same with a pH Down dose and observe where it's coming from. If either product is coming from the wrong port, simply swap the plumbing to correct the dosing.

How does one confirm the Dosing System has been installed?

There are a few ways to check if the Dosing System is properly installed. First, look inside the filter bucket to confirm that the chemical carrier is mounted and the hoses are connected to the wall assembly. Next, access the spa's control panel. Navigate to the firmware page under the Tools menu. If the system is installed and communicating correctly, "Dosing" will appear in the spa information. A Dose button can also be found on the pH page, while the dosing menu is located on the Sensor page.

Why are the dosing pumps not audible when pressing the Dose button? Is it working?

If the Dose button is present, the system is installed and communicating with the spa. When you press the Dose button and no error message appears, the system is functioning correctly. If an error does appear, it means the pump wasn't able to operate. The system will automatically clear the error, and you can try dosing again. If the error continues to occur, the pump may need to be replaced. In that case, please contact your dealer for service.

Why does the Dose System not appear to be dosing chemicals after pressing the Dose button?

When pressing the Dose button, observe the filter area for the corresponding chemical to be dispensed. If nothing is visible, there could be air in the lines or in the cartridge that needs to be purged. Remove the pH cartridges and dose while checking if spa water is being pumped through the ports. A manual, on-demand dosing option is available in the Dosing menu for dosing outside the 24 hour period. If water is present, reinstall the cartridges and continue to manually dose the cartridges until liquid exits the cartridge.

What should be done when the cartridges are refilled before the Dosing System prompts for a refill?

When filling the cartridges out of sequence, the spa will not know they have been filled. Continue to use the system. When the spa believes a refill is needed, top off or refill the cartridges and confirm the fill to get the system back in alignment.

What does the "Error in Dosing" message mean?

The Dosing pump had an issue operating. Retry the dose to see if the issue was resolved. If it is still present, the cartridge dispensing port might be plugged. Remove the cartridge and press "Dose" again while looking for water to flow out of the port in the back of the chemical carrier. If the error persists, consult your dealer about replacing the pump.

What is the sound when the Dose button is pressed?

When dosing, the pumps make an audible sound.

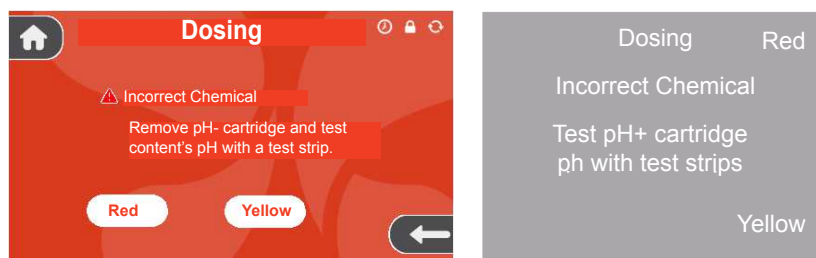
Why is the Dose button not visible?

The Dose button may not be present for several reasons. First, the Smart Monitoring System must be installed for the Dosing System to operate. Additionally, the system is designed to dose once every 24 hours. After pressing the Dose button, the spa will disable dosing for 12 hours to allow the water to adjust and the cartridge to generate fresh concentrate. The Dose button will also not appear if the Dosing System is not properly installed or is not communicating with the spa. Contact your dealer to check your installation.

Why is the spa's control panel not showing the Dose button when the pH is out of range?

If the Dose button is not visible when expected, first determine if a dose was requested less than 24 hours ago. If it has been longer than 24 hours since the last dose, verify that the Dosing menu is visible in the Sensor page. If neither of these are present, the dosing pump controller is not communicating with the spa control system. Contact your dealer for support.

Why are these screens present? What do the "Incorrect Chemical" screens mean?



The FreshWater Smart Monitoring System monitors the spa water to ensure the dose being made is responding correctly to the water. If the Smart Monitoring System detects that pH shift is opposite than what is expected by the dose, it will notify to verify the contents. Follow the onscreen prompts and verify the cartridge contents with a test strip.

Check the following if the FreshWater IQ Dosing System does not appear to be working.

- Inspect the cartridges. The pH cartridges should have visible solid chemical in them and be full of water. The liquid cartridge should have phosphate remover in it.
- Verify the Dose button appears when needed and that the Dosing Settings Page is present.
- Verify the Dosing System controls are working:
 - Manually operate the system to verify that the pumps are working.
 - Enter the Dosing menu and manually run each dose checking for pH chemical discharging from the chemical carrier and phosphate discharging from the Pass-thru in the wall of the spa. The Dosing pumps should be audible when dosing.
 - If the individual chemicals do not flow, run the dose 5 more times to clear any air or priming issues.
 - If the system continues to not pump, contact your dealer for support.

How to use the supplied funnel.

It is important to rinse and dry the funnel between use to prevent cross contamination of the chemicals in the cartridges.

Why did the pH cartridge start foaming after refilling it?

Foam at refill of a pH cartridge is an indicator that the wrong pH chemical was added to the cartridge. Completely empty and rinse the cartridge and refill. Tip: Always verify cartridge and fill chemical by its label when filling. Use a clean funnel when filling.