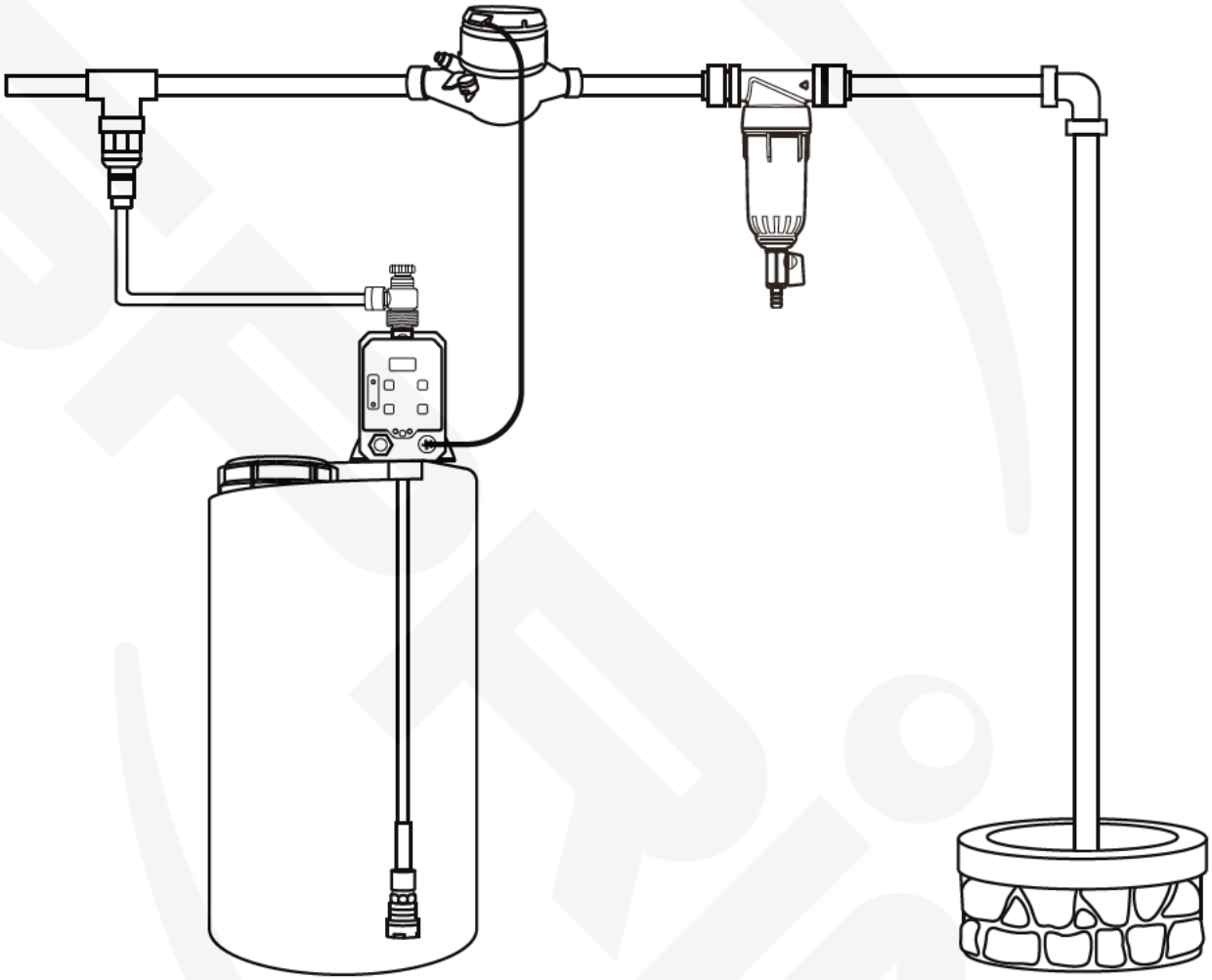
WHOLE HOUSE

iSpring WWC25 Well Water Chlorinator



Model: WWC25

Installation Instructions & User Manual

Ver. 01/2022

iSpring Water Systems

We stand behind our products

Since 2005, iSpring has been dedicated to providing high-quality drinking water to families across the United States. We provide various residential faucets and water filtration systems that purify your water in everyday life and deliver pure, healthy, and tasty water to you and your family.

At iSpring, we strive to develop products to the highest of standards and aim to make excellent drinking water accessible for all households. With affordable pricing, reliable quality, prompt delivery, and top-notch customer service, we hope to assist in bringing you great water for years to come.

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1 Precautions

The user must adhere to the installation specifications described in this Manual. iSpring is not responsible for damage, loss, or injury resulting from neglect, improper maintenance, or unauthorized modification of products.

a. The unit should be placed only on flat surfaces.
b. This product is designed for residential use only. Contact iSpring customer service to inquire about usage in non-residential settings.
c. In case of leaking or malfunction, shut off the inline water supply and unplug the system immediately. Then contact iSpring customer service for guidance.
d. Use only authorized iSpring parts. Using unauthorized or aftermarket components will void the product warranty.
e. The maximum line pressure for the chlorinator is 100 psi.
f. The dosing pump should not be operated in an environment where the temperature exceeds 120°F (50°C).
g. All tubing, fittings, and connections should be checked regularly for cracks or corrosion to ensure all components are secure and operating properly. Replace them as needed.
h. The iSpring Well Water Chlorinator involves using chlorine, which is corrosive to clothing, skin, and eyes. When handling the chlorinator, use caution and wear appropriate personal protective equipment (e.g., protective clothing, a face shield, safety glasses, and gloves). Additional safety precautions may be taken to avoid injury.
i. The suction tubing and air exhaust tubing are made from soft and transparent PVC, while the discharge tubing is made of stiff and translucent PE. These two components are not interchangeable.
j. If you turn 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 the water heater is accidentally drained.
k. Do not let the dosing pump, solution tank, or tubing freeze. If you need to winterize, drain the solution tank and discard the chlorine solution. Place the pump's suction into a bucket of clean water and allow the pump to run until the pump is free of any chlorine solution. Remove the suction from the water and allow the pump to pump dry. Then the pump is ready to store.
l. It is recommended to use a 3/4'' CPVC pipe (not included in the package) to connect appropriate parts of the chlorinator, made in 3/4'' NPT. You can use pipes of other sizes, but you will need proper fittings to change from 3/4'' NPT to your desired size.
m. Use the supplied thread seal tape at thread connection when necessary to prevent leak.
n. Although you can assemble the entire chlorinator system yourself, hiring a licensed plumber is highly recommended.
o. Unauthorized modification and disassembly are strictly prohibited and will void the warranty.
p. Never touch the power cord connector when your hands are wet, as this may result in electric shock.

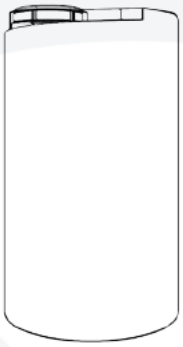
It is recommended to use voltage surge protection to ensure the chlorinator functions appropriately.

2 Packing List

	PART NAME	QUANTITY
A.	25 Gallons PE Solution Tank	1
B.	3/4'' NPT Push to Connect Straight Connector (Pulse Water Meter to CPVC piping)	2
C.	3/4'' NPT Push to Connect Straight Connector (Spin-down Filter to CPVC piping)	2
D.	User Manual	1
E.	50-micron Reusable Spin-down Water Filter (WSP50, can be replaced by WSP50ARB)	1
F.	Thread Seal Tape	1
G.	3/4" Foot valve	1
H.	Chlorine and pH Test Kit	1
I.	5 Lbs EPA-registered Concentrated Chlorine Pellets	1
J.	Injection Tee	1
K.	3/4'' Push to Connect Ball Valve	1
L.	Pulse Water Meter with 3/4" NPT Couplings	1
M.	Dosing Pump (Max. 22 GPD, 102 psi, include two screws and nuts for installation)	1
N.	1/4'' I.D. x 3/8'' O.D. x 2.5' Clear PVC Tubing (soft and transparent, for Suction Tubing)	1
O.	1/4'' I.D. x 3/8'' O.D. x 1.1' clear PVC tubing (soft and transparent, for Air Exhaustion Tubing)	1
P.	1/4'' I.D. x 3/8'' O.D. x 6.5' translucent PE tubing (stiff and translucent, for Discharge Tubing)	1
Q.	Ceramic Weight	1

optional parts (if purchased):

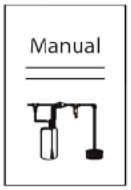
R.	10" x 54" Contact Tank (with a distribution tube)	1
S.	3/4'' Push to Connect Elbow Fitting	1
T.	3/4'' NPT Push to Connect Straight Connector (Contact Tank to CPVC piping)	2
U.	50-micron Reusable Spin-down Water Filter with Automatic Flush	1
V.	3/4" Brass Check Valve	1
W.	Pressure Gauge	1
X.	3/4" Push Fitting Flow Sensor Switch	1
Y.	3/4'' Push to Connect Straight Connector	1
Z.	Cap for Contact Tank (with two connectors and two clips)	1



A: Solution Tank

B: 3/4" NPT Push to Connect Straight Connector (Pulse Water Meter to CPVC Piping)

C: 3/4" NPT Push to Connect Straight Connector (Spin-down Filter to CPVC Piping)



D: User Manual

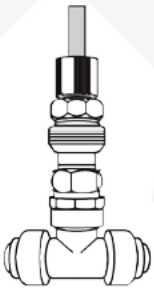
E: Spin-down Water Filter (WSP50, can be replaced by WSP50ARB)

F: Thread Seal Tape

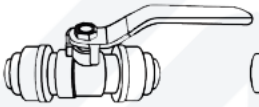
G: 3/4" Foot Valve

H: Chlorine and pH Test Kit

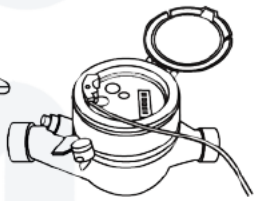
I: 5 Lbs NSF Concentrated Chlorine Powder Granules



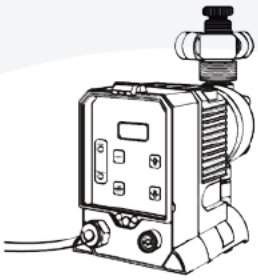
J: Injection Tee



K: 3/4" Push to Connect Ball Valve



L: Pulse Water Meter with 3/4" NPT Couplings



M: Dosing Pump

N: Suction Tubing

O: Air Exhaust Tubing

P: Discharge Tubing

Q: Ceramic Weight

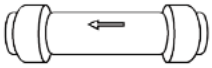
R: Contact Tank (Optional; with a Distribution Tube)

S: 3/4" Push to Connect Elbow Fitting (Optional)

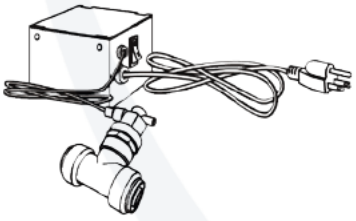
T: 3/4" NPT Push to Connect Straight Connector (Optional; Contact Tank to CPVC Piping))

W: Pressure Gauge (Optional)

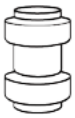
U: Spin-down Water Filter with Automatic Flush (WSP50ARB, Optional)



V: 3/4" Brass Check Valve (Optional)



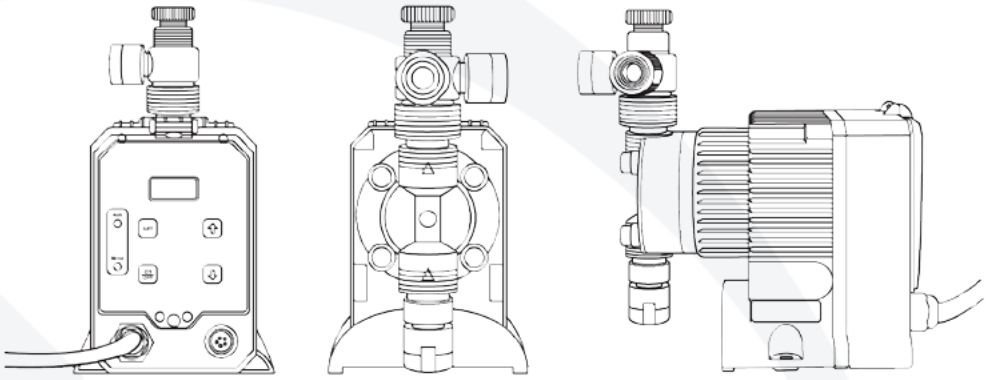
X: 3/4" Push Fitting Flow Sensor Switch (Optional)



Y: 3/4" Push to Connect Straight Connector (Optional)

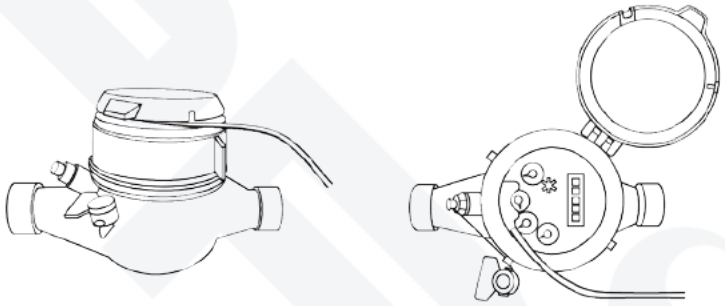
Z: Cap for Contact Tank (Optional; with two Connectors and two Clips)

Detailed view of the dosing pump:



Front View Back View Side View

Detailed view of the pulse water meter:



Side View Top View

Detailed view of the injection tee:

Front View Side View

3 Product Introduction

Together with the pulse water meter and the dosing pump, the chlorinator can inject a precise amount of chlorine into the water supply according to the water flow detected by the pulse water meter. That precise amount of chlorine mixes with your raw well water creates a free chlorine residual of 0.2 to 1.0 ppm in water, allowing the water to be properly disinfected.

4 Before Assembly

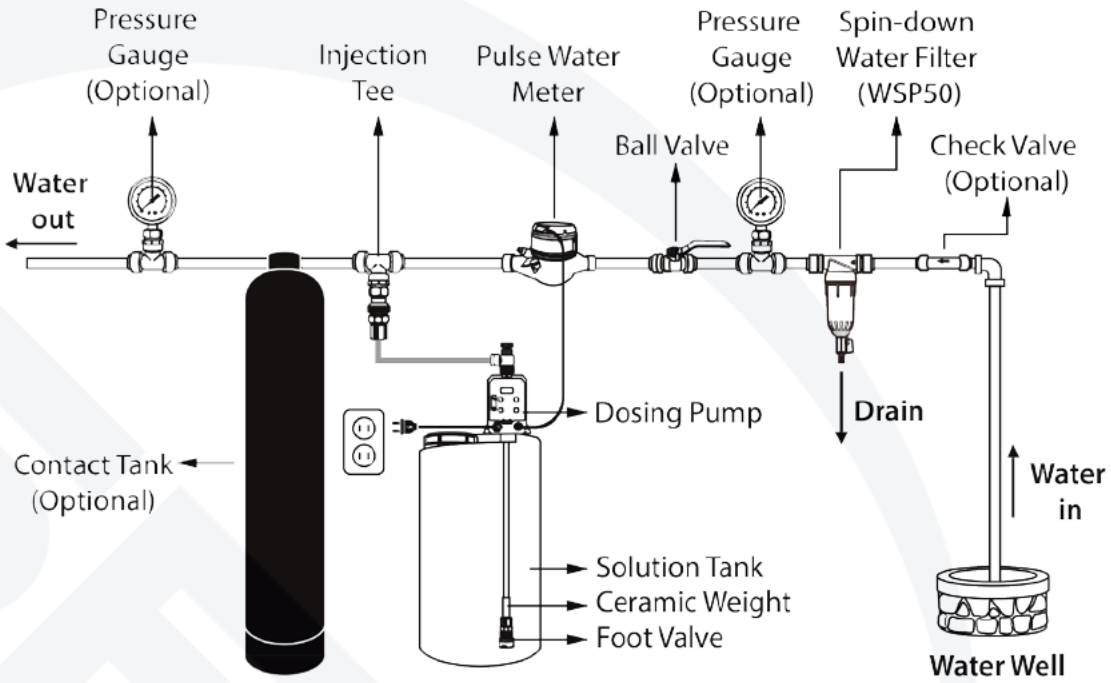
Before assembling the iSpring Well Water Chlorinator, please review the packing list and verify all parts required for installation are included.

Next, select an appropriate location to install the chlorinator. This location should be dry and on level ground. Avoid exposing the chlorinator to direct sunlight, rain, or freezing temperatures.

Although you can assemble the entire chlorinator system yourself, hiring a licensed plumber is highly recommended.

It is recommended to use 3/4'' CPVC pipe (not included in the package) to connect appropriate parts of the chlorinator, made in 3/4'' NPT. For example, the injection tee and pulse water meter should be connected with a 3/4'' CPVC pipe cut to the desired length, so are the check valve and sediment spin down filter. You can choose pipes with other sizes, but you will need proper fittings to change from 3/4'' NPT to your desired size.

An installation example is illustrated in the following diagram. Please note that several parts, such as the contact tank and pressure gauge, are optional.



*The Flow Sensor Switch (optional) can be used to replace the Pulse Water Meter.

Below are the overall assembly steps for the chlorinator:

a. Install the pulse water meter horizontally in a location where it is accessible to the dosing pump and electrical outlet. Make sure the pulse water meter has the display facing up.

b. Install the injection tee after the pulse water meter (Note: be sure to install the pulse water meter and injection tee after the existing pressure tank if you have one).

c. Connect the pulse water meter wiring to the dosing pump wiring according to the instructions provided in Chapter 4.

d. Install the Reusable Spin-down Water Filter. Connect different parts using appropriate water pipes and tubing, as illustrated in the figure above.

e. Mount the pump on the solution tank with the foot valve hanging in the tank.

f. Plug the dosing pump into an electrical outlet. Follow the instructions provided in Chapter 4 to program and set the pump to automatic running.

g. After completing these steps and when there is water flowing through the pulse water meter, the dosing pump will inject chlorine based on water flow.

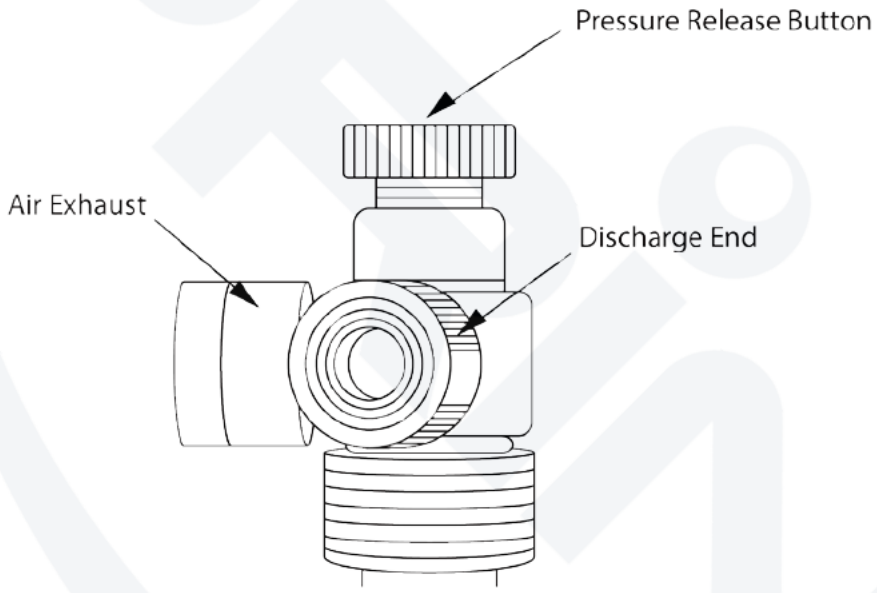
5 Assembly

5.1 Install the Pump on the Solution Tank

While you can install the pump on a shelf above the solution tank, installing the dosing pump directly on top of the solution tank is recommended. If the tubing from the foot valve to the suction side of the pump exceeds 60", the unit will not have enough lift force to stay primed.

Using the two screws and nuts provided, install the pump on the solution tank at the two smaller pre-drilled holes (the other two holes are bigger and are reserved for the air exhaust tubing and suction tubing, respectively).

The two-function valve that sits on top of the pump can release tubing pressure manually when needed. Simply open the pressure release button to allow the fluid in the discharge end of the tubing to flow back to the solution tank. When the pump is turned on, if there is air (bubbles) in the tubing or pump cavity, it will affect the metering accuracy of the pump, and it needs to be exhausted. Turn on the pressure release button to allow the fluid in the discharge end of the tubing to flow back to the solution tank.



Two-function Valve

5.2 Connect Tubing and Fittings

Before installation, verify that all tubing is cut straight. The tubing has been pre-cut and is ready to use. If you need to further trim it yourself, it is recommended that you trim the end of the tubing square using a new box cutter blade.

To connect tubing and fittings:

a. Slide the connector nut onto the tubing.
b. Push the tubing over the conical fitting until the tubing is flush against the end of the fitting. If necessary, soak the end of the tubing in hot water for 2-3 minutes to soften it to make the connection easier.
c. Screw the connector nut on and tighten it by hand. Do not use pliers or wrenches to tighten nuts or joints, as over-tightening can easily damage the sealing ring and thread.

Note:

a. Do not use thread seal tape or paste on the tubing fitting connections. These tubing fitting connections are sealed with sealing rings.

b. Tubing should be checked regularly for cracks or corrosion and should be replaced as needed.

c. The suction tubing and air exhaust tubing are made from soft and transparent PVC, while the discharge tubing is made of stiff and translucent PE. These two components are not interchangeable.

d. Before starting the pump, ensure all tubing is securely connected to the appropriate joints. This can be tested by pulling hard with your hand.

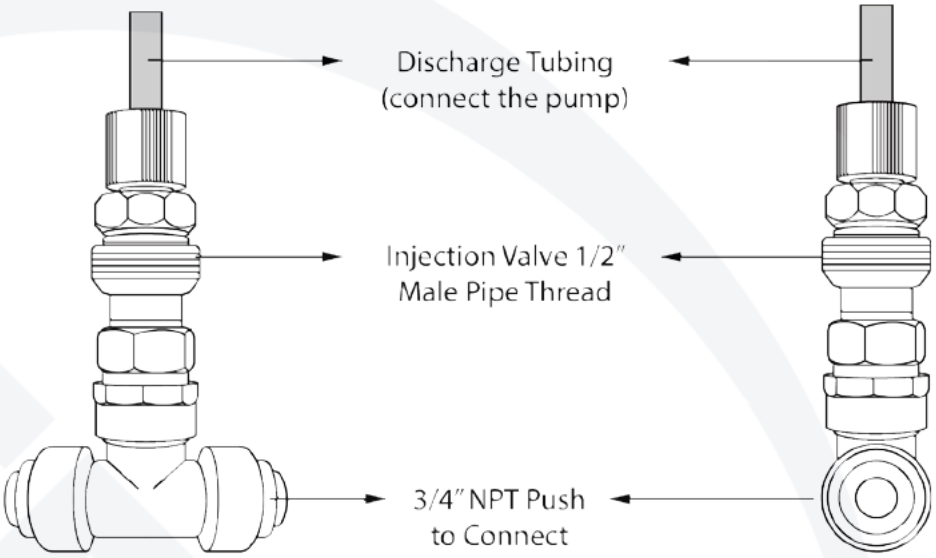
5.3 Install Discharge Tubing and Injection Tee

The discharge tubing is stiff and translucent tubing, and it connects the pump discharge end and the injection tee. Cut the tubing to the desired length as needed. Avoid bending the discharge tubing to prevent any potential damage.

The discharge tubing can be connected to the pump discharge end and the injection tee following the abovementioned steps. If necessary, soak the end of the tubing in hot water for 2-3 minutes to soften it to make the connection easier.

The injection tee is the dosing point where chlorine enters the water supply line. It also serves as a check valve that prevents the water in the supply line from back-flowing to the pump. The injection tee includes a 3/4'' NPT push to connect tee fitting and easily connect two 3/4'' CPVC pipes.

Note: Clean injection tee 1 to 3 times a year depending on use. Soak the injection tee in citric acid, muriatic acid, or white vinegar to clean.



Injection Tee

5.4 Install Suction Tubing and Foot Valve

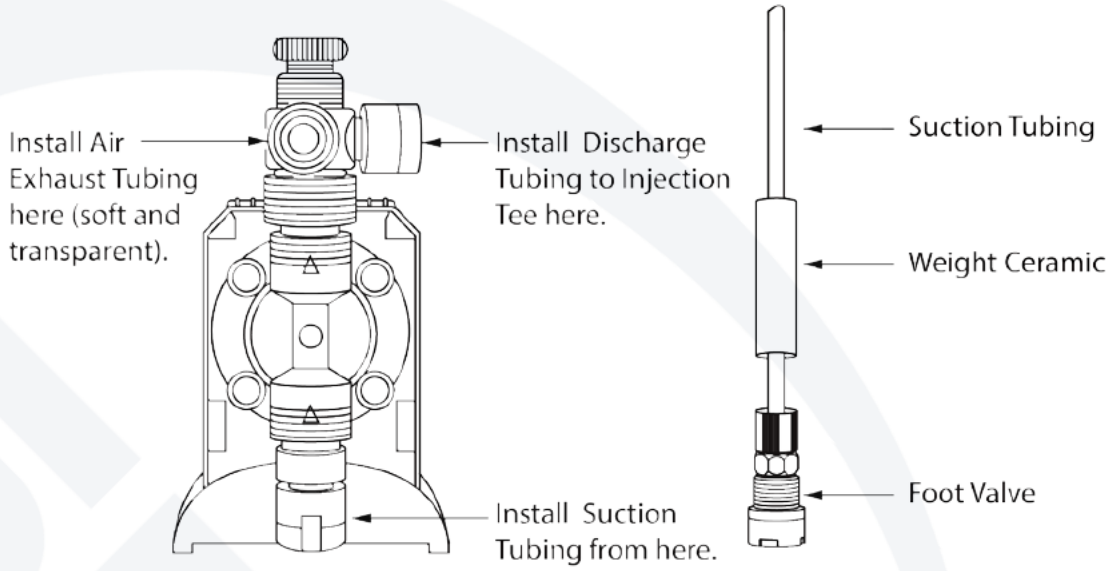
There are two soft and transparent tubing included in the package. Use the longer one for the suction tubing. It is pre-cut and pre-measured and is ready to install.

The suction tubing connects the foot valve on one end and the suction side of the pump on the other. The connection should be made following the steps described above.

The foot valve is designed to draw fluids upwards from the solution tank and into the dosing pump. It also serves as a check valve to maintain the suction of fluids, preventing fluids from flowing downwards and back to the tank.

To connect the foot valve with the suction side of the dosing pump, follow these steps:

a. Connecting the suction tubing with the foot valve. Be sure to place the ceramic weight on top of the foot valve. This helps the foot valve stand vertically near the bottom of the solution tank.
b. Next, run the suction tubing up through the pre-drilled hole in the solution tank. Connect it to the suction side of the pump.
c. Verify that the foot valve stays close to but is not touching the bottom of the tank.

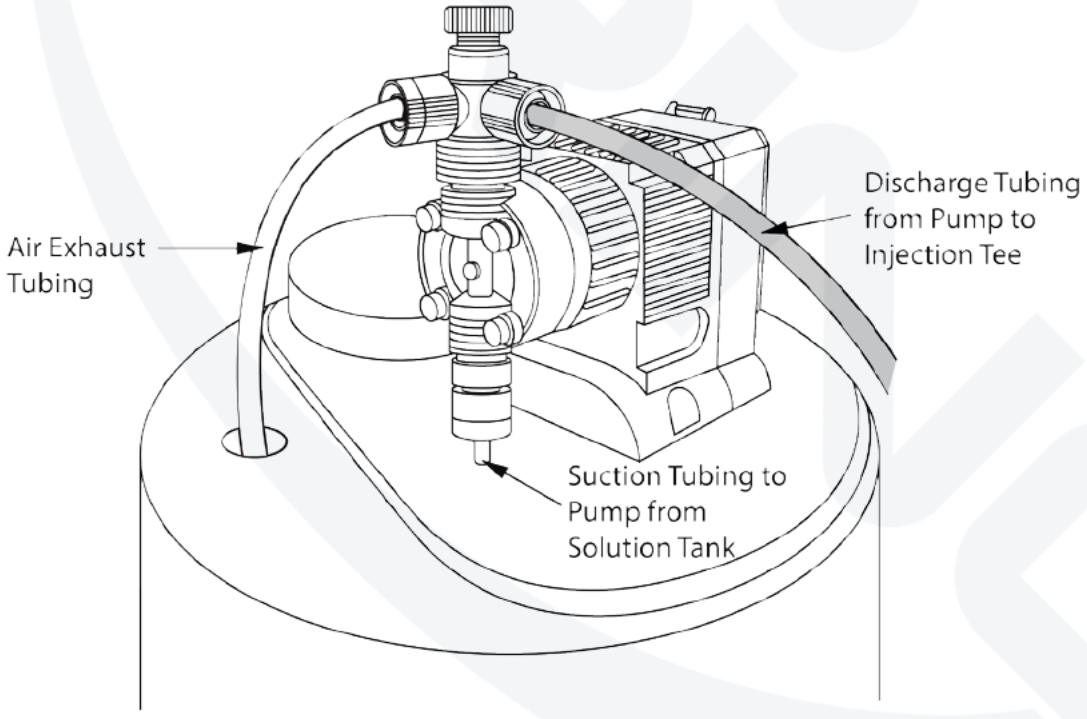


5.5 Connect Air Exhaustion Tubing at Degassing Port ("Kicker Port")

Use the shorter soft and transparent tubing as the air exhaustion tubing. It is pre-cut and pre-measured and is ready to install.

Connect one end of the air exhaustion tubing to the degassing port on the pump (labeled as "Kicker Port").

Insert the other end of the air exhaustion tubing into the solution tank via the pre-drilled hole (the one that is closest to the solution tank lid).



5.6 Connect Cables for Dosing Pump and Pulse Water Meter

Two cables come with the pulse water meter, one gray and one black. They are re-connected with wire nuts for your convenience. The black cable contains a yellow wire connector, which needs to be connected directly to the dosing pump via the "Signal Input" port located in the front of the dosing pump. After that, connect the dosing pump to the electricity using the black power cable located in the front of the pump.

Note:

In case the pre-connected cables are disconnected and need to be re-connected, follow the steps below:

Both the gray cable and the black cable further contain two wires of different colors. These wires need to be correctly connected to make the entire chlorinator function properly.

The red/blue wire within the gray cable needs to be connected with the red wire within the black cable. Use a wire nut or a piece of electrical tape (not provided) to fully insulate the wires.

The black wire within the gray cable needs to be connected with the gray wire within the black cable. Use a wire nut or a piece of electrical tape (not provided) to fully insulate the wires.

5.7 Use the Dosing pump and the Pulse Water Meter

Before starting the dosing pump for the first time, ensure that the pump has been installed securely on the solution tank, the tubing has been connected correctly, and the pump has been connected with the pulse water meter.

To start the dosing pump, follow these steps:

a. Add about 4 gallons of distilled or purified water to the solution tank. Do not use untreated well water.
b. Open the pressure release button on the two-function valve to approximately one half to one full turn.
c. Turn on the power to start the pump.
d. The pump will start working to push air out of the discharge tubing. When powering up for the first time, the pump will be in Manual mode, and the "MOTOR" light will be green. The display will read "60".
e. Close the pressure release button once the discharge tubing is filled with water, and there is no air bubble visible. The pressure release button will remain closed during normal operation.
f. Press the ON-OFF button once.
g. Press the SET button for a few seconds until the "AUTO" light turns green, and then press the ON-OFF button. The pump is now in automatic mode.
h. The pump is now coupled with the pulse water meter and can inject the desired amount of chlorine according to the water flow measured by the pulse water meter.

i. You can later adjust the amount of chlorine injection higher or lower using the UP and DOWN arrow buttons for desired free chlorine residual.

Note:

a. When making programming changes, you must wait at least 15 seconds for the updated changes to be memorized by the pump. Making additional changes or shutting off power to the pump before this waiting period will cause the product to default back to the original settings.

b. While in automatic mode, numbers appearing on the screen display have no meaning - they have no direct correlation to the amount of chlorine being injected. Correct operation can be verified by comparing pump actuation vs. programmed strokes per gallon of water flowing through the meter.

c. Understand the Buttons on the Pump:

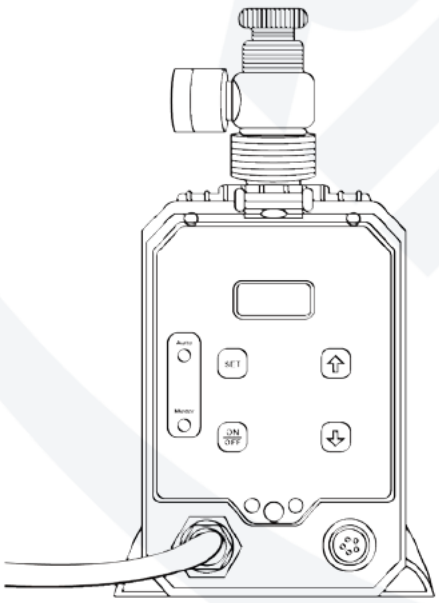
"SET": This key is used to switch between internal manual control mode and external remote control mode, save and exit when the pump is stopped.

"ON-OFF": This key is used to start and stop the pump.

"UP" and "DOWN" arrows: adjust the number of strokes per minute of the pump in the internal manual control mode, the maximum pump speed is 360 times/min, and the minimum is 0 times/min.

"MOTOR" light: lights up when the pump is energized and goes out when the power is off.

"AUTO" light: on when in automatic mode and off when in manual mode.



Pump Control Panel

5.8 Use the Optional Flow Sensor Switch Instead of Pulse Water Meter

The flow sensor switch (optional, if purchased) can replace the pulse water meter. It essentially has the same functionality as the pulse water meter: it measures the water flow that passes through it and sends signals to the pump.

To use the flow sensor switch, follow these steps:

a. Connect the plug of the dosing pump into the adapter of the flow sensor switch.

b. Connect the plug of the flow sensor switch into an electrical outlet.

c. Turn on the power switch on the adapter of the flow sensor switch.

d. Proceed with the steps mentioned in the prior section to push air out of the discharge tubing and set the pump in automatic mode.

6 Determine How Much Chlorine You Need

6.1 Make a Concentrated Chlorine Solution

Steps to make a concentrated chlorine solution in the solution tank:

a. Through the solution tank lid, add 80 grams (approximately 1.4 ounces) of Chlorine pellets into the tank.

b. Add purified water into the solution tank to the 100 Liter mark to dissolve the Chlorine pellets and make a concentrated chlorine solution.

c. Fully stir the solution until Chlorine pellets are completely dissolved, and no visible residual remains at the bottom of the solution tank. It may take some time for the Chlorine pellets to completely dissolve. Adding a small amount of white vinegar helps the granules to dissolve faster.

Note:

a. It is recommended to make a new chlorine solution in the solution tank once every 1 to 3 months. The chlorine solution is sensitive to heat and light, and thus it degrades over time. For best results, keep the solution tank out of the sun and use fresh solution regularly.

b. Use only the EPA-registered Chlorine Pellets provided for the chlorinator. Do not use household bleaches as many are not considered "food-grade" and may contain additives and/or heavy metals.

c. Do not use untreated well water to dissolve Chlorine pellets in the solution tank. Use purified water such as reverse osmosis water or distilled water instead.

d. Do not dissolve Chlorine pellets in warm or hot water, as heat will degrade chlorine efficacy.

6.2 Adjust for Desired Free Chlorine Residual

Once the chlorine is injected into raw well water at the injection tee, it reacts with various substances in water such as bacteria, iron, and manganese. After the chlorine has fully reacted with those substances, some level of un-reacted or free chlorine residual will remain in the water.

The goal of this chlorinator is to have a free chlorine residual of 0.2 to 1.0 ppm in water following the chlorinator but before any carbon filtration system. A free-chlorine residual at this level with sufficient contact time ensures the water is appropriately disinfected. Note: Free chlorine residual should not exceed 2.0 ppm due to taste concerns, according to CDC.

To test the free chlorine residual in your water following the chlorinator, use the chlorine and pH test kit supplied in the package. If you have an optional contact tank added to your chlorinator, you should sample the water after the contact tank but before any carbon filtration system. If you don't have one, you can test the water at any point after the

injection tee but before any carbon filtration system. Simply dip a test strip in that water sample and compare the color on the test kit. You can get both the free chlorine residual level and the pH using the test kit. Refer to the instructions on the test kit for detailed information.

The free chlorine residual level can be adjusted using the dosing pump's UP and DOWN arrow buttons. If you need a more free chlorine residual, press the UP arrow button. Always go from lower to higher; gradually increase your chlorine input until you get your desired residual. Do not over-chlorinate, and then work down.

Once you get the pump setting for the desired free chlorine residual level, use the same pump setting every time you make the concentrated chlorine solution in the solution tank. Check the free chlorine residual once per month and adjust the dosing pump accordingly to ensure your water is properly disinfected.

Note:

a. It is recommended to install the optional contact tank after the chlorinator so that chlorine and water have enough contact time to ensure the water is appropriately disinfected. Follow the steps below to assemble this unit:

a1 Find the white distribution tube inside the contact tank and insert it into the bottom of the tank cap (comes in a separate box).

a2 Screw in the tank cap on top of the contact tank. Note the flow direction on the cap.

a3 Install the two black plastic connectors for the tank inlet and outlet, respectively.

a4 Plug in the two red clips into the grooves found on the side of the tank cap to secure the connectors.

a5 Install the two brass connectors (3/4'' NPT push to connect straight, comes in a separate box) onto the two black plastic connectors for the tank inlet and outlet. This allows the installation of 3/4'' CPVC piping.

b. It is recommended that you get your well water tested by a qualified laboratory to understand the levels of various contaminants in your water. As a rule of thumb, for different substances, free-chlorine residual needed:

b1 For bacteria, you want to inject 1–2 ppm of chlorine with approximately 10 minutes of contact time. If the water is colder than 50°F (10°C) and/or the pH is higher than 7.5, a longer contact time or a higher residual is required.

b2 For each ppm of iron or manganese, you want to inject 1 ppm of chlorine.

b3 For each ppm of hydrogen sulfide (rotten egg smell), you want to inject 2-3 ppm of chlorine.

Therefore, if the well water contains bacteria and 2.0 ppm of iron, you need to inject 4 ppm of chlorine. If the well water contains bacteria and 1.0 ppm of hydrogen sulfide gas, you need to inject 5 ppm of chlorine.

7 Maintenance

[Warning] Always wear protective clothing, masks, goggles, and gloves during maintenance and replacement.

7.1 Replacing Pump Diaphragm

If you notice liquid leaking from the back of the pump or there is white residual appears on top of the solution tank near the pump, it is time to replace the pump diaphragm. Please contact us if you need to purchase a new diaphragm.

The steps to replace the diaphragm are as follows:

a. After the discharge tubing is depressurized, empty and remove the discharge tubing. Put the foot valve in the solution tank that contains water or pH-neutral fluids. Then start the pump to rinse, and lift the foot valve off the liquid surface and continue to run the pump. Continue doing this until the pump head is filled with air. If the diaphragm is broken and is not functioning properly, carefully remove the suction and discharge tubing, as well as the four screws on the pump head, and put the pump head in water or a pH-neutral solution.
b. While the pump is stopped, unscrew the four stainless steel bolts that are located at the back of the pump.
c. Pull the round plastic piece out by hand. Be sure not to lose the sealing ring inside that plastic piece.
d. Grasp the outer edge of the diaphragm and rotate it counterclockwise to loosen the diaphragm. Discard the old diaphragm. Remove the diaphragm chassis (located behind the diaphragm) and make sure the protrusion and new diaphragm have the same diameter.
e. Replace the diaphragm chassis so that the drainage hole on the chassis faces down and the screw holes are aligned with those on the pump.
f. Screw in the new diaphragm in a clockwise direction until it reaches the bottom. Be careful not to scratch the white surface of the new diaphragm.
g. Reinstall the round plastic piece onto the pump with four bolts. Tighten the bolts by hand only. Over-tighten may cause damage to the pump housing. Check the bolts again after a week and tighten them as needed. Do an annual check up on those bolts to verify that they stay tight, as those bolts tend to loosen up over time.

Diaphragm

7.2 Replacing Sealing Ring

To replace the sealing ring, follow these steps:

a. Release the pressure and disconnect the discharge tubing from the pump.
b. Put the foot valve in a container with water or another pH-neutral fluid. Start the pump to rinse it clean. Next, take the foot valve out of the container but keep the pump running until all fluid inside is removed. If the tetrafluoroethylene diaphragm is ruptured and prevents the solution from discharging, carefully disconnect the suction and discharge tubing. Remove the 4 screws on the pump and immerse the pump in water or other pH-neutral fluid.
c. Disconnect one tubing and one joint at a time, then replace the damaged check valve and sealing ring. When necessary, use a small screwdriver to pass through the center hole of the check valve to pry out the check valve. Review the installation directions related to the check valve before disassembling it.
d. Verify the direction of the check valve is correct when installing new check valves in various points.

7.3 Replacing Injection Valve

The injection valve (see figure below) is a check valve within the injection tee. To replace the injection valve, follow these steps:

a. Isolate the injection valve. Release the pressure and drain any fluids in the tubing.
b. Release the pressure and disconnect the discharge line.
c. Remove the tube connected to the injection valve, then disconnect the injection valve connector. Remove and replace any damaged back pressure springs, valves, and sealing rings. Note: Before disassembling the injection valve, review the installation directions for these parts.
d. Install a new backpressure valve spring, valve, and sealing ring. Make sure that the orientation of the part is correct during installation.

Injection Valve

8 Troubleshooting

PROBLEM	POTENTIAL CAUSE(S)	SOLUTION
The pump will not be automatically prime.	1. The pump is not turned on or is not connected to power.	1. Turn on the pump or connect the power supply.
	2. The foot valve is not perpendicular to the bottom of the solution tank.	2. Reposition the foot valve to make it stand vertically at the bottom of the solution tank.
	3. The pump's suction lift is too high.	3. The maximum suction lift of the pump is 1.5 meters. If the higher suction lift is desired, immersion installation is required.
	4. The suction tubing is twisted or coiled.	4. Use a straightening sleeve to straighten the suction tubing.
	5. The connection is over tightened at the port, which deforms the sealing ring and causes leakage.	5. Loosen the connection at the port.
	6. Air in the suction tubing.	6. The suction tubing must be placed as close to vertical as possible to avoid false immersion.
The pump needs to be primed.	1. No fluid in the solution tank.	1. Add fluid to the solution tank and restart the pump.
	2. The foot valve is not perpendicular to the bottom of the solution tank.	2. Reposition the foot valve to make it stand vertically at the bottom of the solution tank.
	3. The pump's suction lift is too high.	3. The maximum suction lift of the pump is 1.5 meters. If the higher suction lift is desired, immersion installation is required.
	4. The suction tubing is twisted or coiled.	4. Use a straightening sleeve to straighten the suction tubing.
	5. The connection is over-tightened at the port, which deforms the sealing ring, causing backflow or failure to pour.	5. Loosen the connection at the port.

	6. Air in the suction tubing.	6. The suction tubing must be placed as vertical as possible to avoid false immersion.
	7. Air leakage at the suction side.	7. Check the suction side for cracks and replace if necessary.
Leak in the tubing.	1. The connecting portion of the tubing is damaged.	1. Cut off the tubing by 1 inch (25 mm), then reconnect the tubing to the port.
	2. Loose or cracked joints.	2. Replace with a new connector.
	3. Damaged sealing ring.	3. Replace with a new sealing ring.
	4. The pump is corroded.	4. Contact us for guidance.
The pump fails to run when output flow is small or under pressure.	1. The rated discharge pressure of the pump is less than the injection pressure.	1. The injection pressure cannot exceed the maximum pressure of the pump.
	2. Damaged sealing ring.	2. Replace with a new sealing ring.
	3. Diaphragm rupture.	3. Replace the diaphragm.
	4. Improper stroke length setting.	4. Check the zero position of the pump, then reset the device.
	5. Exhaust tubing is too long, causing the rated pressure of the pump to be lost due to friction.	5. Reduce the length of the exhaust tubing.
	6. Foot valve filter is clogged.	6. Replace the filter when pumping viscous fluids.

Warranty

This Limited Warranty extends to the original purchaser of the system only. This warranty covers all Manufacturer-supplied items only that prove to be defective in material, workmanship, or factory preparation. This warranty covers parts only; all labor is excluded from this warranty, including, but not limited to, services related to the removal, replacement, installation, adjustment, maintenance, and/or repair of the unit or its components items. Excludes all non-Manufacturer labor required for any servicing of the unit, including, but not limited to, servicing related to installation, adjustment, maintenance, and repair of the unit. This warranty applies only for the first full calendar year from the date of purchase. The following items are excluded from this warranty: suction tubing, air exhaust tubing, discharge tubing, pump diaphragm, O-rings, and all other parts or components that require regular replacement due to ordinary usage.

Disclaimers: This Limited Warranty applies only if the system is installed, used, and maintained in compliance with all instructions and requirements enclosed with the system. This warranty will be void if unauthorized, or aftermarket components are used, or unauthorized modification and disassembly are performed.
While the testing was performed under standard laboratory conditions, actual performance may vary. The Manufacturer does not know the characteristics of your water supply. The quality of water supplies may vary seasonally or over a while. Your water usage may vary as well. Water characteristics can also change if the drinking water appliance is moved to a new location. The Manufacturer assumes no liability for determining the proper equipment necessary to meet your requirements, and we do not authorize others to assume such obligation on our behalf.
This Limited Warranty does not cover any Manufacturer-supplied items that are defective due to the use of improper parts, equipment, or materials. This warranty does not cover alterations or modifications of the unit or failure of a unit caused by such alterations and modifications.
This Limited Warranty does not cover malfunctions of the unit due to tampering, misuse, alteration, lack of regular maintenance, and misapplication. In addition, damage to the unit due to fire, accident, negligence, the act of God, or events beyond the Manufacturer's control is not covered by this warranty.

Incidental and Consequential Damages Limitation: The Manufacturer will not be responsible for any incidental or consequential damages as a result of the failure of this unit to comply with express or implied warranties or any defect in the unit, including but not limited to lost time, inconvenience, damage to personal property, loss of revenue, commercial losses, postage, travel, telephone expenditures, or other losses of this nature. If some states do not allow the exclusion or limitation of incidental or consequential damages, you may choose to return the system. If you choose to keep it, you insist this exclusion STILL apply to you.

Owner's Warranty Responsibilities: As a condition of this Limited Warranty, the owner must ensure that periodic maintenance of the system is performed as described in the literature enclosed with the system. Neglect, improper maintenance, abuse, modification, or alteration of the unit will invalidate this warranty. Should your unit develop a defect or otherwise fail to perform under this warranty, you should contact the retailer from whom the product was originally purchased.

Implied Warranties: The implied at-law warranties of merchantability and fitness for a particular purpose shall terminate on the date one year after the date of purchase.

NOTE: IN CASE SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, YOU MAY CHOOSE TO RETURN THE SYSTEM. IF YOU CHOOSE TO KEEP IT, YOU AGREE THAT THE ABOVE LIMITATIONS STILL APPLY TO YOU.

Warranty Registration

To register your product for the warranty, visit our website at 123filter.com and go to the "Warranty" tab.

We provide a 30-day money-back guarantee, a 1-year manufacturer warranty, and lifetime tech support for all of our products. However, we do not have the order information from websites other than 123Filter.com (Amazon, Home Depot, etc.), so please be sure to fill in that information upon registration of your system. If you have any questions or concerns about your product, please do not hesitate to call or email us or put it in the notes/comments upon your warranty registration. Your satisfaction is our business!

If you are happy with our products and service, please show your support by writing a product review on Amazon, even just a single line. It takes you just a minute but means a lot to us. Thank you!

Atlanta, GA USA

iSpringFilter.com

For questions, comments, or technical support, contact us at:

support@123Filter.com

(678) 261-7611

Monday-Friday 8:30 a.m. - 5:30 p.m. EST