IONGEN™ SYSTEM G2

IonGen™ System G2
Item #95027

IonGen™ Probe

Active Ingredient
Copper (as metallic).....99.99%
Other Ingredients:.....0.01%
Total: 100.00%

EPA Registration Number 83739-1
EPA Est. No. 89457-CHN-001

NET WEIGHT: .5 LBS.

Keep Out of Reach of Children

CAUTION

Refer to the product manual for complete directions for use and installation instructions.

Manufactured For:
Aquascape, Inc.
901 Aqualand Way
St. Charles, IL 60174-5303

Storage and Disposal

Do not contaminate food or feed by storage and disposal.

Pesticide Storage

Store this product in a cool, dry place away from children.

Pesticide Disposal and Container Handling

Dispose of recycling or put in trash.

See IonGen™ Probe packaging for additional Precautionary Statements and Directions For Use.

IonGen™ System G2

Thank you for choosing the IonGen™ System G2. At Aquascape, we connect people to water the way nature intended. Since 1991, we've been creating and field-testing water features in order to provide you with the most reliable products and best value in the water gardening industry.

The IonGen System is an electronic algae controller for ponds, waterfalls, and other decorative water features such as fountains. The IonGen system reduces unsightly string algae and helps reduce maintenance without the use of chemicals.

A microprocessor inside the IonGen System's control panel causes the outermost atoms of the system's metal probe to lose an electron, creating a positive ion. The positive ion attempts to flow from one probe bar to the other, and is then swept away by the flow of water where the ion can begin to treat the water and reduce algae.

The IonGen Probe uses reverse polarity to reduce scale and debris buildup on the probe's bars. The metal alloys in the IonGen Probe are tested to ensure maximum results.

The IonGen System may be used for algae control in ponds or water features containing fish as long as the copper concentration is carefully monitored with the included test kit to avoid concentration levels that exceed 0.25 ppm.

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☎ Contact Us

For more information about our company or products, please visit our website at aquascapeinc.com or call US (866) 877-6637 CAN (866) 766-3426.

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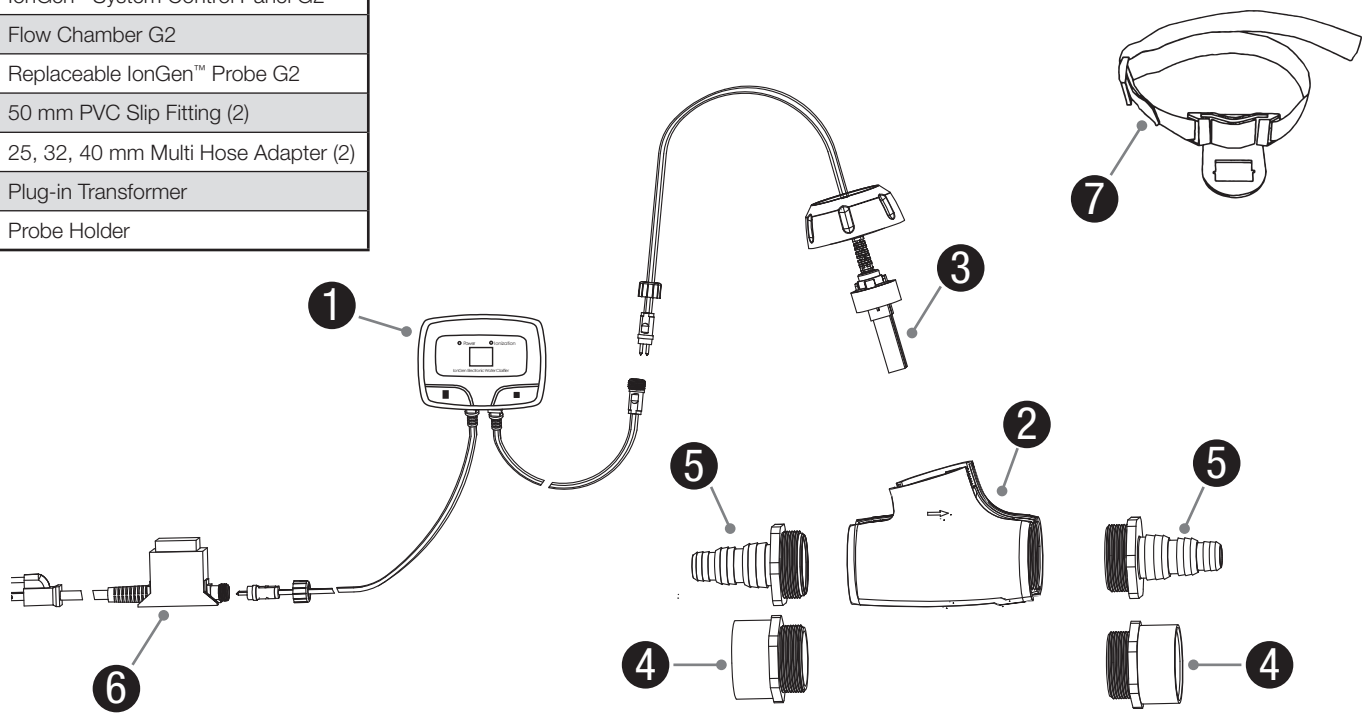
Contents	
No.	**Description**
1.	IonGen™ System Control Panel G2
2.	Flow Chamber G2
3.	Replaceable IonGen™ Probe G2
4.	50 mm PVC Slip Fitting (2)
5.	25, 32, 40 mm Multi Hose Adapter (2)
6.	Plug-in Transformer
7.	Probe Holder



Includes (not pictured)
- Cu/Copper Test Kit (also sold separately as Item #96020)
- KH/Alkalinity Test Kit (also sold separately as Item #96019)

Also Available (not included)
- 7.6 m Quick-Connect Extension Cable (sold separately as Item #98998)

Safety Information

- Read this Instructions and Maintenance manual before installing.
- Follow all local codes for installation.
- To reduce the risk of electric shock, connect only to a properly grounded, Residual Current Device (RCD)
- DO NOT immerse the IonGen™ System Control Panel in water.

WARNING: It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

WARNING: This appliance must be grounded. In the event of a malfunction or breakdown, grounding will reduce the risk of electric shock by providing a path of least resistance for electric current. This appliance is equipped with a cord having an appliance-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is installed and grounded in accordance with all local codes and ordinances.

WARNING: Improper connection of the appliance-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service representative if you are in doubt whether the appliance is properly grounded. DO NOT modify the plug provided with the appliance; if it will not fit the outlet, have a proper outlet installed by a qualified technician.

IonGen System G2 Specifications

- Input Voltage: 230V
- Input Frequency: 50 Hz
- Output Voltage: 12V
- Output Current: 0.5A
- Plug-in Transformer: UL Listed, CSA Listed Rainproof Class 2
- Flow Chamber: Injection Molded Plastic
- Probe material: 99% Copper
- Capacity: Up to 100,000 litre water features

Installation

IMPORTANT: Before installing the IonGen System in existing water features, it is recommended to thoroughly clean the pond of as much algae and debris as possible. This will maximize the ions' effectiveness and speed to achieve desired results. The more algae and debris in the water feature, the longer it will take the Aquascape IonGen System to provide noticeable results.

STEP 1

MOUNT THE CONTROL PANEL


Ex. 1

- Mount the IonGen System Control Panel in the desired location (Ex. 1); making sure the power cord reaches the GFI outlet and the IonGen Probe cord reaches the desired location of the IonGen Probe. A 25' Extension Cable with Quick-Connects (sold separately) is available, if needed. The IonGen System Control Panel is weather-resistant, but in order to maximize the lifespan of your unit, we suggest mounting the panel above ground in a location protected from the elements.

STEP 2

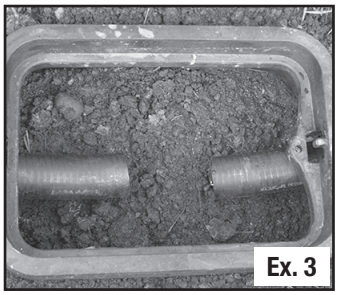
INSTALL THE FLOW CHAMBER

- The Flow Chamber for the IonGen System can be located in several areas within the water feature. The Flow Chamber is most effective when plumbed directly into the water feature's recirculating system. The IonGen Probe can also be installed without the Flow Chamber by submerging it in a filter, such as in a skimmer or Pondless® Waterfall Vault. Follow the step-by-step installation instructions for the method you select.

Option A: Install into Recirculating System

- Cut and insert the Flow Chamber into the water feature's recirculating system (Ex. 2). The Flow Chamber should be positioned after the water feature's pump, and in a region of the plumbing line that drains by gravity. This enables you to easily service the IonGen Probe and allows for overwintering the Flow Chamber and fittings. It is recommended to use a pre-filter, such as a skimmer, prior to the Flow Chamber, in order to remove solids and debris that may interfere with the IonGen Probe. A small valve box may be used for easy access during maintenance (Ex. 3).


Ex. 2


Ex. 3

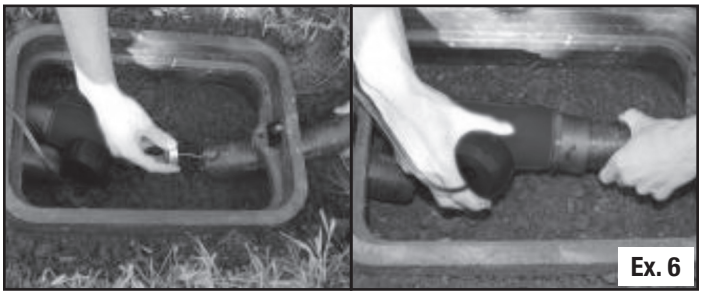
- Select the fittings needed for the application. The PVC slip fitting is designed to be used with Schd 40 PVC pipe rigid or flex and PVC glue. The multi-hose adapter fitting is designed to be used with kink-free pipe and hose clamps. Refer to page 3 for adapters and fittings.
- Hand thread the selected fitting into the Flow Chamber (Ex. 4).

  NOTE: Do not use tools to install the fittings into the Flow Chamber. Fittings need to be hand-tight only.

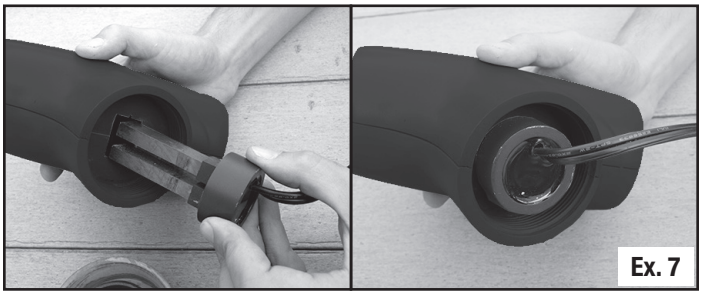

Ex. 4

- If using a diameter pipe larger than the smaller hose tails, cut off the hose tails not being used with a hack saw in order to maximize the water flow through the plumbing.
- When using the Barbed Multi-Hose Fitting, use a metal hose clamp to secure pipe to fitting (Ex. 5).
- When using PVC, glue pipe into Slip Fitting using PVC glue (not included). Follow the glue manufacturer's directions for proper plumbing steps (Ex. 6).

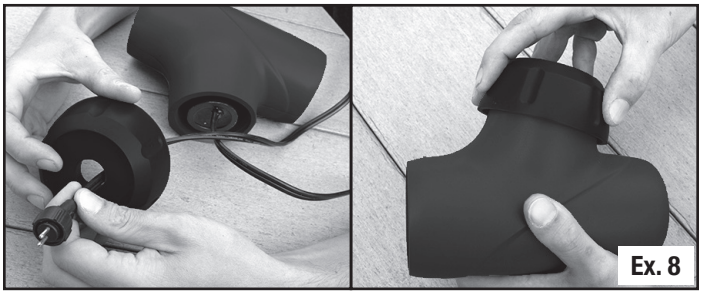

Ex. 5


Ex. 6

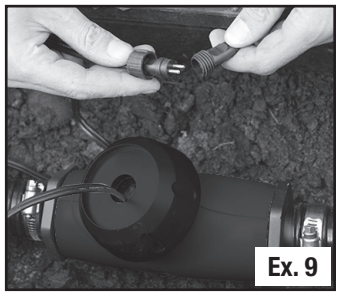
- Install the IonGen Probe into the top of Flow Chamber (Ex. 7).



- Insert IonGen Probe cord through the IonGen Probe collar (Ex. 8).
- Hand-tighten the IonGen Probe collar into position (Ex. 8).

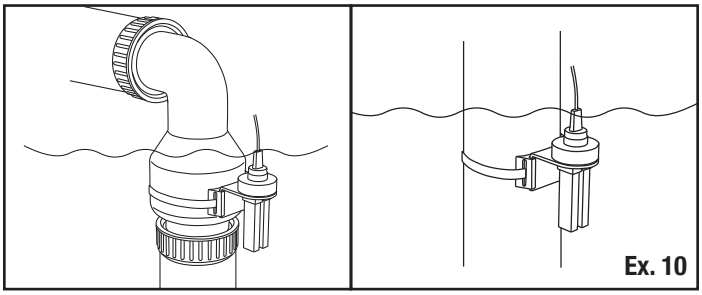


- Plug the connector from the Control Panel into the IonGen Probe fitting connector (Ex. 9).



Option B: Only Using IonGen Probe Holder

- The IonGen Probe can also be submerged in a filter by using the IonGen Probe Holder.
  1. Position the probe holder bracket in the desired location on check valve or plumbing (Ex. 10).
  2. Pull the buckle securely fastening the probe holder in place.
  3. Trim away remaining or excess strap if necessary.
  4. Position the IonGen Probe into the probe holder.



IMPORTANT: The IonGen Probe must be fully submersed in water at all times to function properly. Failure to provide sufficient water flow across IonGen Probe will affect the IonGen System's performance. See Troubleshooting for more information.

NOTE: The IonGen System may be used for algae control in ponds or fountains containing fish as long as the copper concentration is carefully monitored and the concentration is not allowed to exceed 0.25 ppm.

NOTE: If the total alkalinity of the water is less than 100 ppm, you'll need to increase the level of alkalinity. DO NOT operate the IonGen System on water features with fish if the alkalinity levels are below 100 ppm.

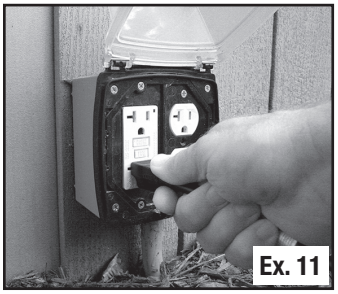
NOTE: If the total alkalinity of the water is above 250 ppm you will need to decrease the level of alkalinity. If alkalinity is more than 250 ppm it can be typically reduced by conducting a partial water change. Check to make sure your tap water is within the target water parameters.

NOTE: Alkalinity (not hardness) can be determined using the KH/Alkalinity Test Kit (part #96019). Alkalinity levels outside of the recommended parameters will significantly reduce and possibly eliminate the effectiveness of the IonGen System to control the algae. See Targeted Water Parameters section for more information.

STEP 3

SETTING THE IONGEN™ SYSTEM'S LEVEL

- Turn on the pump and plug in the IonGen System (Ex. 11).
- Adjusting the IonGen System's Level - Depress the “+” or “-” button for 3 seconds to enter the setting mode. Once in the setting mode the ionization level can be adjusted (Ex. 12). The setting mode will exit automatically.



- If operating the IonGen System on a new water feature or a water feature with good water quality and little to no algae, set the IonGen System to level 1 or 2. Follow the next step if algae growth begins to increase.

IMPORTANT: Operate the IonGen System at a low level and only raise the ionization level if the algae attached to rocks and gravel becomes excessive. Maintaining the IonGen System on the low level will make sure the copper levels don't become too elevated, and also prolong the life of the IonGen Probe.

NOTE: It is not unusual to have low, or even no copper level readings on the test kit, no matter how high the IonGen System's ionization level setting. This is due to the copper being used within the water feature. Periodic copper testing will ensure that the levels are below the maximum level of .0.25 ppm.

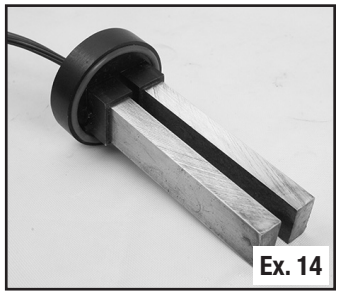
Operating the IonGen System on an existing water feature with algae present

Ex. 13

- Set the IonGen System to the highest ionization level possible if there are significant levels of algae present in the water feature. In some water feature applications you may find that you are not able to raise the ionization level to the higher power setting (levels 7 - 10) (Ex. 13). This is typically due to the water chemistry of the water feature on the water flow rate across the IonGen Probe. In most cases, the IonGen System will still produce sufficient quantity of ions to kill the algae. Be patient, as it may take several days to a few weeks for noticeable results to occur. Using the included copper test kit, test the water over a period of days to ensure that the copper levels **DO NOT** rise above .0.25 ppm. The ionization level can be lowered once the algae levels have decreased or the copper test kit indicates a maximum level of .0.25 ppm.
- Pre-existing algae levels, poor water conditions, as well as the volume of water in the water feature are all factors that affect the speed at which the IonGen System will achieve desired results.
- If the level of copper rises above .0.25 ppm, reduce the IonGen System down to level one or unplug the IonGen System until the copper levels fall below .0.25 ppm. A water change can also be conducted if the copper levels are significantly above .0.25 ppm.
- In the case of a power failure, the IonGen System Control Panel's internal memory will reset itself to the last setting before the power failure.

General Maintenance

IonGen Probe Maintenance


Ex. 14

- The replaceable IonGen Probe will typically last one or more seasons, depending on the usage, quantity of water and water chemistry of the water feature (Ex. 14). The IonGen System Control Panel display will read "00" when the IonGen Probe is completely exhausted or there is a fault in the operation of the system.
- It is recommended to visually inspect the bars on the IonGen Probe from time to time, and replace the IonGen Probe if the bars are significantly worn.
- The Aquascape IonGen System does contain a built-in, self-cleaning mechanism that reduces the build-up of oxidation scale on the bars, but requires sufficient water flow to work properly. An excessive build-up of scale on the bars is an indicator that there may not be sufficient water flow. Significant oxidation scale on the bars will decrease the distribution of ions being released into the water, as well as affect the ability to raise and lower the Control Panel's ionization level. Scale build-up can easily be brushed or scraped off the bars, immediately improving IonGen Probe performance. If you notice repeated scale build-up, you may want to move the IonGen Probe to a location with higher water flow, such as plumbing it directly into the main recirculating system.
- Starting out each year with a new IonGen Probe is recommended and will significantly boost the performance of the IonGen System.

Winter Application

- It is recommended to shut down the IonGen™ System in regions that have climates that experience cold temperatures. This will prevent elevated copper levels during the time of the year when there is no algae growth, and will prolong the life of the IonGen Probe.
- The IonGen System's Control Panel is weather resistant, but steps to protect it from the elements, such as mounting the panel above the ground, are recommended to maximize its lifespan.
- The Flow Chamber, when plumbed directly into the recirculating system, needs to be located in a region that will drain for servicing the replacement IonGen Probe, as well as allowing the Flow Chamber fitting to over-winter.
- If shutting down the water feature during the winter, make sure the plumbing line is drained free of water. Failure to do so may cause water remaining in the plumbing line to freeze, potentially cracking the Flow Chamber and voiding the warranty.
- Prior to restarting the IonGen System in the spring, it is a good idea to remove and inspect the IonGen Probe to ensure it is free of debris and scale build-up, and not exhausted or worn. Scrape away any scale build-up from the IonGen Probe's bars. Replace worn IonGen Probes. See section above the IonGen Probe maintenance for more information.

Troubleshooting

IMPORTANT: Before installing the IonGen System on an existing water feature, it is recommended to thoroughly clean the pond of as much algae and debris as possible. This will maximize the ions' effectiveness and speed to achieve desired results. The more algae and debris present in the water feature, the longer it will take for the IonGen System to provide noticeable results.

- Power light not illuminated
  - No AC Power
    - Check Residual Current Device (RCD) and incoming power
  - Controller failure
    - Contact dealer or installer
- Ionizing indicator display reads "00"
  - IonGen Probe exhausted
    - Inspect and replace IonGen Probe
    - Check to make sure all of the IonGen Probe cable connectors are properly installed and the cables have not been accidentally damaged or cut
- Ionization level not able to be raised to full power
  - Insufficient water flow through Flow Chamber
    - In most cases the IonGen System will still produce a sufficient quantity of ions to kill the algae. If algae levels are not being controlled, move IonGen Probe to area of greater water flow. Plumbing into the water feature's recirculating system is the most effective method.
  - Scale build-up or debris suffocating IonGen Probe
    - An excessive build-up of scale on the bars is an indicator that there may not be sufficient water flow. The scale will decrease the distribution of ions being released into the water, as well as affect the ability to raise and lower the Control Panel's ionization level. The scale can be easily brushed or scraped off the bars which will improve the IonGen Probe's performance immediately. If you notice the scale repeatedly building up then you may want to move the IonGen Probe to a location with higher water flow, such as plumbed directly into the main recirculating system.
  - Water chemistry make-up
    - Water chemistry also plays a role in the ability of the ionization level to be raised or lowered, as well as the effectiveness of the copper ions in the water.
- Continued scale build-up on IonGen Probe Bars
  - Insufficient water flow across IonGen Probe
    - An excessive build-up of scale on the bars is an indicator that there may not be sufficient water flow. The scale will decrease the distribution of ions being released into the water, as well as affect the ability to raise and lower the Control Panel's ionization level. The scale can be easily brushed or scraped off the bars which will improve the IonGen Probe's performance immediately. If you notice the scale repeatedly building up then you may want to move the IonGen Probe to a location with higher water flow, such as plumbed directly into the main recirculating system.
- Low copper level
  - Copper being used
    - It is not unusual to have low or even no copper level readings on the test kit, no matter how high the IonGen System ionization level setting. This is due to the copper being used within the water feature. Use visual indicators, such as the quantity of algae in the water feature to determine if the ionization is working. Periodic copper testing will ensure that the levels are below the maximum level of .0.25 ppm.
- High copper level
  - Ionizing level set too high
    - Reduce ionizing indicator to one bar or unplug Control Panel until copper level is below 0.25 ppm. A partial water change can also be conducted for quicker copper level decrease

- Algae levels remain high after prolonged use
  - Low copper level
    - Raise ionization level
  - Insufficient water flow through Flow Chamber
    - In most of these cases the IonGen System will still produce a sufficient quantity of ions to kill the algae. If algae levels are not being controlled move IonGen Probe to area of greater water flow. Plumbing into the water feature's recirculating system is the most effective method.
  - Scale build-up or debris suffocating IonGen Probe
    - In most of these cases the IonGen System will still produce a sufficient quantity of ions to kill the algae. If algae levels are not being controlled move IonGen Probe to area of greater water flow. Plumbing into the water feature's recirculating system is the most effective method.
  - Water chemistry outside of targeted water parameters
    - See Targeted Water Parameters for Optimal Performance
  - Algae type
    - The IonGen System is very effective at controlling filamentous string algae. Some types of algae are less affected by copper ions than others. In these cases you may not have as noticeable results with the IonGen System.

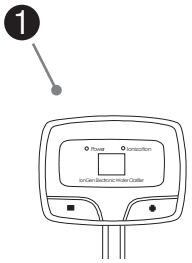
Targeted Water Parameters for Optimal Performance

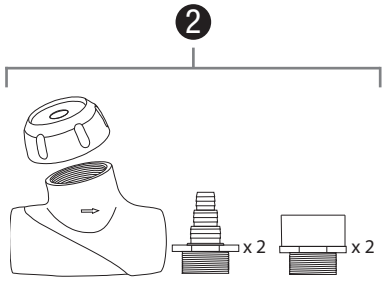
- To achieve the best results with the IonGen System it is recommended that the water feature's water is within the water parameters listed below.
- The water feature's water parameters can change during the season, especially in features that experience high evaporation. Many times a simple water change can help reset the water feature's water parameters.
- Alkalinity is an important parameter for the proper function of the IonGen System. One easy way to raise low alkalinity levels is to use ordinary baking soda. Adding 1/4 cup (0.15 pounds) per 3,785 litres will typically raise the alkalinity by 10 mg/L (ppm). Raising the alkalinity should not be done all at once, but over a period of days. One easy way to lower high alkalinity is performing a water change.

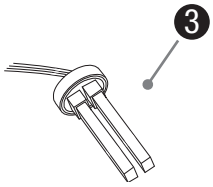
Copper: Less than 0.25 ppm
Alkalinity: 100-250 ppm

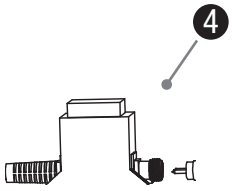
Replacement Parts

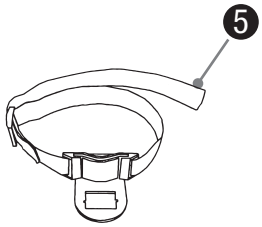
IonGen™ System G2 Replacement Parts	
No.	**Item number/description**
1.	95017 – IonGen G2 Control Panel with 12-Volt Transformer
2.	95015 – IonGen G2 Flow Chanber Kit
3.	95028 – IonGen Probe for the G2 System (EPA Registered)
4.	98375 – 6-Watt Low Voltage Quick-Connect Transformer
5.	95077 – IonGen G2 Probe Holder











Warranty Information

3 YEAR WARRANTY

Aquascape warrants that the IonGen System will be free of manufacturing defects for three years from date of purchase. Proof of purchase required. Warranty does not cover damage resulting from electrical supply problems, lightning, negligent handling, misuse or lack of reasonable maintenance or care. Warranty does not cover parts subject to normal wear, such as the IonGen Probe. This product should only be operated in fresh water without corrosive chemicals like chlorine or bromine. If upon Aquascape's inspection, the IonGen shows evidence of a manufacturing defect, Aquascape's liability is limited, at Aquascape's option, to the repair of the defect, replacement of the defective product, or refund of the original purchase price. The warranty excludes costs of labor, removal of product, shipping and expenses related to the installation and re-installation of the product. All products that include plumbing (tubing, pumps, check valves) need to be properly drained and winterized otherwise warranty is null and void. No liability for loss or damage of any nature or kind, whether arising out of or from the use of the product, whether defective or not defective, is assumed by Aquascape, Inc. or its affiliates. Aquascape shall not be liable for any incidental, consequential or other damages arising under any theory of law whatsoever.

For more information about our company or products, please visit our website at aquascapeinc.com
or call us at US (866) 877-6637 CAN (866) 766-3426

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