



MOVING WATER FORWARD, SINCE 1968



# Robust-Aire™ DIFFUSER ASSEMBLY

## Assembly & Installation Manual

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## QUESTIONS?



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# SAFETY FIRST

**IMPORTANT: PLEASE READ THIS MANUAL AND SAVE FOR FUTURE REFERENCE**

WARNINGS:



**Electrical Shock Hazard**

- Use caution when dealing with any electrical equipment.
- Use caution around water.
- Running the system in conditions below freezing may create open areas of water at the diffuser locations and thin ice in the surrounding area.
- Some areas require warning signs to be posted. The system owner will assume all risks of operating the Robust-Aire™ system during winter months. Check your local laws and ordinances.
- Do not use boats that tip easily, such as canoes, for installation. Follow all boating safety rules and regulations, including wearing a PFD (Personal Flotation Device).
- Consult a qualified electrician for electrical installation.

## SUGGESTED TOOLS & SUPPLIES

- 7/16" socket wrench with shaft extension or 7/16" nut driver
- Adjustable wrench
- Flathead screw driver or 1/4" nut driver
- Retrieval ropes longer than the desired installation depth (optional)
- Marker buoy (optional)

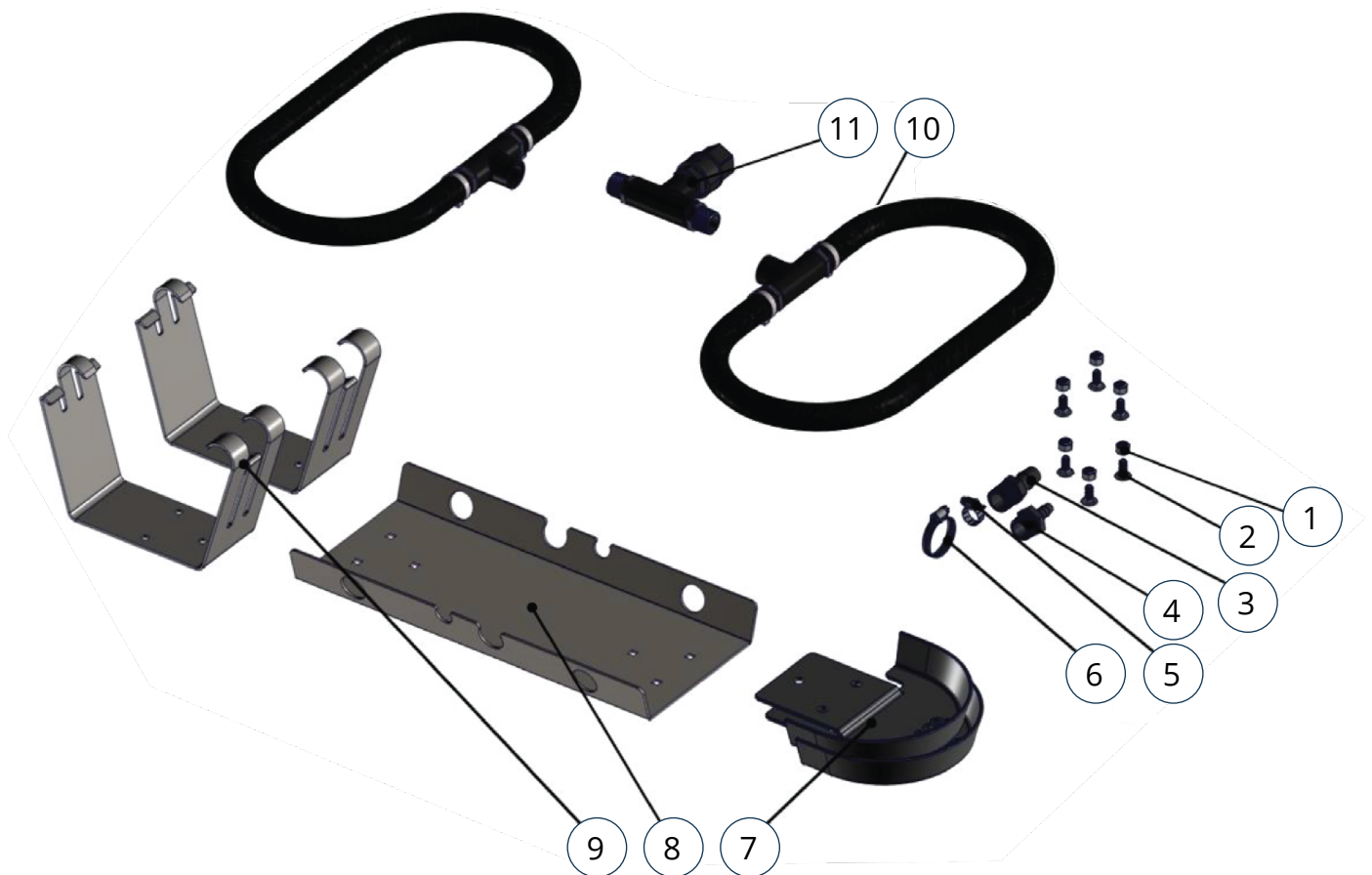
## INSTALLATION SUGGESTIONS

Make sure to unroll any SureSink™ Tubing before installing the diffuser. Unrolling the tubing will make it less likely to kink during installation. Also make sure to unroll and connect any additional SureSink™ Tubing before going to the installation site.


Use a retrieval rope and marker buoy to allow for easy retrieval during maintenance or relocation of the Robust-Aire™ Diffuser.

# PARTS INCLUDED

Item	Description	Qty.
1	Locknut	6
2	Carriage bolt	6
3	5/8" barb fitting	1
4	3/8" barb fitting	1
5	3/8" hose clamp	1
6	5/8" hose clamp	1
7	Edge guards	2
8	Substrate connector	1
9	Substrate riser	2
10	Tubing assemblies	2
11	Inlet check valve assembly	1

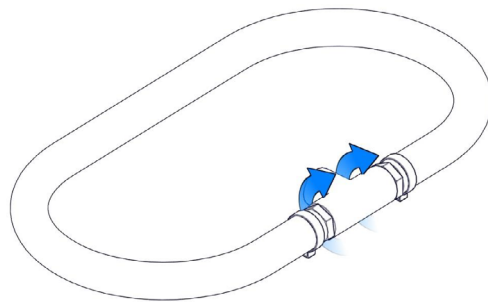


# ASSEMBLY INSTRUCTIONS

**NOTE**  Though these parts for both 3/8" and 5/8" SureSink™ Tubing are included, you will need only one size, depending on your installation.



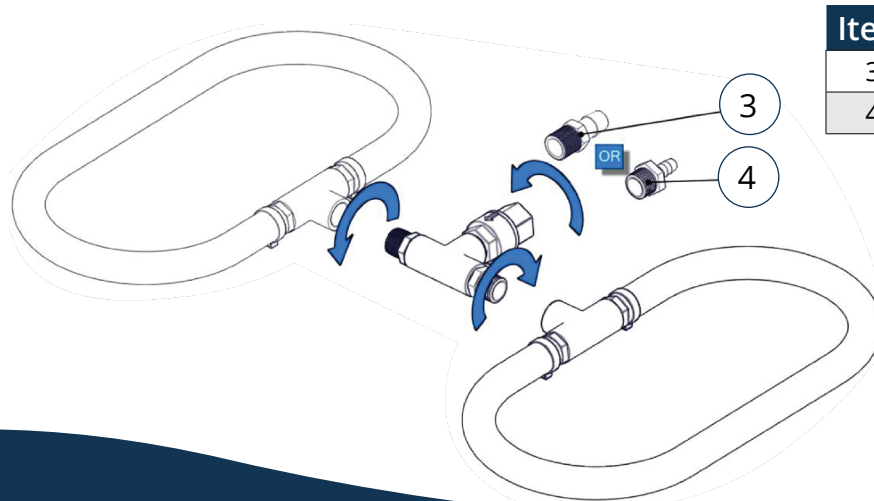
1. After unpacking your box, the tubing assembly tee's open end will be turned towards the center of the loop. Twist the tee fitting so the open end faces away from the center of the tubing loop.



2. Assemble both tubing assemblies to the inlet check valve assembly.

Tighten until snug, making sure the blue lines on both aeration tubing assemblies face the same direction and are parallel with the inlet check valve assembly.

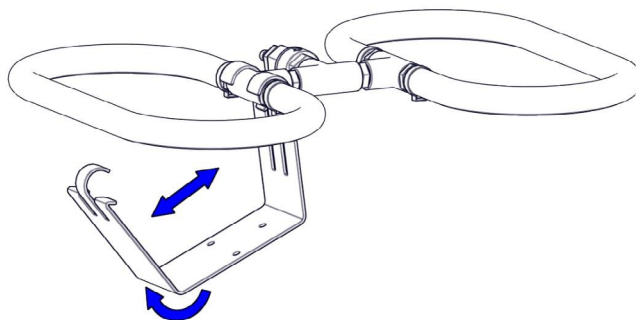
Tighten a barb fitting into the check valve assembly. The barb fitting size depends on the SureSink™ Tubing size. Use an adjustable wrench to tighten the barb fitting to the inlet check valve assembly.



Item	Description
3	5/8" barb fitting
4	3/8" barb fitting

## ASSEMBLY INSTRUCTIONS (CONT.)

3. With the blue line on the tubing facing down, attach the substrate riser around the tee fitting. Rotate up and secure the aeration tubing into the substrate riser.

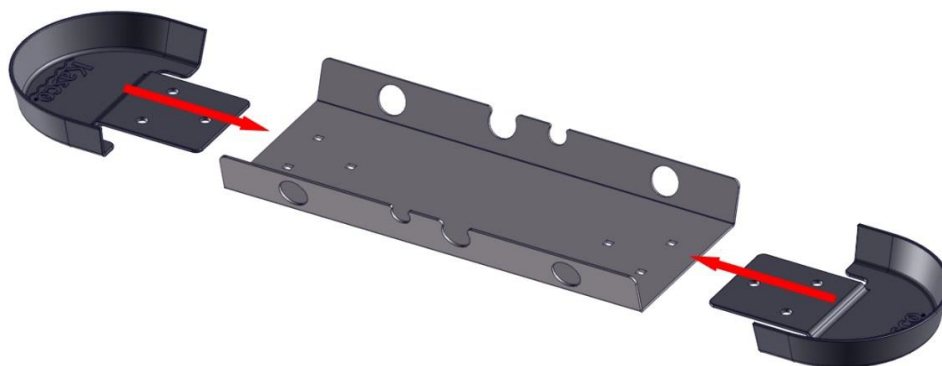


4. Repeat step 3 to attach both substrate risers to the assembly.



**NOTE** For best performance, keep an equal amount of tubing on either side of substrate risers.

5. Slide the substrate edge guards onto the connector plate as shown.

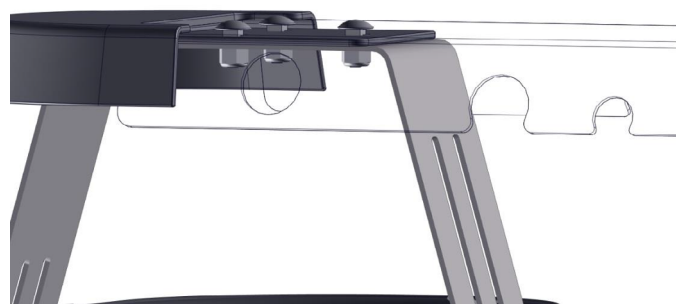
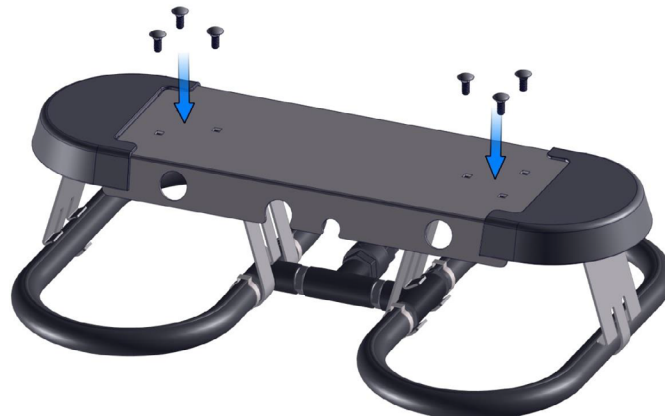


# ASSEMBLY INSTRUCTIONS (CONT.)

6. Rotate the entire assembly and set the tubes on a flat surface.



7. Insert the six provided carriage bolts into the holes on the substrate connector plate and loosely tighten them down with the six provided lock nuts to temporarily hold them in place.

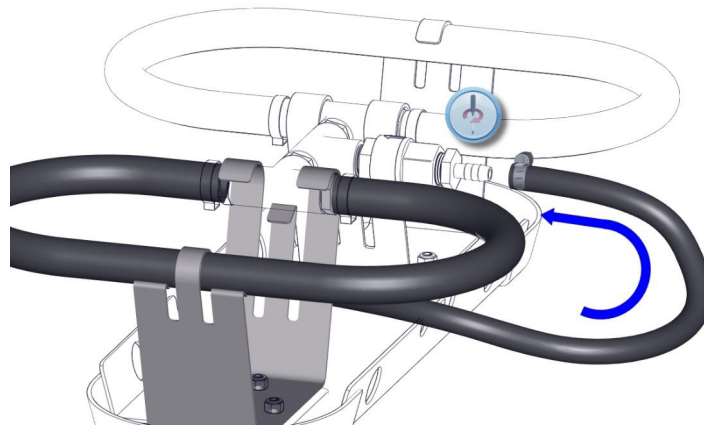


## ASSEMBLY INSTRUCTIONS (CONT.)

8. Flip the diffuser assembly back over and tighten down each nut until snug with a socket wrench or a 7/16" nut driver. Kasco recommends using an extender for the socket wrench.



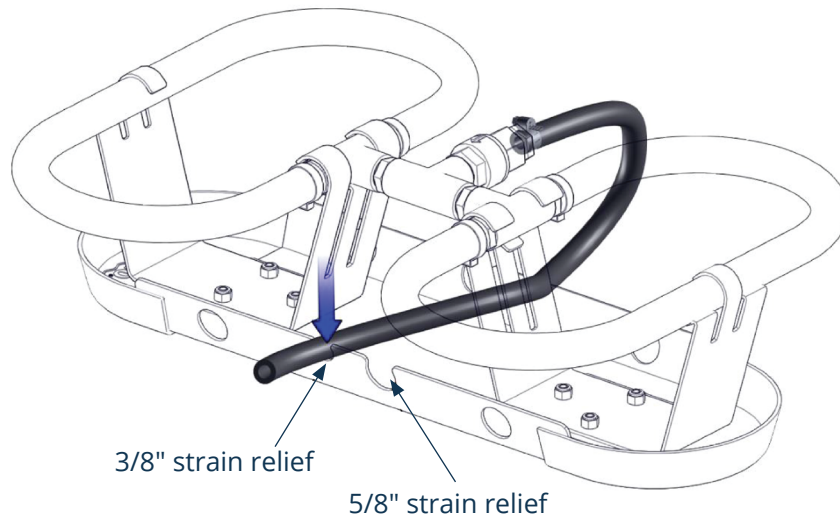
9. Slide the provided hose clamp of the appropriate size onto the SureSink™ Tubing. Feed the weighted tubing over the substrate connector, leaving plenty of slack. Make a generous loop and secure the tubing to the barb fitting with the hose clamp. Tighten down the clamp with a flathead screwdriver or a 1/4" nut driver.



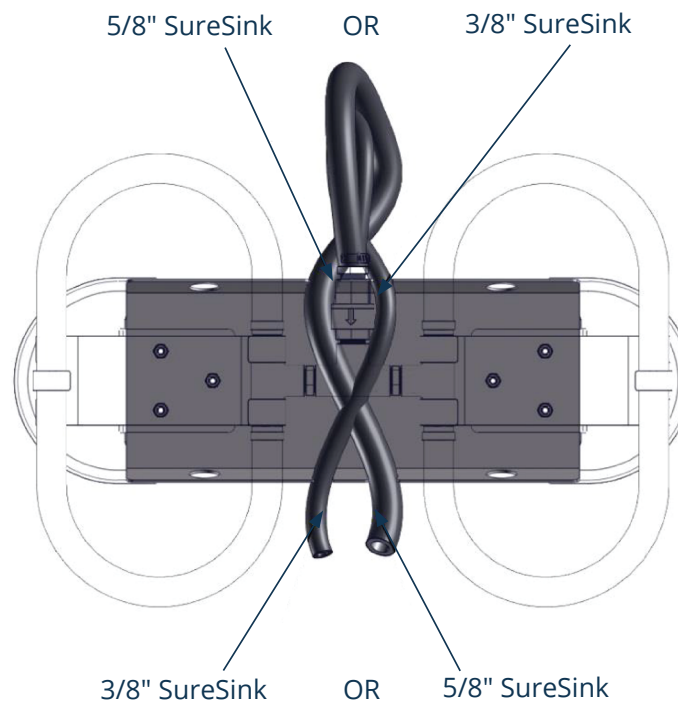


# ASSEMBLY INSTRUCTIONS (CONT.)

10. Press the weighted tubing into the appropriately sized (3/8" or 5/8") strain relief notch on one side of the connector plate, making sure there is no strain on the barb fitting.



11. On the other side of the connector plate, press the weighted tubing into the remaining strain relief notch of the same size (diagonal from the notch on the opposite side of the plate). Ensure that the SureSink™ Tubing snaps into place in both correctly sized notches before installing the unit.



# INSTALLATION INSTRUCTIONS

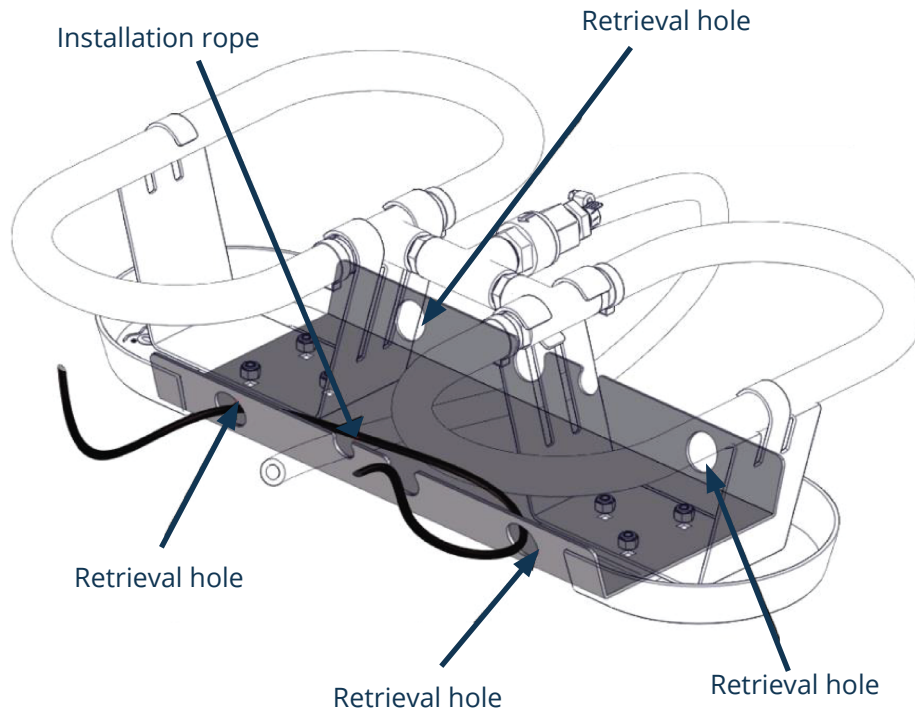
## Water Installation

With the SureSink™ Tubing in place, the diffuser is ready to install. If you are unsure how many feet of tubing you will need, bring the SureSink™ Tubing out with you and connect the tubing needed on the way back.



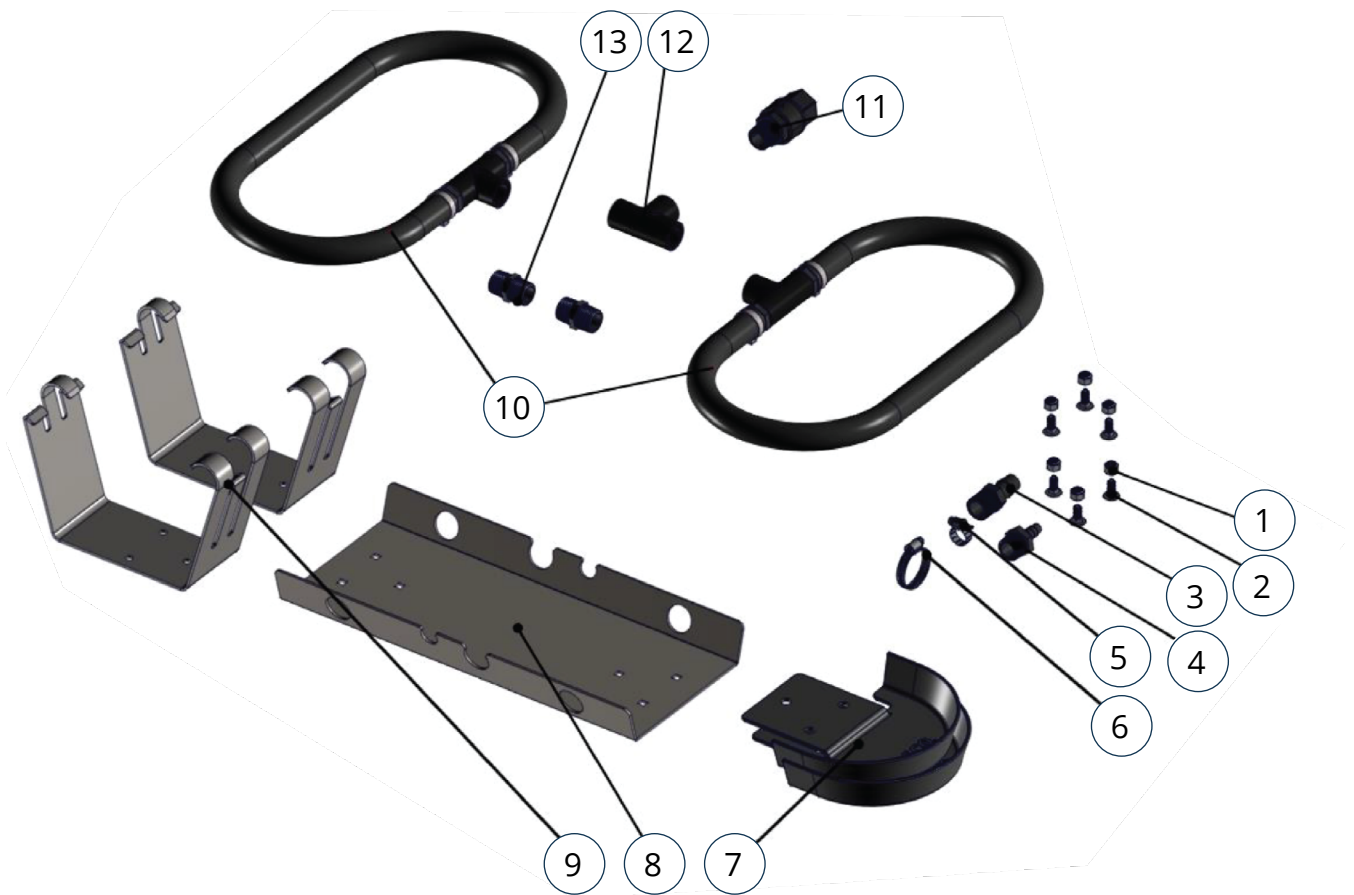
## Optional Step

Once at the desired location, thread a rope through the two retrieval holes on one side of the diffuser base. Pull the rope through the holes until its midpoint is centered between the retrieval holes. Slowly lower the diffuser until it reaches the bottom of the pond and tie the installation rope to a marker buoy. Doing this will allow for easier maintenance in the future and also will notify others of the diffuser's location. Repeat the steps for additional Robust-Aire™ Diffuser locations.



# REPLACEMENT PARTS

Item	Description	Qty.	Part No.
1	Locknut	6	451100
2	Carriage bolt	6	772034
3	5/8" barb fitting	1	773013
4	3/8" barb fitting	1	773012
5	3/8" hose clamp	1	773008
6	5/8" hose clamp	1	773009
7	Edge guards	2	772032
8	Substrate connector	1	772031
9	Substrate riser	2	772030
10	Replacement tubes	2	772040
11	Inlet check valve	1	772033
12	Tee fitting	3	772221
13	Nipple	2	773003



# WARRANTY

## Warranty Period:

- SureSink™ Tubing: 15 years
- Diffuser assembly: Lifetime

Kasco® Marine, Inc. warrants this diffuser assembly to be free from defects in material or workmanship under normal use and service. The Kasco Marine, Inc. obligation under this warranty is limited to replacing or repairing free of charge any defective part within the warranty period. The customer shall pay shipping charges for returning the unit to Kasco or an Authorized Repair Center.

THIS WARRANTY IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ANY OTHER OBLIGATION OR LIABILITY WHATEVER ON THE PART OF KASCO MARINE, INC. AND IN NO EVENT SHALL KASCO MARINE, INC. BE LIABLE FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES.

Warranty is void if:

- The assembly is not maintained properly according to the maintenance recommendations supplied in this manual.
- The assembly is damaged by unauthorized tampering.

## Warranty Claim Procedure

The best method for establishing warranty period is via the original receipt. Also, register the unit online at: [www.kascomarine.com](http://www.kascomarine.com). Once the warranty coverage has been established, the unit may be sent to any Kasco Authorized Repair Center for evaluation and repair. Please call Kasco at 715-262-4488 prior to shipping to receive any updated information and/or Repair Form, or call to locate your nearest Authorized Repair Center. You can also email Kasco at [sales@kascomarine.com](mailto:sales@kascomarine.com).

Please include the repair form received from Kasco or your local distributor with the shipment. If no repair form is available, include your name and physical address for return delivery of the repaired unit and a daytime phone number and/or email address for correspondence regarding the warranty claim. Any expedited shipping method for the return of the unit is at the customer's expense. Kasco will return units repaired under warranty at our expense via ground freight within the continental United States.



Please attach a repair form with the shipment. The repair form must include a name, physical address (for return delivery of the repaired unit), daytime phone number, and an e-mail address for correspondence regarding the warranty claim.

Any expedited shipping method for the return of the unit is at the customer's expense. Kasco will return units repaired under warranty at our expense via ground freight within the continental United States.

# OTHER REPAIRS

Most failed equipment can be repaired at substantially lower costs than replacement with new equipment. Please ship according to the instructions provided.

Kasco does estimates on repairs at the request of the customer. The request for an estimate should be included in the letter that accompanies the returned unit and must include a daytime phone number and/or email address. Estimate options are as follows:

- We will contact the customer with a total estimated cost for repairs after we have evaluated the unit but before we perform the work.
- We will repair the unit only if repair costs are under a dollar amount stated by the customer. Example: "Please repair if total is under \$150.00 before shipping charges."

All estimates that are rejected for repair will be destroyed unless otherwise directed by the customer. If the customer would like the unit returned, we will restore the unit as closely as possible to the condition in which we found it and ship at the customer's expense (including shipping and handling charges).

Billing: Kasco accepts Visa and MasterCard credit card payments. Kasco will call for credit card information upon completion of the estimate at the customer's request. All other warranty and repair inquiries should be directed to Kasco at 715-262-4488 or [repairs@kascomarine.com](mailto:repairs@kascomarine.com)

## CONTACT US



Kasco Marine  
800 Deere Road  
Prescott, WI 54021



715.262.4488



[kascomarine.com](http://kascomarine.com) | [sales@kascomarine.com](mailto:sales@kascomarine.com)

# REPAIR CONTACT FORM

- Kasco requires that all equipment sent for repair MUST be accompanied by this form and marked to Repairs attention.
- Unit should be cleaned before shipping.
- Kasco is NOT responsible for shipping damage accrued in return shipment.
- It is the responsibility of the customer to ship and pay freight to Kasco.

Kasco Marine  
800 Deere Road  
Prescott, WI 54021  
Attn: Repairs

Note: Contact information should be that of the person or company to contact for repair information.

Company name			
Contact name	First name	Last name	
Address	Street		
	City		
	State		
	ZIP code		
Phone number	Primary	Alternate	
Email address			
Preferred method of contact (circle one)	Phone	Email	
Purchase order number			
Additional product information	Serial Number	Cord Length	
<b>Information for Repair Technician</b>			
Was this unit used in a chemical treatment or wastewater application? (circle one)	Yes	No	
Additional notes			