



# 50Hz LIFT STATION AGITATOR



## Installation & Operation Manual

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## QUESTIONS?



715.262.4488



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



# SAFETY FIRST

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

WARNINGS:



**Electrical Shock Hazard**

- Use caution when dealing with any electrical equipment.
- Consult a qualified electrician for electrical installation.
- All electrical equipment must be Ground fault/leakage current protected. Use of a Ground fault protective device (GFI, RCD, RCBB, or RCBO type device) is required as directed by local and national codes.
- The unit is supplied with an internal grounding conductor. To reduce the risk of electrical shock, be certain that the unit is plugged in/connected to a circuit with ground fault protection.
- Means for disconnection must be incorporated in the fixed wiring, in accordance with local and national wiring rules.
- Consult a qualified electrician for electrical installation.

## UNIT SPECIFICATIONS

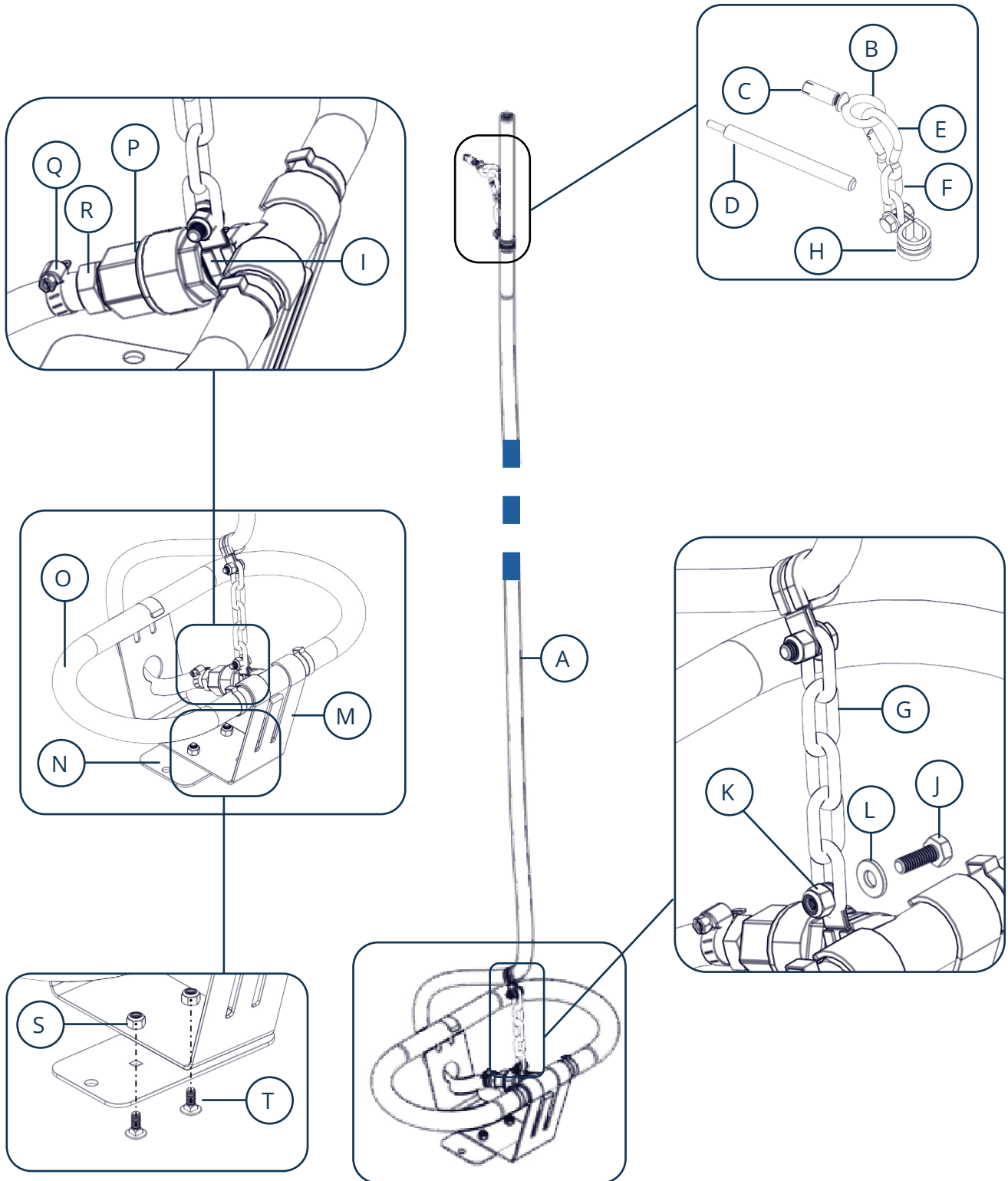
Model Number	Number of diffusers	Voltage	Phase	Compressor HP	Amps	Number of 15.2m rolls of 9.5mm tubing included
LSE-125	1	230V	1	1/4	1.6	1
LSE-225	2	230V		1/4	1.6	2

# PARTS INCLUDED LIST

			LSE-125	LSE-225
Item	Description	Part No.	Qty.	
<b>Tubing Suspension Kit (PN: 636560)</b>				
A	SureSink Tubing - 15.2m	773375	1	2
B	Eyebolt	566222	1	2
C	Concrete anchor	566220	1	2
D	Anchor installation tool	566221	1	2
E	Snap hook	636346	1	2
F	2-link chain	636383	1	2
G	5-link chain	636385	1	2
H	Small strain relief - 15.9mm	772019	2	4
I	Large strain relief - 25.4mm	772020	1	2
J	1/4"-20 x 3/4" hex head screw	840539	3	6
K	1/4"-20 nylon locknut	451100	3	6
L	1/4" flat washer	258476	6	12
<b>Single-loop Diffuser Kit (PN: 772200)</b>				
M	Diffuser substrate	772030	1	2
N	Baseplate	772201	1	2
O	Diffuser loop kit	772039	1	2
P	Inlet check valve assembly	772033	1	2
Q	Hose clamp	773008	1	2
R	3/8" hose barb	773012	1	2
S	1/4"-20 nylon locknut	451100	2	4
T	1/4"-20 x 5/8" carriage bolt	772034	2	4
<b>Barb Fitting Kit (PN: 636389)</b>				
U*	Splice barb fitting	636386	1	2
V*	Tee barb fitting	636387	1	2
W*	Cross barb fitting	636388	1	2
X*	Hose clamp	773008	4	8

\*Not pictured in parts included illustration.

# PARTS INCLUDED ILLUSTRATION

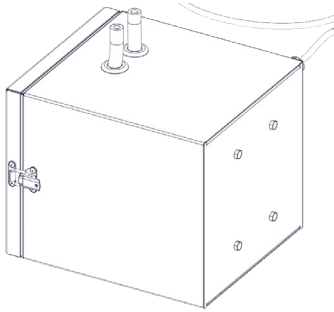


# STAINLESS STEEL CABINET INSTALLATION

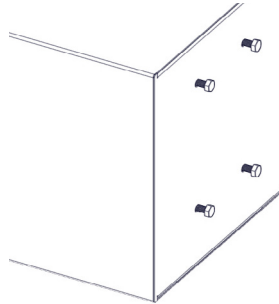
Secure the mounting bracket to ground, post, or vertical wall (shed) with electrical service.

Place the cabinet adjacent to the electrical service which will power the system. The cabinet has a 2 meter power cord with flying leads. **DO NOT USE EXTENSION CORDS.**

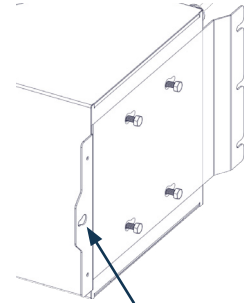
- 1** Place the cabinet on its side with the diffuser tubing connections facing up.



- 2** Use a 7/16" socket or wrench to loosen the four bolts on the bottom of the cabinet until they are sticking out 3.2mm.

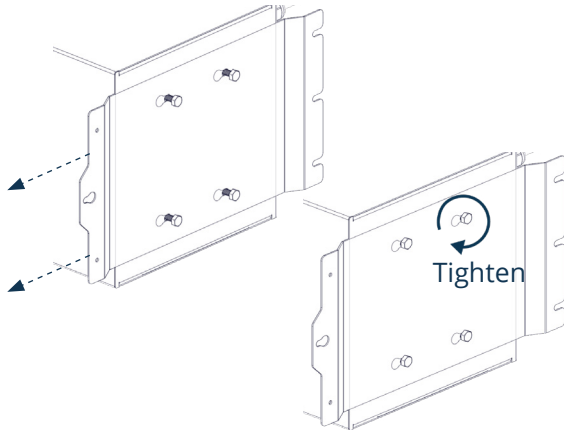


- 3** Place the mounting bracket over the bolt heads.

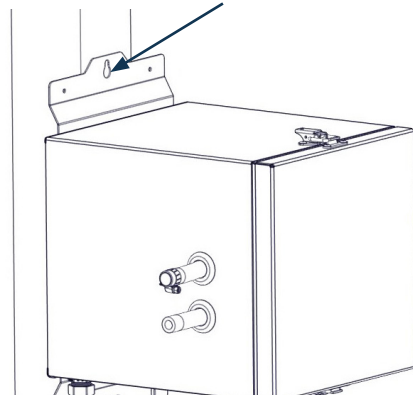


The mounting hole should be on the opposite side of the power cord.

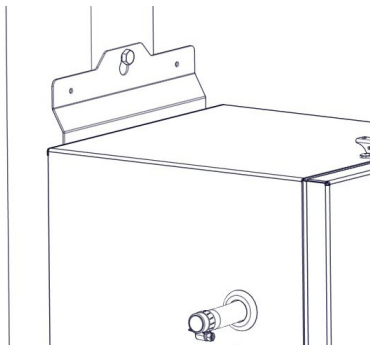
- 4** Slide the bracket until the bolt heads are interlocked with the narrow grooves. Tighten bolts with 7/16" socket or wrench.



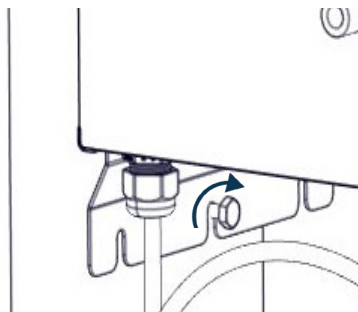
- 5** Level and center the top single mounting hole to mark the lag screw location.



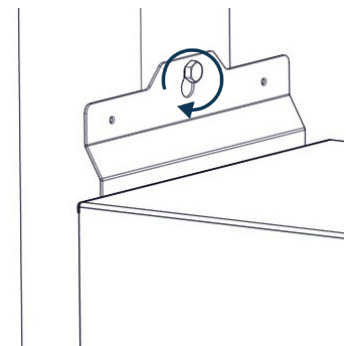
- 6** Predrill a 4mm hole on the marked location. Insert a lag screw. Do not fully tighten.



- 7** Predrill a 4mm hole in the middle notch on the bottom of the bracket. Insert a lag screw. Tighten to secure to the post.



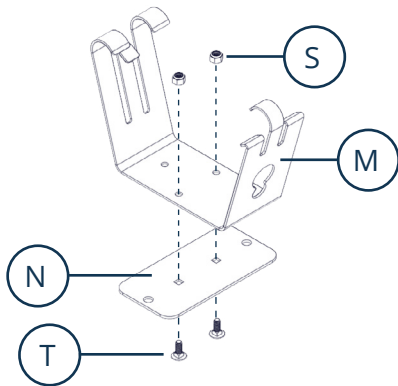
- 3** Tighten the top lag screw until the bracket is secure to the post.



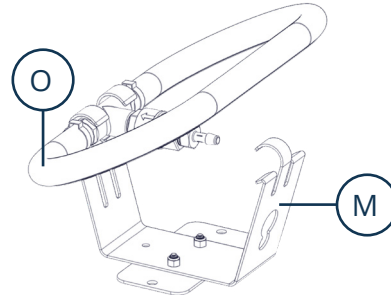
# ASSEMBLY INSTRUCTIONS

**NOTE** The following process supports up to 70lbs. For high-accumulation areas such as under inlets, install with caution. The holes on the baseplate (N) can be used to suspend it via chain or cable for added strength.

- 1** Attach the diffuser substrate (M) to the baseplate (N) using the carriage bolts (T) and the nylon locknuts (S).

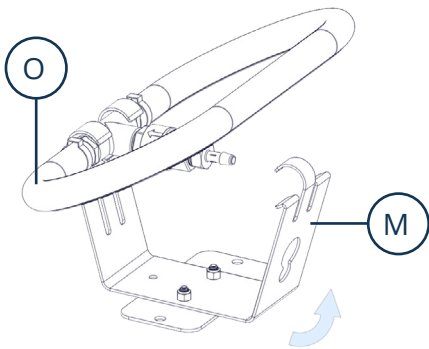


- 2** Hook the two-pronged side of the substrate (M) around the tee fitting of the diffuser loop (O).

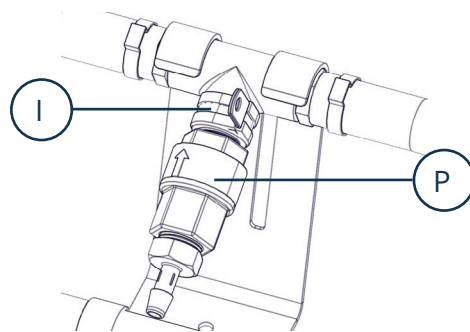


**NOTE** Ensure that the blue line on the diffuser loop is facing down.

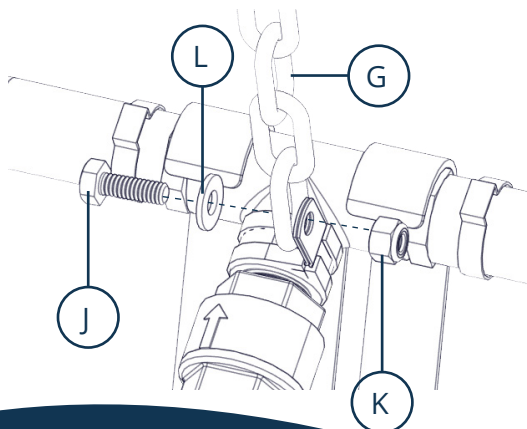
- 3** Pivot the single-pronged side of the substrate (M) up and over the other side of the diffuser loop (O).



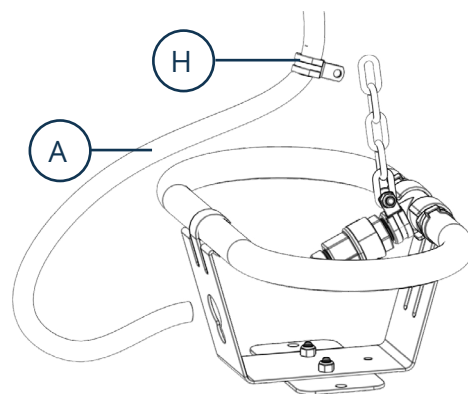
- 4** Slide the large strain relief (I) over the inlet check valve (P).



- 5** Connect the 5-link chain (G) to the large strain relief using a hex head screw (J), locknut (K), and washer (L).

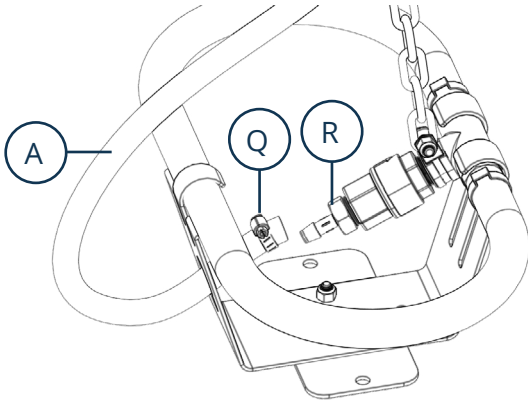


- 6** Slide the small strain relief (H) over the SureSink tubing (A) as shown.

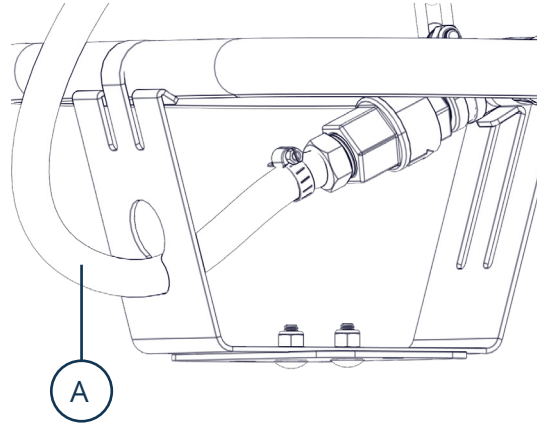


# ASSEMBLY INSTRUCTIONS

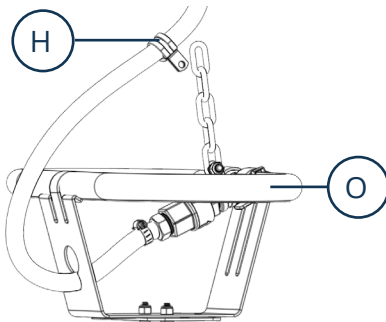
- 7** Angle hose barb (R) toward the keyhole cutout. Run tubing (A) through the wide hole. Secure it to the barb with the hose clamp (Q).



- 8** Firmly press tubing (A) into the narrower part of the keyhole to create a strain relief for the diffuser.

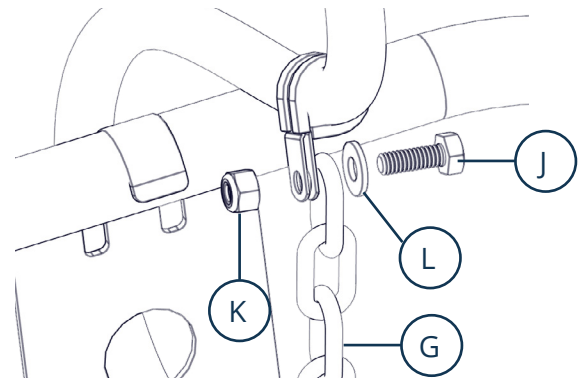


- 9** Position the small strain relief (H) to sit over the center of the diffuser loop (O).

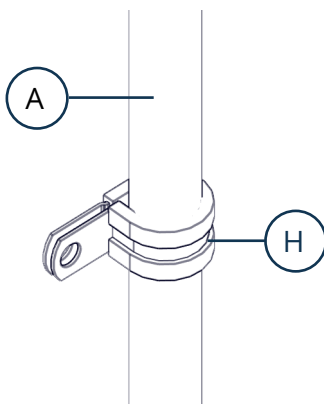


**NOTE** This step sets the diffuser's positioning. The more vertical, the better the mixing.

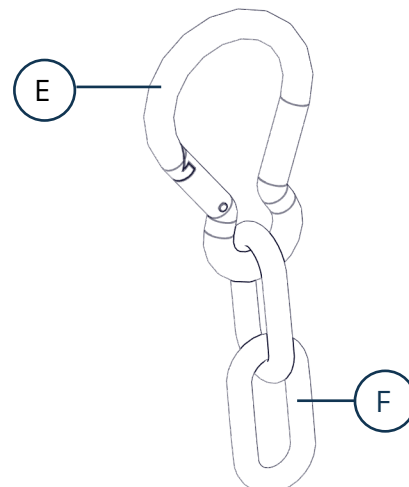
- 10** Attach the free end of the 5-link chain (G) to the small strain relief with a hex head screw (J), locknut (K), and washer (L) and tighten.



- 11** Slide a second small strain relief (H) over the other end of tubing (A).

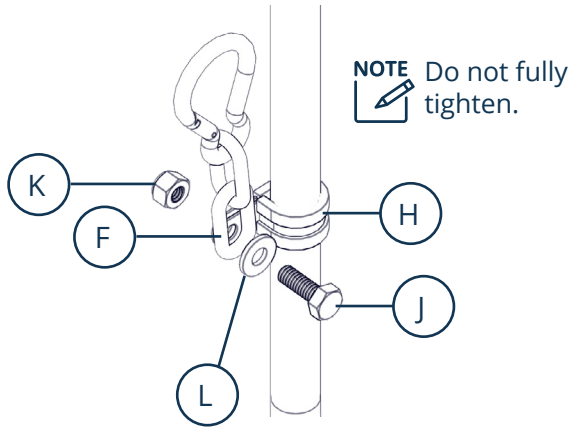


- 12** Attach the snap hook (E) to the 2-link chain (F).

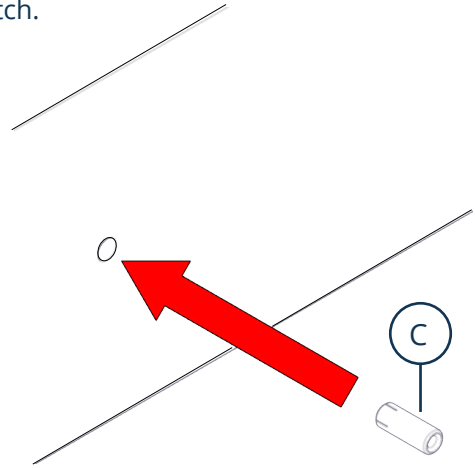


# ASSEMBLY INSTRUCTIONS

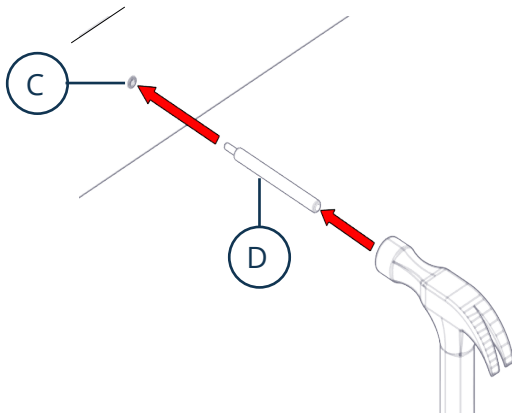
- 13** Attach the free end of the 2-link chain (F) to the small strain relief (H) with a hex head screw (J), locknut (K), and washer (L).



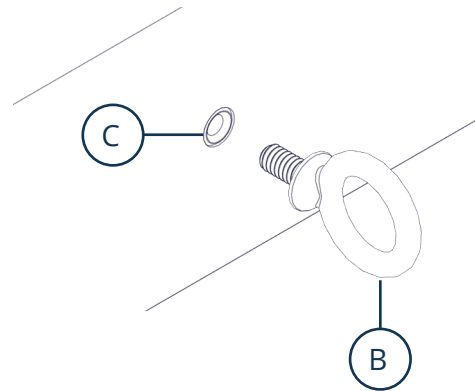
- 14** Drill 25.4mm deep hole with a 3/8" masonry drillbit. Insert concrete anchor (C) with the female thread facing toward the center of the hatch.



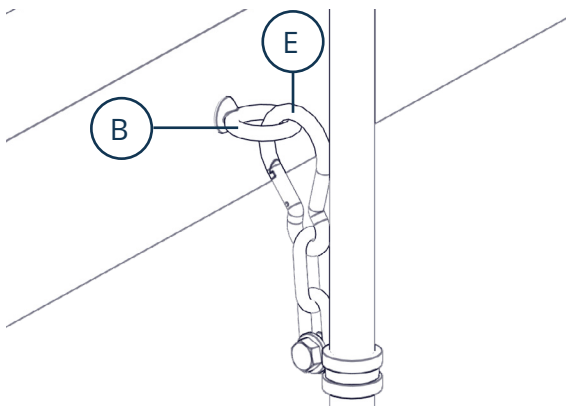
- 15** Insert installation tool (D) into anchor (C). Hammer until anchor is fully seated and flush with the surface.



- 16** Insert the eyebolt (B) into the anchor (C) and tighten.



- 17** Clip the snaphook (E) to the eyebolt (B).

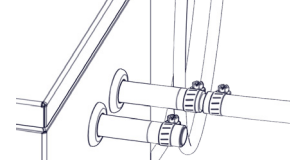
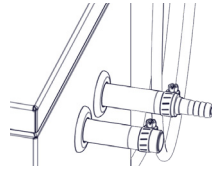
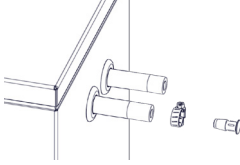


- 18** Position diffuser to desired height in lift station and tighten the small strain relief.

# TUBING CONNECTION

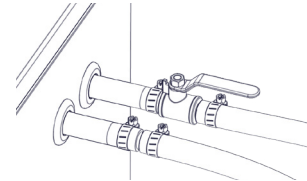
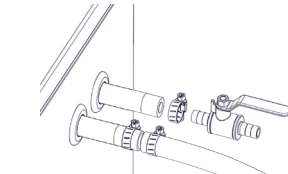
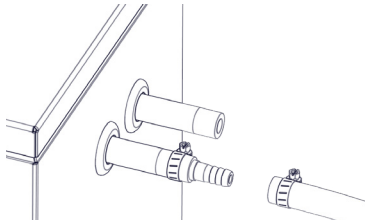
## LSE-125 SYSTEM

- 1 Seal one tube using the provided 3/8" hose plug and hose clamp.
- 2 In the second tube, insert provided 3/8" barb fitting and secure using a hose clamp.
- 3 Connect SureSink tubing to exposed side of barb fitting and secure with hose clamp.



## LSE-225 SYSTEM

- 1 Follow steps 2 & 3 from LSE-125 instructions to connect first roll of SureSink tubing.
- 2 Insert provided valve into second tube and secure using a hose clamp.
- 3 Connect SureSink tubing to exposed side of valve and secure with hose clamp.



**NOTE** The valve is designed to help balance air flow between the two diffusers.

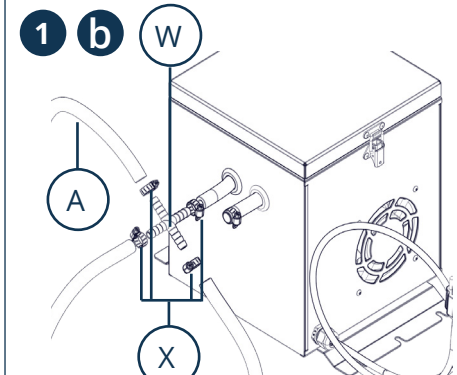
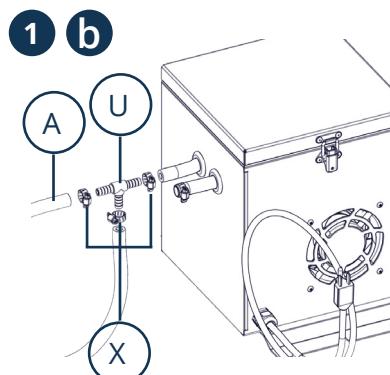
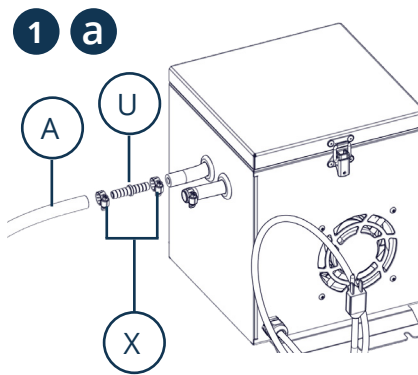
OR

Select the appropriate brass barb fitting provided in the barb fitting kit:

- a. Straight splice fitting (U) for a one diffuser installation.
- b. Tee fitting (V) for a two diffuser installation.
- c. Cross fitting (W) for a three diffuser installation.

- 1 Connect one end of selected barb fitting to outlet lead hose from compressor and secure with hose clamp. Connect free end of SureSink tubing (A) to remaining barb fitting and secure with hose clamp (X).

**NOTE** SureSink tubing will need provisions to pass through, or around, hatch and back to compressor. Tubing OD is 17.3mm.



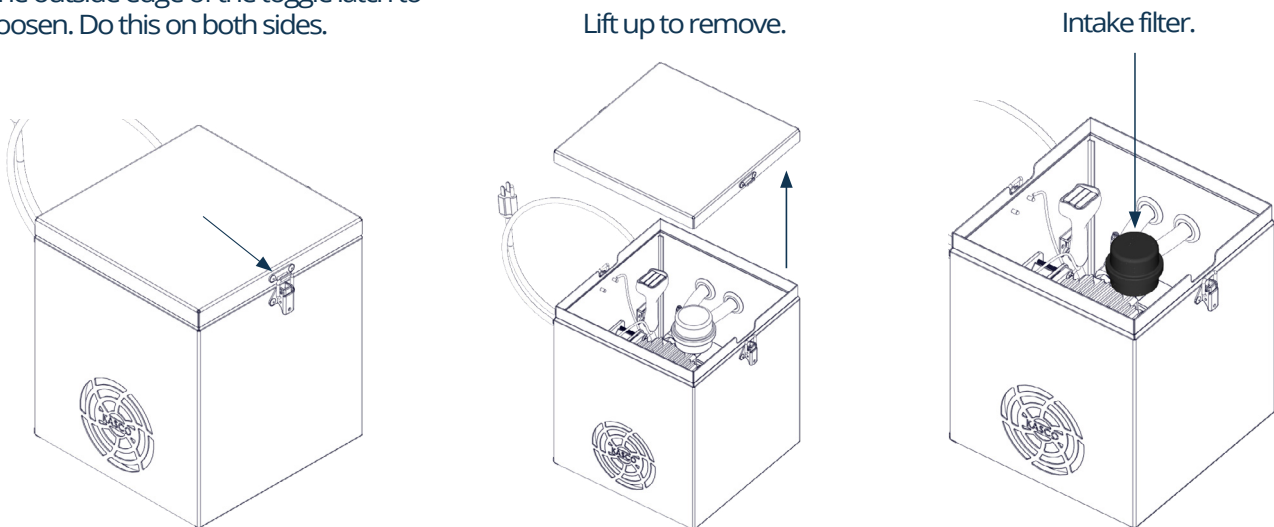
# FILTER MAINTENANCE

**Warning!** Product surfaces become very hot during operation. Allow compressor to cool before servicing. Disconnect electrical power before performing maintenance.

- Check filter monthly.
- Failure to maintain clean air filter will lead to excessive heat and premature failure of the compressor.
- Preventative maintenance kit part number: 774470
- Air filter part number: 771014

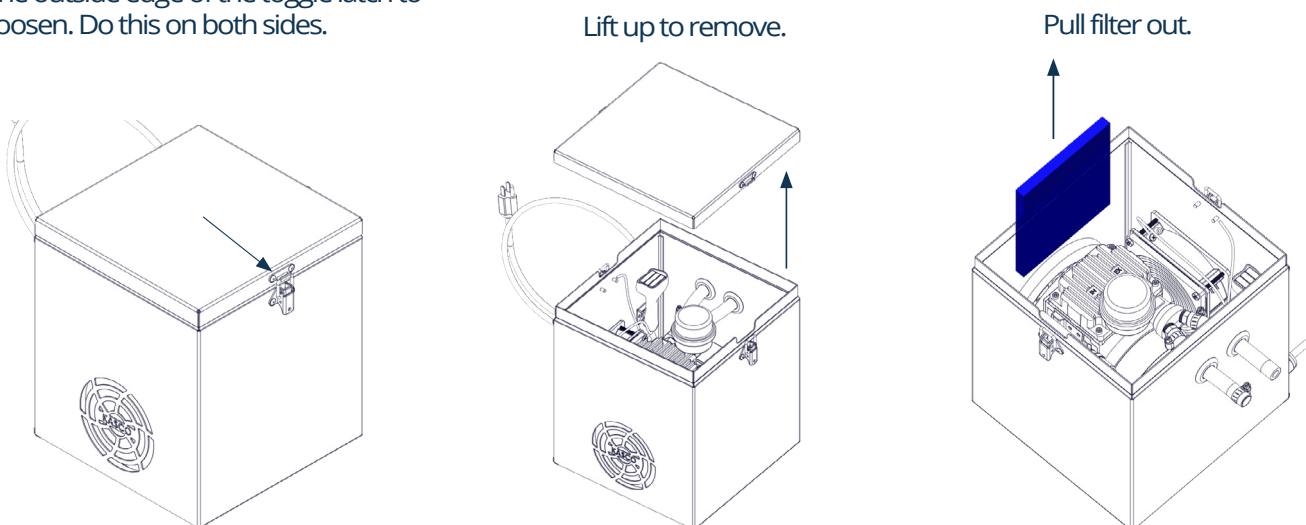
## To access the intake filter:

Remove the lid of the cabinet. Lift up on the outside edge of the toggle latch to loosen. Do this on both sides.



## To access the pre filter:

Remove the lid of the cabinet. Lift up on the outside edge of the toggle latch to loosen. Do this on both sides.



# WINTER OPERATION



The system owner assumes all risks of operating the HydraForce Lift Station Agitator during winter months.

In climates where temperatures fall below freezing, Kasco recommends insulating the air lines from the compressor cabinet to 1 meter below the lift station/wet well lid. Prevent ice buildup in the lines by using closed cell polyurethane foam to insulate. Ice buildup can block the flow of air to your diffuser and cause damage to your compressor.

## TROUBLESHOOTING

“Compressor and fan are not running.”

- Ensure the power cord is connected. Check if the user supplied ground fault protective device is tripped. Reset as necessary

“The fan is running but the compressor is not”

- Inspect the compressor and capacitor wiring and connections.

“The compressor and fan are running, but there are no bubbles coming out of any diffusers”

- Check for leaks in line connections and at the compressor. Check connections for tightness.

“The compressor and fan are running. There are bubbles coming out of some diffusers, but not all of them.”

- The valves in the cabinet may need to be balanced. There may be a clogged diffuser that needs to be cleared. The compressor may be due for a rebuild.

“The compressor stops and restarts”

- Ensure the fan is working properly. Capacitor may need replacement.

**Please contact Kasco or your distributor if any problems persist.**

# WARRANTY

## Warranty Period

Warranty period: LSE-125 & LSE-225 = 2 years



If replacement is required, please contact Kasco at [support@kascomarine.com](mailto:support@kascomarine.com) or call 715-262-4488 as **we do not accept the diffuser or weighted tubing for repair.**

Kasco® Marine, Inc. warrants this system 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 any component or repairing compressors within the warranty period free of charge. The customer shall pay shipping charges for returning the compressor 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 system is not maintained properly according to the maintenance recommendations supplied in this manual.
- The system is damaged by unauthorized tampering.

### **IMPORTANT:**

Due to OSHA and shipping regulations, Kasco does not accept units for repair that have been used in wastewater or other hazardous applications. If you have equipment that has been used in a hazardous application and believe you are experiencing a warranty failure, please reach out to Kasco at [support@kascomarine.com](mailto:support@kascomarine.com).

# KASCO PATENTS

To view a full list of Kasco patent and patent-pending information, visit <https://kascomarine.com/patents/>.

## CONTACT US



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