RICHWAY

Versa Trac

Installation & Operation Manual

Models VTD- 2000

Boom-Mix
Foam Marking System

Thank you for purchasing a VersaTrac™ foam marking system. By following this installation, use and maintenance guide carefully, your unit will provide years of reliable service.

The manufacturer makes a continued effort to improve its products. As such, we reserve the right to make design changes without obligations to add them to machines already in the field.

Please take a moment to fill out the following for future reference:

Model #:

Serial #:

Date of Purchase:

Purchased From:

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SAFETY FIRST

Do not operate without reading and understanding this owners manual

Caution: To reduce the risk of explosion or fire

- This foam marker is designed to operate off of a 12volt DC power supply only.
- Do not attempt to operate machine without covers in place.
- Never operate this machine with a damaged electrical cord. Disconnect from electrical supply if machine is not working properly or cord is damaged.
- Disassembly or attempted repairs, if accomplished incorrectly can create electrical shock and/or short hazards. Only qualified personnel should perform repair service.
- Do not remove covers or attempt repairs while connected to electrical source.
- Never attempt to replace electrical wires and cables with smaller gauge or inferior wire and cable.
- Do not attempt to operate this machine with out the appropriate fuse in place.
- Do not attempt to bypass fuse. If fuse is no longer serviceable, a real shock or short hazard may exist.
- Never replace original fuse with a higher amperage fuse.
- Inspect all components for damage after any electrical problem.
- Never operate this product in or near explosive atmospheres or where aerosol (spray) products are being used.
- Do not use air compressor to pump anything other than atmospheric air.
- Do not pump combustible liquids or vapors with this product or use in or near an area where flammable or explosive liquids or vapors may exist.
- Do not use this product near flames.
- Never operate machine while unattended.
- Inspect machine for damage after use.
- Close supervision is necessary when this product is used near children or invalids.
- Never allow children to operate this machine.
- All electrical components generate heat. To avoid serious burns never touch internal components immediately after use.
- The air compressor in this unit may be thermally protected and may automatically restart when the protector resets. Always disconnect power source before servicing.
- Wear safety goggles and all proper clothing when operating, servicing or refilling this machine. Always read and follow manufacturer recommendations when handling any chemicals.
- This foam marker is designed to operate at low pressure. Personal injury may result when air pressure exceeds 15 psi.
- Do not attempt, for any reason, to remove tank cap while machine is turned on.
- After machine is turned off pressure may remain in the system. Remove tank cap slowly allowing pressure to exhaust.

Agricultural chemical mist or liquid or liquid can cause permanent eye, skin or lung damage or death. Always wear proper protective clothing, goggles, aspirator, gloves or other protective garments as recommended by the labels of the chemicals used.

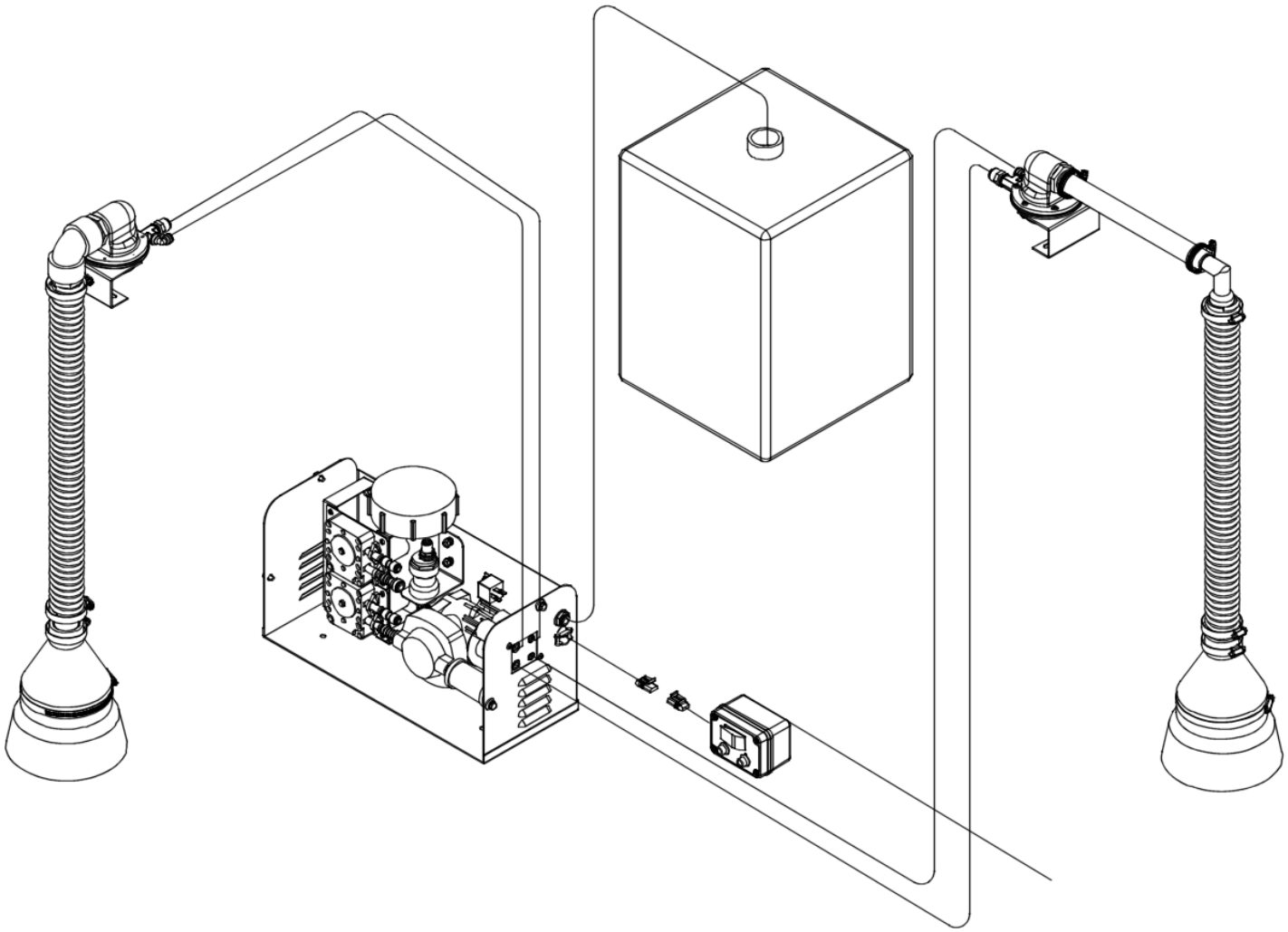
INSTALLATION

To install Versa Trac foam markers, several components must be connected. Every application may be slightly different. The following is a guide to help you choose the best locations for installing its components.

TANK & POWER UNIT ASSEMBLY

When considering a location for mounting the tank and power unit assembly, it will be important that the assembly is accessible for easy filling. The Versa Trac tank is designed to be mounted to a horizontal frame member or platform. The assembly should be attached to a platform or frame using 3/8” bolts of an appropriate length, with flat washers and lock washers.

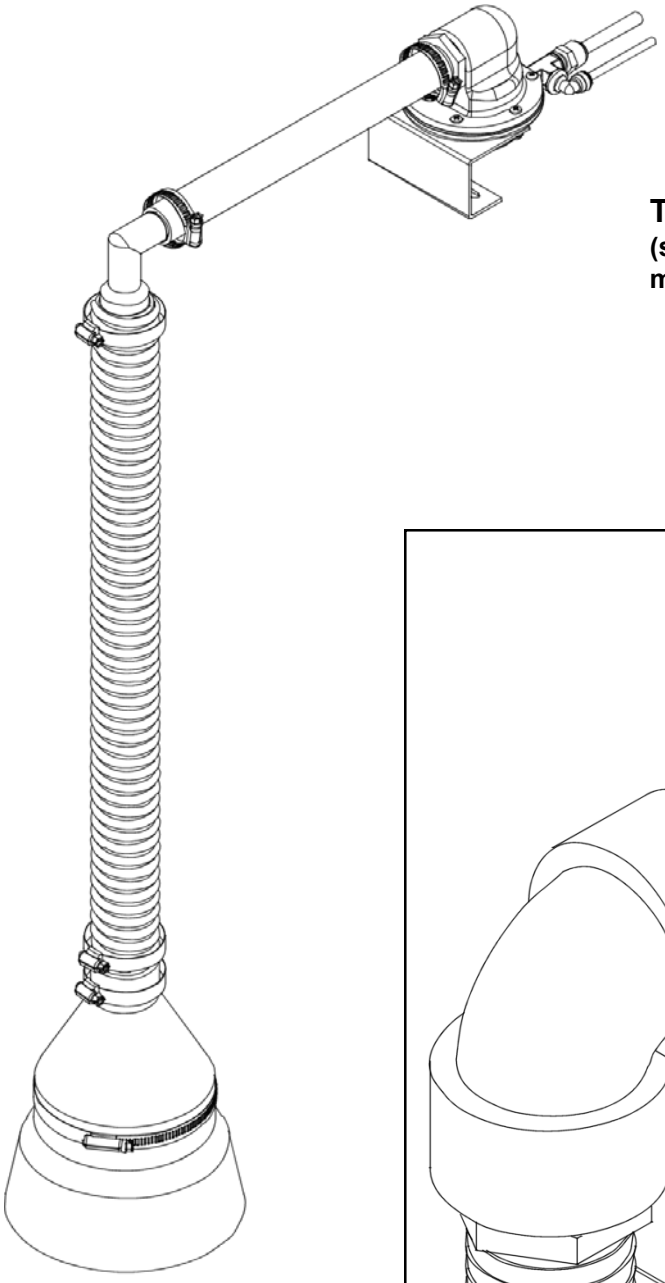
It is best if the assembly is mounted in a contaminant free area to insure an efficient, trouble-free compressor. If the assembly is mounted outside, regular cleaning of the compressor filter is necessary. See Appendix for additional Power Unit diagrams



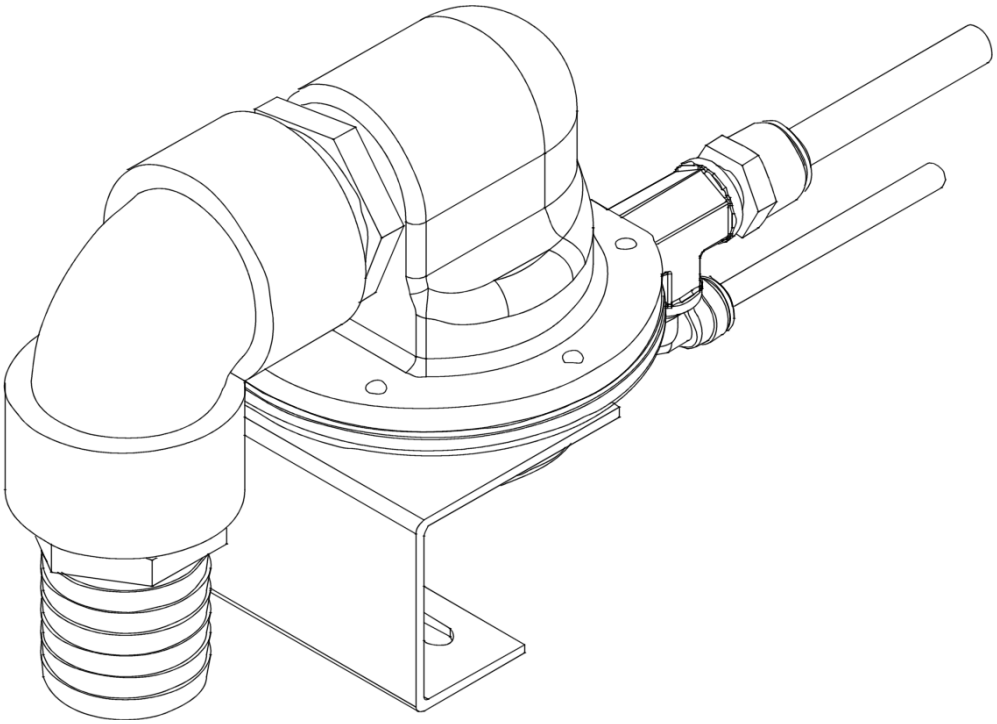
VTD-2000
Power Unit & Tank Assembly

FOAMHEADS™

Foamheads are mounted at the end of the spray boom. If mounting a single-drop unit, mount the foamhead in a convenient location as needed. Mount foamhead assemblies on boom tubing with the u-bolts provided. Install 1¼" male by 1½" hose barb straight fittings onto foamhead elbows. Ideally, the foamheads should be mounted one half the distance of your nozzle spacing beyond the last spray nozzle.



TRD Foamhead
(shown with optional remote mounting accessories)



TRD Foamhead (standard)

FOAMHEAD TUBING

Route one 3/8" and one ¼" poly tube from each foamhead assembly to the power unit. The 3/8" line routes the air to the foamhead and the ¼" line routes the liquid to the foamhead. Beginning at the end of your boom, attach the tubing using nylon cable ties, provided, to secure the tubing at 3 to 6 foot intervals. These ties assure a positive clamping without damaging the tubing. Be sure to leave enough slack at the hinge to fold and extend the spray boom. Repeat this procedure for the other ½ of your boom.

DROP HOSE

After the foamhead and boom end assemblies are in place, the 1 ½" drop hoses are secured onto the boom end elbow assembly with the #28 hose clamps provided. The drop hoses should be trimmed so the discharge end is left approximately 1 foot above the ground or to desired length. If Collector Deflectors are to be used, it may be desirable to trim drop hoses higher. This will prevent loss of the collectors from impact with the ground.

FOAM STREAMERS™

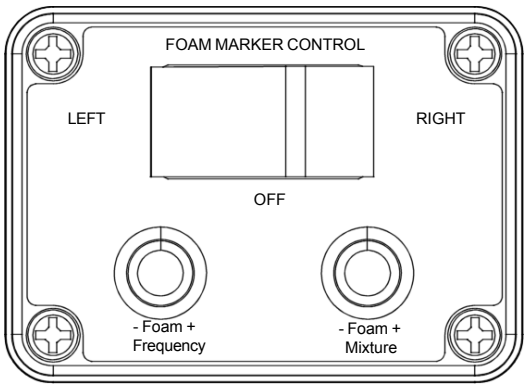
Neon Orange Foam Streamers are standard equipment with all VERSATRAC foam markers. When placed on the drop hose, these attachments produce a stream of foam. This will be particularly effective in "over the top" post emergent crop conditions.

COLLECTOR DEFLECTORS

Collector Deflectors are standard equipment on VERSA TRAC foam markers. Collector Deflectors, when attached to the drop hose, will produce a larger, denser foam ball. The resulting foam ball will be more visible due to its size, and will last longer on the ground. However, the heavier foam from Collector Deflectors normally will not stay on top of vegetation when post-emergent spraying. You may choose to remove the Collector Deflectors and install foam streamers, under these conditions.

SWITCH BOX

Mount the switch box in a location convenient to the operator. VERSA TRAC foam markers are equipped with an electrical plug assembly. This plug assembly allows for easy separation of the switch plate from the power unit. After the switch plate and power unit are installed, connect the plug assembly.



WIRING

CAUTION

-This machine is designed to operate off of a 12 volt DC power supply only
-Do not operate this machine without covers in place.
-Never operate this machine with a damaged electrical cable.
-Only qualified personnel should perform repair service.
-Do not remove covers or attempt repairs while connected to electrical source.
-Never attempt to replace electrical wires and cables with smaller gauge or inferior products.
-Do not operate machine without the appropriate fuse.
-Do not attempt to bypass fuse.
-Never replace fuse with a higher amperage fuse.
-Inspect all components for damage after any electrical problem.
-Never operate this machine in or near explosive atmosphere or where aerosol products are used.

To prevent accidental grounding of circuit, do not connect two-wire battery cable until all other connections have been made and checked for accuracy. If a greater length of wiring cable is needed, extension cables are available. When adding wire, be sure to use wire of the same or larger gauge. Using smaller wire can cause poor performance, blown fuses, and rapid compressor motor failure.

Route the two-wire battery cable from the switch box to the battery. Be sure it is out of the way and secure it using plastic coated clamps to prevent damage from rubbing off insulation by sharp edges. The white wire of the battery cable should be attached directly to the positive (+) post of the battery by use of the cable mounting bolt. The black wire of the battery cable should be attached directly to the negative (-) mounting bolt. Check all connections for accuracy before completing battery connections.

NOTE: VERSA TRAC foam markers normally draw 12 -15 amperes.

When connecting to an electrical system with two 6-volt batteries wired in series, be certain to connect the battery terminals so that a full 12 volts is supplied. If connected to 6 volts, the compressor will run slowly and the foam switching valve will not operate correctly.

OPERATION

CAUTION

-Do not attempt to operate machine without covers in place.
-Never operate machine while unattended.
-Inspect machine for damage after use.
-Close supervision is necessary when this product is operated near children or invalids.
-Never allow children to operate this machine.
-Wear safety goggles and all proper clothing when operating, servicing or refilling this machine.
-Agricultural chemical mist or liquid can cause permanent eye, skin or lung damage or death.
-Always read and follow manufacturer recommendations when handling any chemical.
-Never operate this product in or near explosive atmospheres or where aerosol products are being used.
-Do not use air compressor to pump anything other than atmospheric air.
-Do not pump combustible liquids or vapors with this product or use in or near an area where flammable or explosive liquids or vapors may exist.
-Do not use this product near flames.
-The foam tank is pressurized with air from the compressor. Do not attempt, for any reason, to remove tank cap while machine is turned on.
-After machine is turned off pressure remains in the system. Remove tank cap slowly to allow pressure to exhaust.

COMPRESSOR CHECK

After checking all wiring for accuracy, turn switch box to the “on” position and check that air is flowing out of the compressor.

FILLING THE TANK

CAUTION

-Do not attempt, for any reason, to remove tank cap assembly while unit is in operation.
-After machine is turned off, pressure may remain in the system.
-Remove tank cap slowly to allow pressure to exhaust.
-Wear safety goggles and all proper clothing when operating, servicing or refilling this machine.
-Always read and follow manufacturers recommendations when handling any chemical.
-Do not pump combustible liquids or vapors with this product.

1. BE SURE POWER UNIT IS TURNED OFF. Remove the cap from the top of the tank.

CAUTION! Remove tank cap slowly, to exhaust any pressure that may be present.

2. Fill tank with 100% foam concentrate. Note: For an increase in foam variablity, the manufacturer suggests mixing the foam concentrate with water at a rate of 50%.

3. Replace cap at the top of the tank.

MAINTENANCE

CAUTION

-All electrical components generate heat. To avoid serious burns, never touch internal components immediately after use.

-The air compressor in this unit may be thermally protected and may automatically restart when the protector resets. Always disconnect power source before servicing.

-Wear goggles and all protective clothing when operating, servicing or refilling this machine.
-Always read and follow manufacturer recommendations when handling any chemical.

-Do not remove covers or attempt repairs while connected to electrical source.
-Disassembly or attempted repairs, if accomplished incorrectly, can create hazards. Only qualified personnel should perform repair service.

AIR FILTERS

Every 40 operating hours, or more often if extremely dusty, remove the compressor intake filter and clean it by back blowing through the fitting with air pressure up to 80 psi. The air intake filters must be kept clean. Dirty filters prevent proper operation of the marking system and will overload the motor. This will blow fuses and possibly lead to compressor failure. Compressor filters must be replaced periodically.

FOAMHEADS AND SCREEN/STRAINER

The foamheads have been designed so that the elements inside may be cleaned as necessary. The screens inside this unit should be washed periodically with hot water. The screen/strainer located in the tank should be checked occasionally to insure sufficient liquid flow to the foamhead assemblies.

TANK AND HOSES

At the end of the season flush the tank with warm water. Check the airlines and liquid lines for holes and replace as required. **Be sure to flush, then drain, all liquid from the system prior to storage in freezing temperatures. If liquid in this system is allowed to freeze, several components may be damaged.**

WINTERIZATION

The liquid lines and tank must be drained completely prior to storage. If liquid in this system is allowed to freeze, several components may be damaged. Follow the procedure below to prevent component damage.

1. Remove the in-line filter bowl at the bottom of the tank and completely flush the tank with warm water.
2. Replace in-line filter. Turn on machine and allow to operate until no foam is generated.
3. Add anti-freezing solution such as windshield washer solvent to tank.
4. Turn on machine until anti-freezing solution reaches the foamheads.
5. Check the airlines and liquid lines for holes and replace as required. **Be sure to flush, then drain, all liquid from the system prior to storage in freezing temperatures.**

TROUBLE-SHOOTING

If you do not get foam:

1. Be sure that the compressor is connected properly and that air is blowing into the tank. To be sure the airline and liquid lines do not have a hole in them or are not pinched, remove air and liquid tubing at each foamhead and check for flow.

2. Be sure you have enough foam concentrate in the tank.

3. Be sure the threaded tank cap is securely installed.

4. Check and clean the screen-strainer located in the tank.

5. Be sure the flow controls located at the switchbox are turned for maximum output.

PROBLEM: not enough foam - not enough foam concentrate in tank; hole in airline; pinched air or liquid lines. Clogged screen-strainer/foam heads.

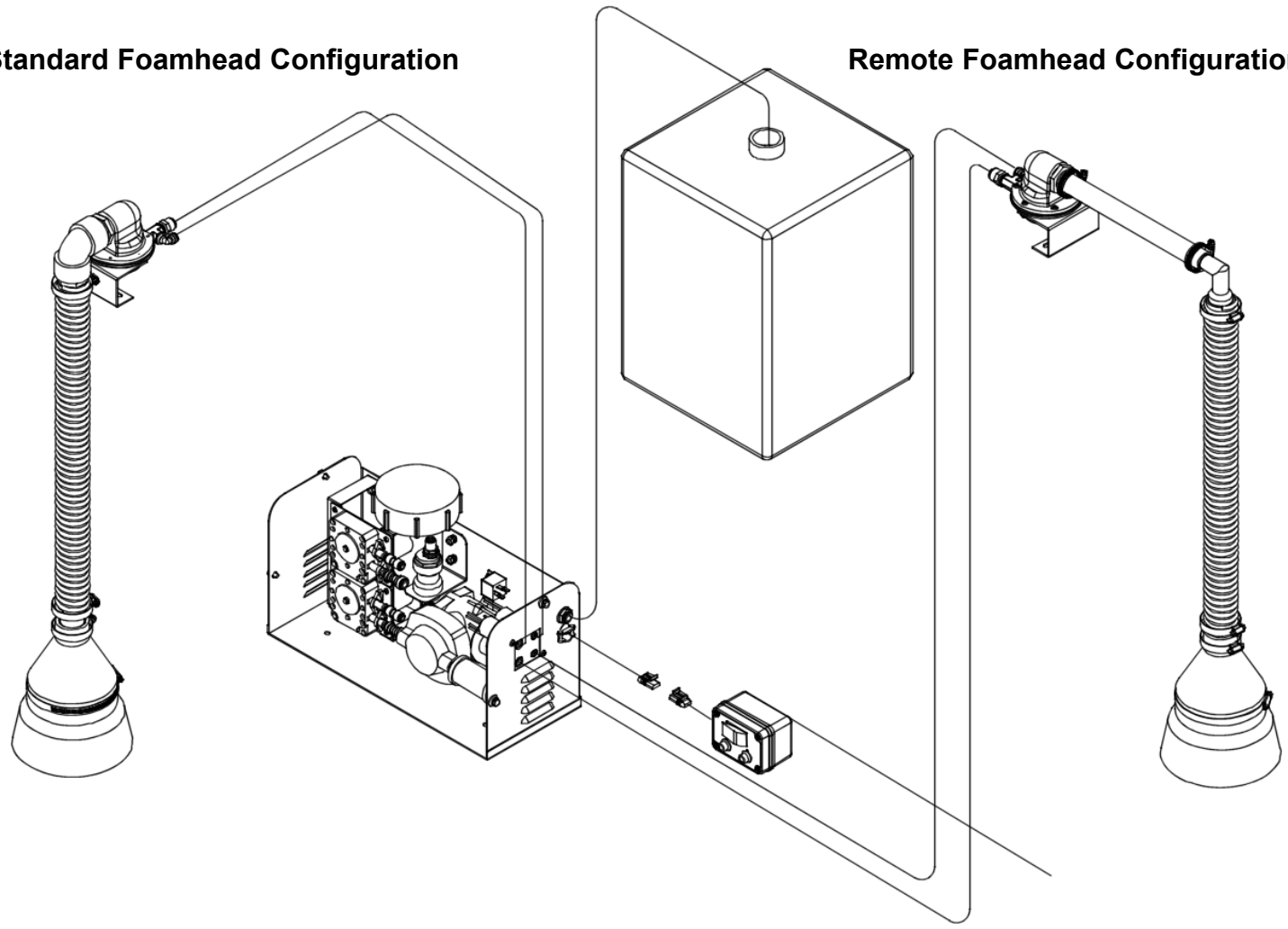
PROBLEM: wet foam - not enough foam concentrate; clean screen-strainer/foam head; reduce foam mixture at the switchbox

PROBLEM: surging - if foam is “surging” out under considerable pressure, you probably too high on the foam mixture located at the switchbox

PROBLEM: foam does not last on the ground - adjust foam mixture at the switchbox or a higher quality foam concentrate such as GOODMARK. Use collector heads.

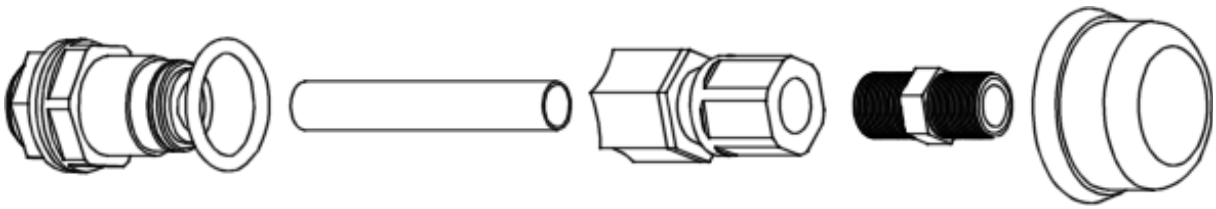
PROBLEM: blowing foam in windy weather - decrease mix of foam solution at the switchbox with slightly less foaming agent or more water to produce a wetter, heavier foam.

Standard Foamhead Configuration **Remote Foamhead Configuration**



Fresh Water Tank Fittings

Fittings have been included with this foam marking system that allow you to connect to your fresh water source. Suction from the foam marking system will take the water from your fresh water tank to the power unit for mixing with the foam concentrate. **IT IS IMPORTANT THAT YOUR TANK IS VENTED TO PREVENT DAMAGE DUE TO THE SUCTION!** The fittings to be used are shown below. The tank bulkhead fitting needs a 13/16" drilled hole in the tank for installation.



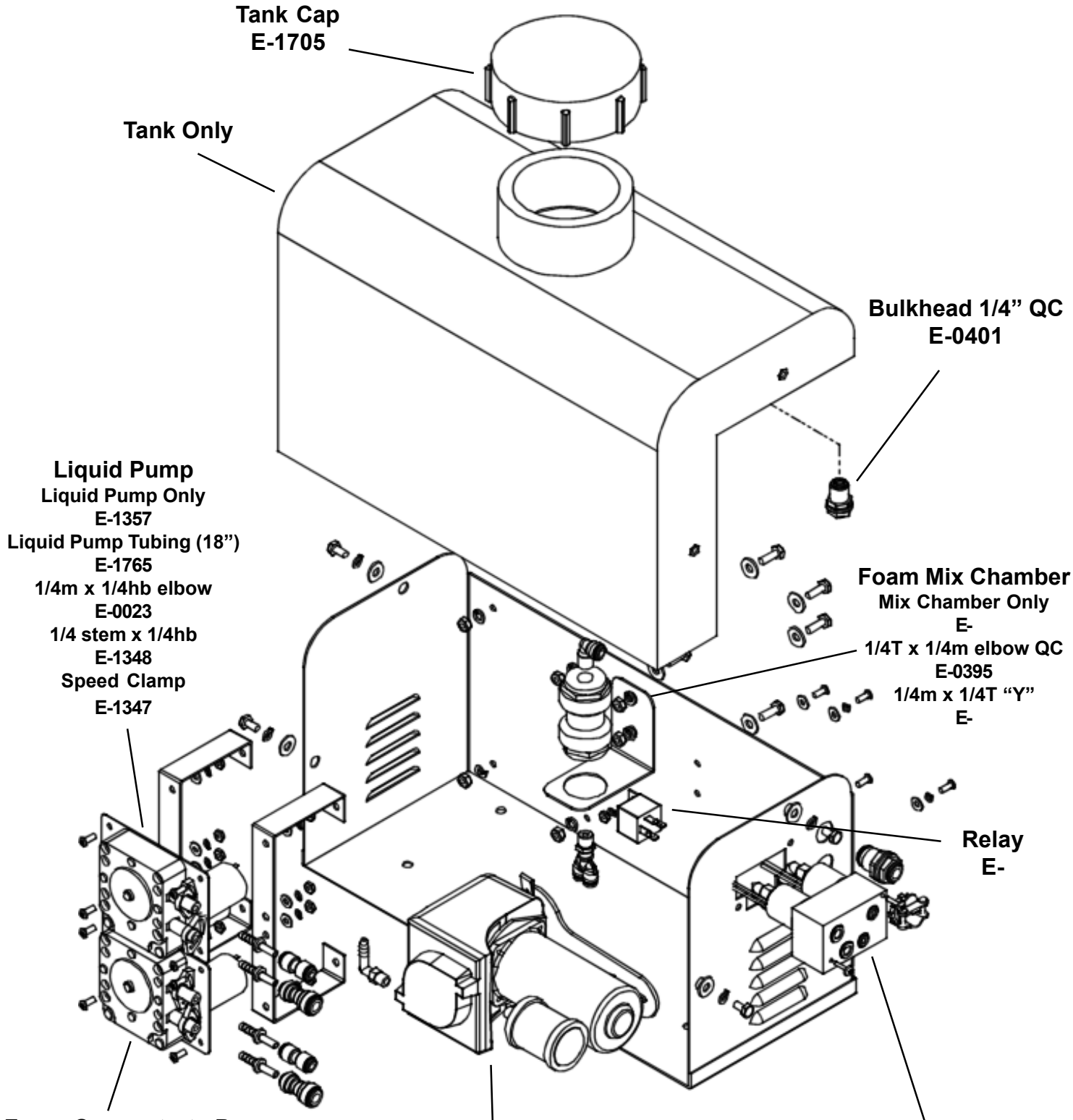
3/8 Tube Bulkhead
E-0362

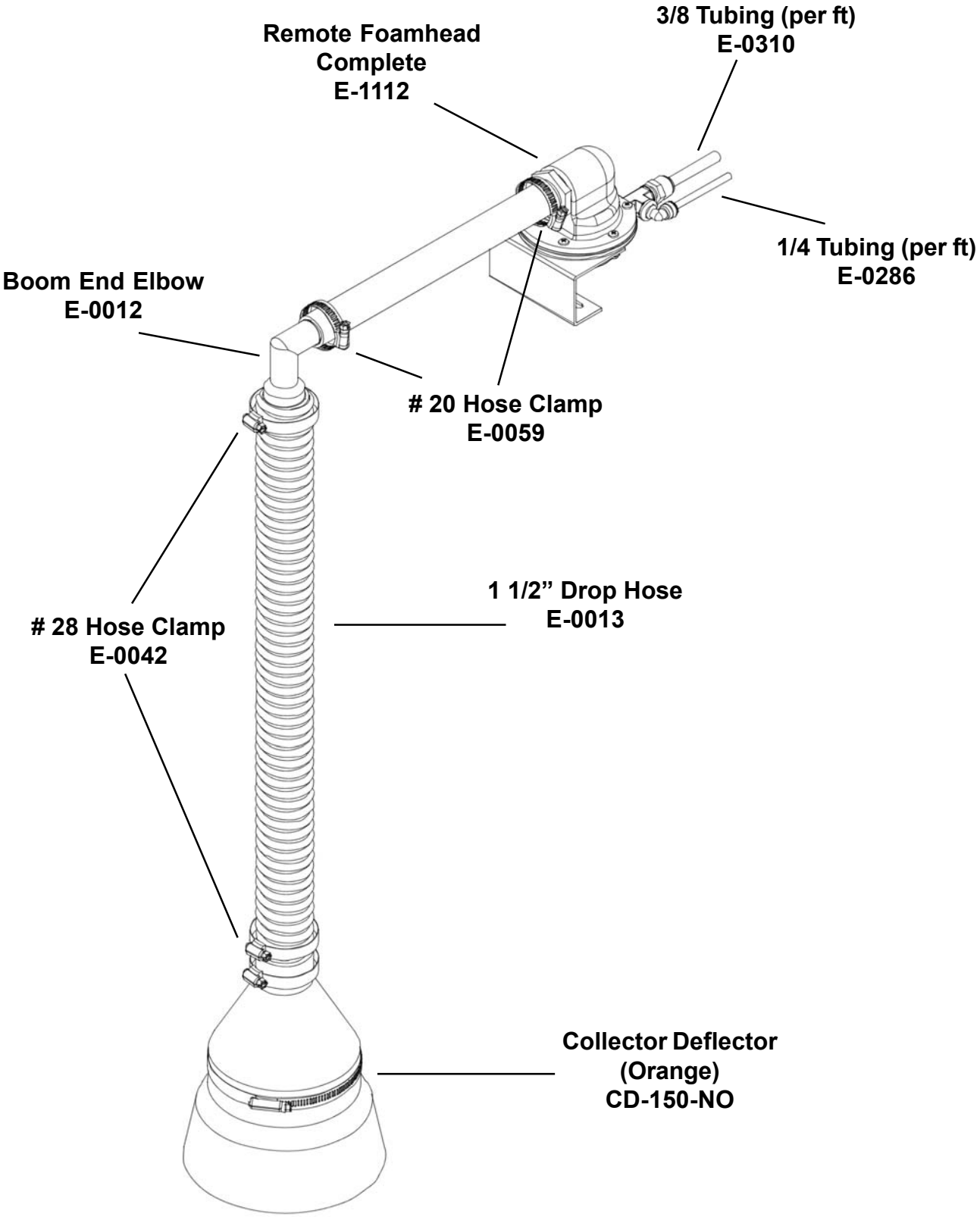
3/8 Tubing

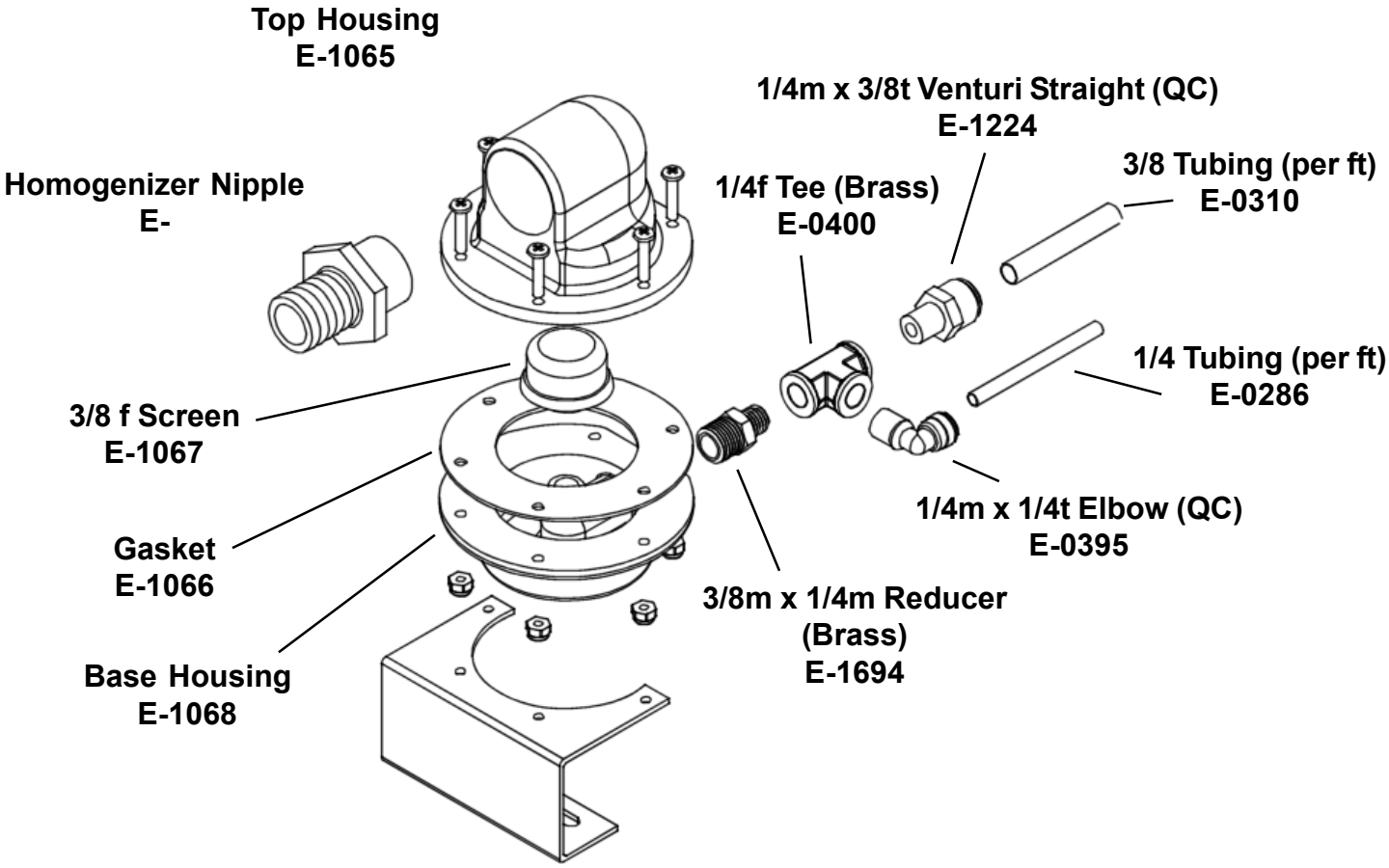
3/8T x 1/4 FPT
E-0673

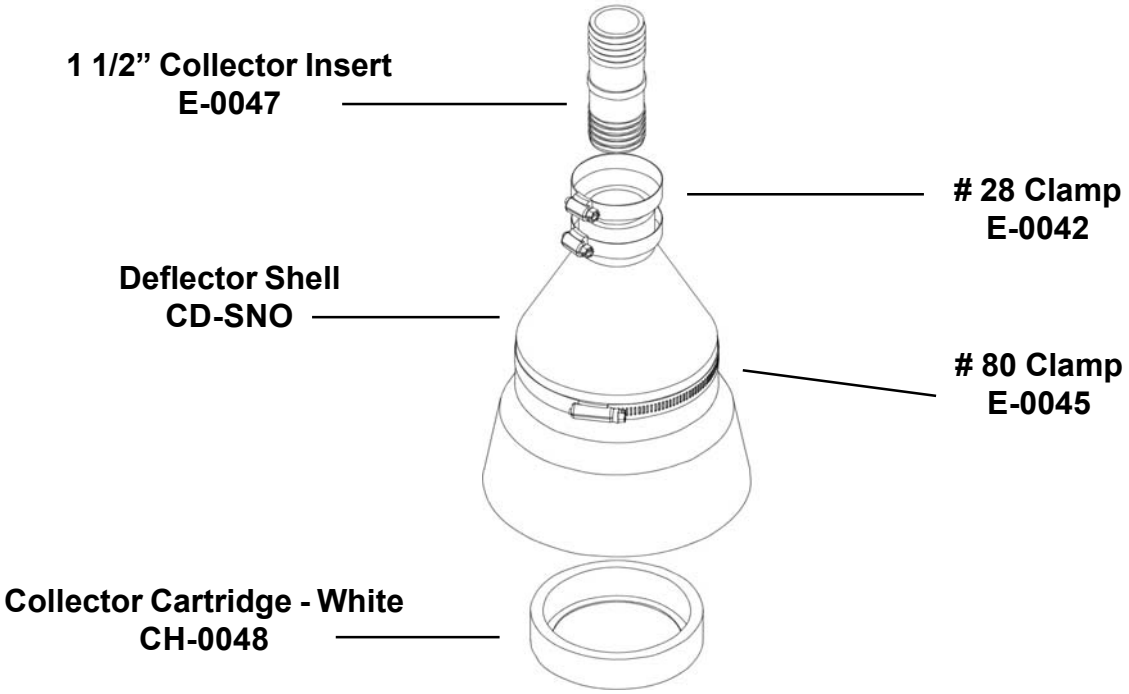
1/4mx 1/4m Brass
E-0723

Strainer
E-1067

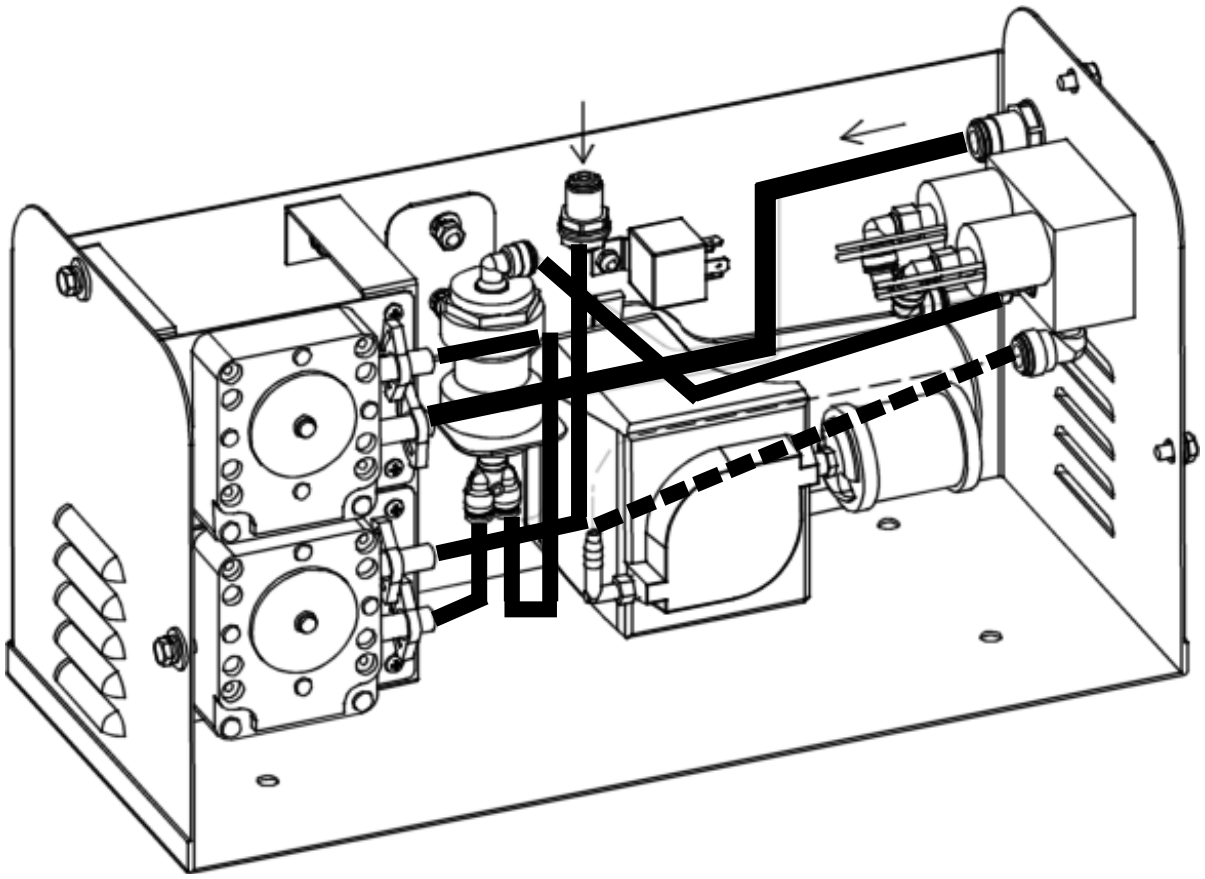

Tank Cap
E-1705
Tank Only
Bulkhead 1/4” QC
E-0401
Liquid Pump
Liquid Pump Only
E-1357
Liquid Pump Tubing (18”)
E-1765
1/4m x 1/4hb elbow
E-0023
1/4 stem x 1/4hb
E-1348
Speed Clamp
E-1347
Foam Mix Chamber
Mix Chamber Only
E-
1/4T x 1/4m elbow QC
E-0395
1/4m x 1/4T “Y”
E-
Relay
E-
Foam Concentrate Pump
Liquid Pump Only
E-1372
Liquid Pump Tubing (18”)
E-1765
1/4m x 1/4hb elbow
E-0023
1/4 stem x 1/4hb
E-1348
Speed Clamp
E-1347
Compressor
Diaphragm Compressor
E-0024
Compressor Filter
E-0050
1/8m x 1/4hb elbow
E-0707
CONTROL MODULE ASSEMBLY
E-1722
3-Way Actuator
E-1707
1/8m x 1/4t elbow (QC)
E-0969
1/4 Stem x 1/4t elbow (QC)
E-1728
Control Module Block Only
E-1721


Remote Foamhead
Complete
E-1112
3/8 Tubing (per ft)
E-0310
1/4 Tubing (per ft)
E-0286
Boom End Elbow
E-0012
20 Hose Clamp
E-0059
28 Hose Clamp
E-0042
1 1/2” Drop Hose
E-0013
Collector Deflector
(Orange)
CD-150-NO


Top Housing
E-1065
1/4m x 3/8t Venturi Straight (QC)
E-1224
Homogenizer Nipple
E-
1/4f Tee (Brass)
E-0400
3/8 Tubing (per ft)
E-0310
1/4 Tubing (per ft)
E-0286
3/8 f Screen
E-1067
1/4m x 1/4t Elbow (QC)
E-0395
Gasket
E-1066
3/8m x 1/4m Reducer
(Brass)
E-1694
Base Housing
E-1068

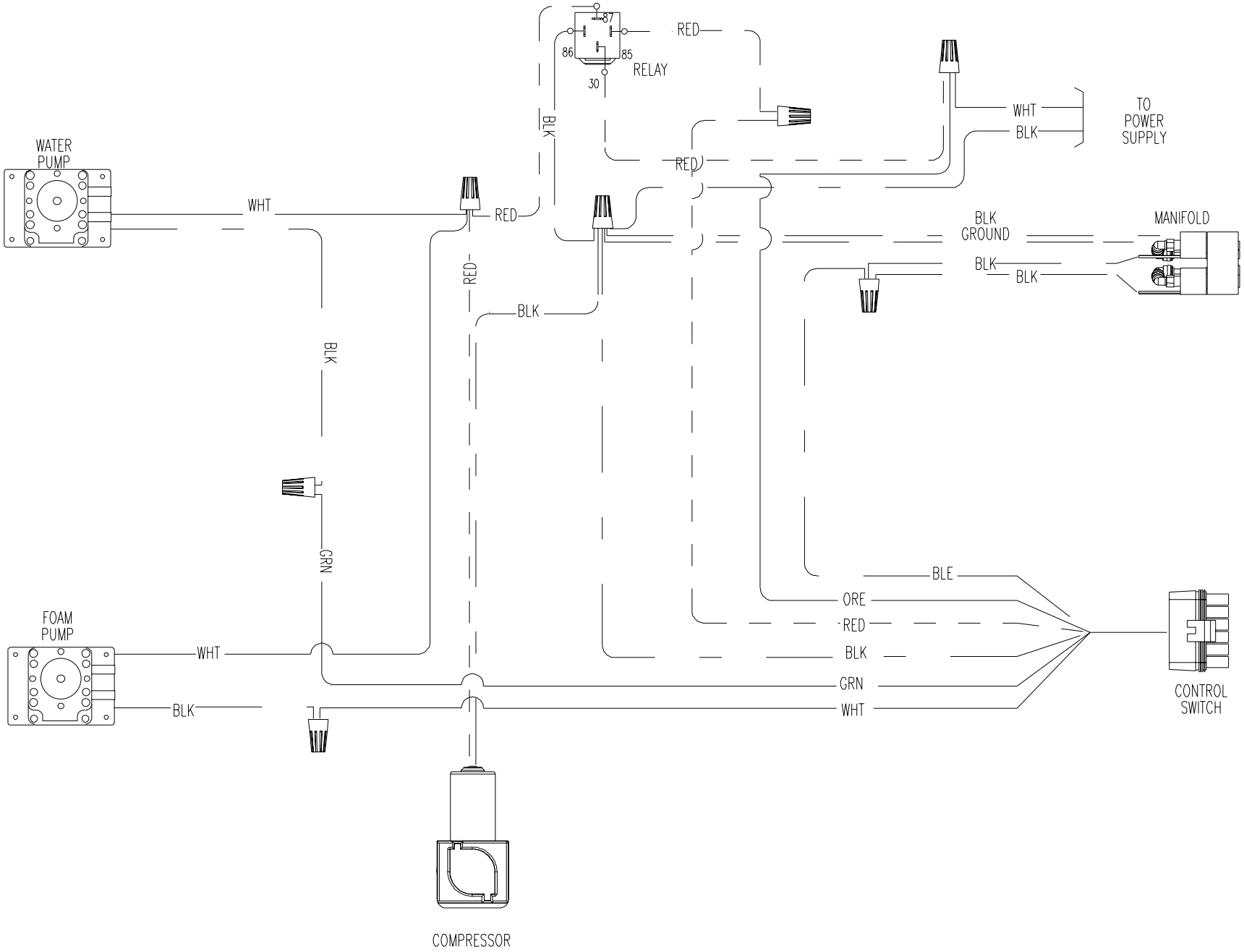

1 1/2” Collector Insert
E-0047
28 Clamp
E-0042
Deflector Shell
CD-SNO
80 Clamp
E-0045
Collector Cartridge - White
CH-0048

Air & Liquid Flow Diagram



Liquid

Air


87
86
85
30
RELAY
RED
BLK
WHT
BLK
TO
POWER
SUPPLY
RED
WATER
PUMP
WHT
RED
RED
BLK
GROUND
MANIFOLD
BLK
BLK
BLK
BLK
GRN
BLE
ORE
RED
BLK
GRN
WHT
FOAM
PUMP
WHT
BLK
CONTROL
SWITCH
COMPRESSOR

WARRANTY INFORMATION

Limited Warranty

Richway Industries, Ltd., foam marking systems and components are warranted against defects in materials and workmanship for a period of 1 year from date of shipment.

During this warranty period, Richway will repair or replace at no charge, those parts or components which upon receipt by Richway, following warranty analysis, prove to be defective.

This warranty does not apply to parts or products not manufactured by Richway Industries, Ltd., including but not limited to solenoid valves, Thomas or Gast diaphragm compressors, etc., the warranty of such items being limited to the actual warranty extended to Richway Industries, Ltd., by its supplier.

Further, this warranty does not cover part or component failures or damage due to misapplication, misuse, abuse, breakage, or improper installation, storage or handling, abnormal conditions of temperature, water, dirt, corrosive or other contaminants.

Products covered by this warranty must be used in compliance with all federal, state, and local regulations.

Disclaimer of Other Warranties

The foregoing limited warranty is in lieu of all other warranties, expressed or implied, including merchantability or fitness for a particular purpose. In no event shall Richway Industries, Ltd., be liable for indirect, consequential or special damages of any nature, whatsoever.

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