



**Operation
Applies to Waterous Model**

FoamFill

Rev 3

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WATEROUS ARIZONA

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Warnings, Cautions, and Notes

Warning A warning alerts you to a procedure, practice or condition that may result in death or long term injury to personnel or destruction of equipment.

Caution A caution alerts you to a procedure or condition that may result in serious damage to equipment or its failure to operate as expected

Note: A note points out important information. Failure to read the note may not result in physical harm to personnel or equipment. It may waste time and money.

Revision History

Revision	Date Issued	Comments
---	05/28/2008	Original Release
1	6/9/2010	Updated Fig. 4
2	8/13/10	Added parts list
3	8/1/11	Added 12/24 VDC breaker caution

Disclaimer: These instructions are guidelines only and in no way meant to be definitive. During installation, standard safety precautions and equipment should be used where appropriate. Because the tools used and the skill/experience of the installer can vary widely, it is impossible to anticipate all conditions under which this installation is made, or to provide cautions for all possible hazards. Proper installation is the responsibility of the purchaser. All bolts, setscrews, and belts must be checked prior to start-up AND after the initial operation. Damages due to poor installation are the responsibility of the installer.

Waterous reserves the right to make modifications to the system without notice

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SECTION 1. SYSTEM COMPONENTS

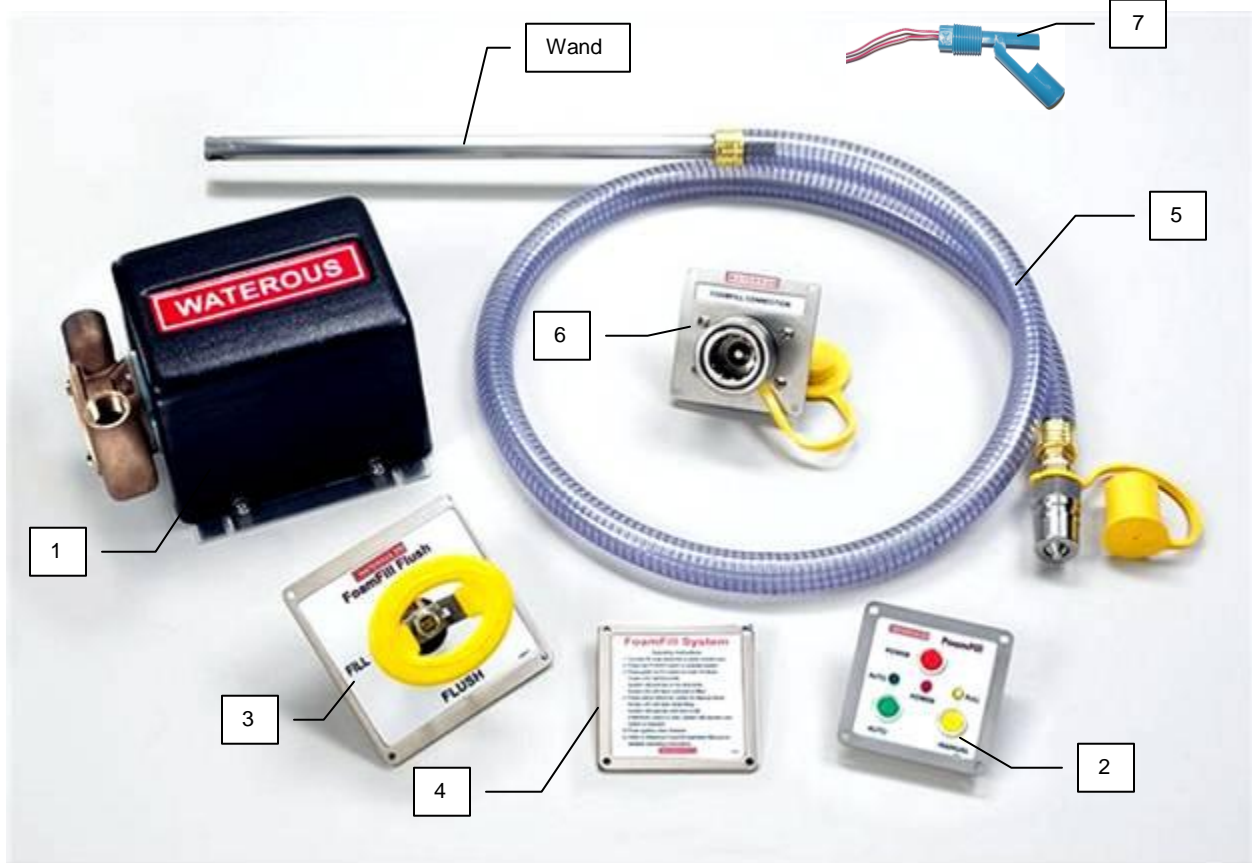


Figure 1 System Components

1	Refill Motor/Pump
2	Control Panel
3	Refill-Flush Valve

4	Operational Instruction Plate
5	Pickup Tube Assembly
6	Pickup Quick Connection

7	Tank full/ Lo Tank switch (x2)
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Note: If you use 5 gallon buckets and 55 gallon drums, you will need to have 2 lengths of pickup tube assemblies for Quick Connection on the panel. A 6ft length for buckets and 10ft length (1" only) for drums.

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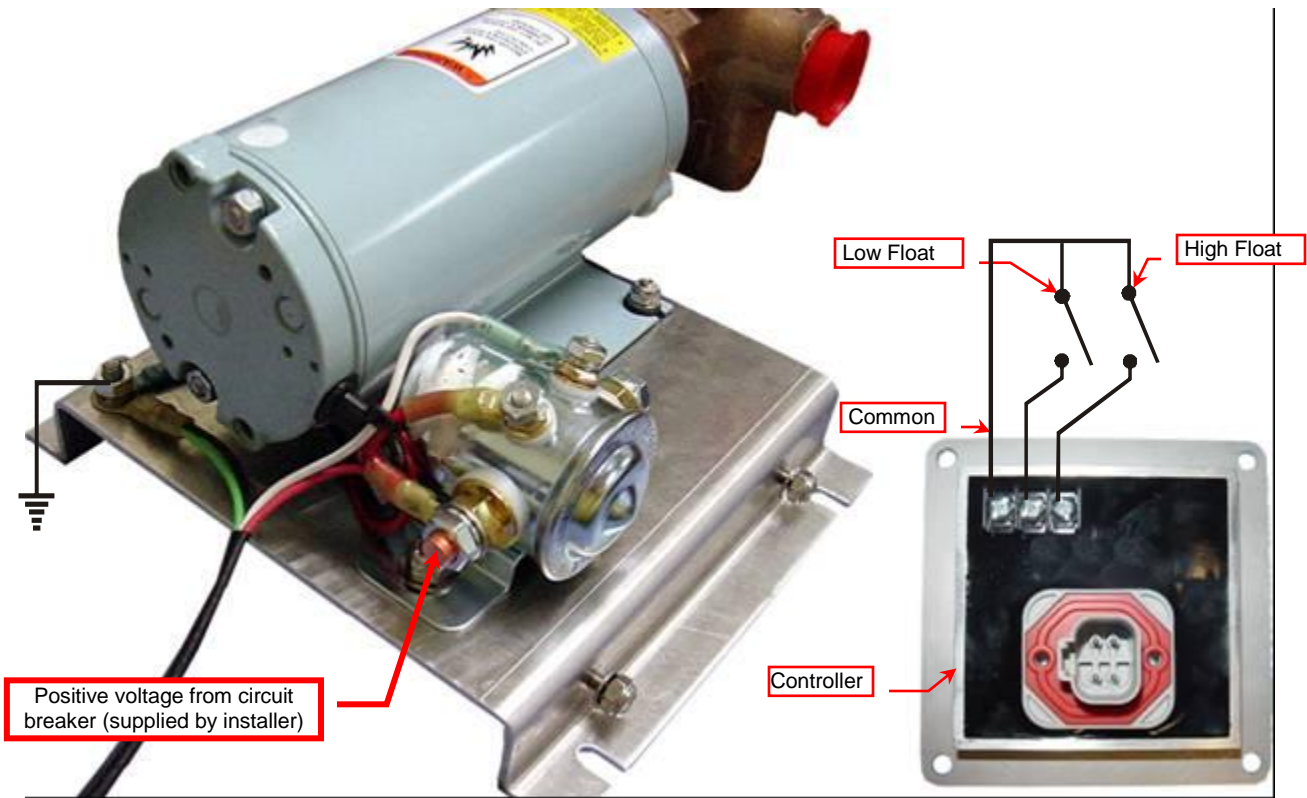
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SECTION 2. WIRING



Caution Installer needs to add a 30 Amp (12VDC) or 15 Amp (24 VDC) circuit breaker in line, before attaching a cable to the solenoid.

SECTION 3. SEQUENCE OF OPERATION

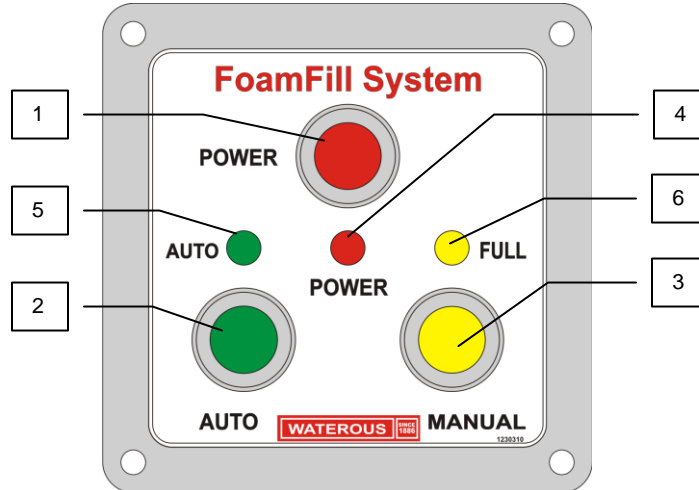


Figure 2 Controller

System has a control panel with three (3) normally open momentary push button switches and three (3) status LED's to control and display system operation.

1	Power Button – turns system on and off	4	Power LED (Red) – indicates system is on or off
2	Auto Button – initiates Auto Mode	5	Auto LED (Green) – indicates system is in Auto Mode
3	Manual Button – initiates manual operation	6	Filling /Full LED (Yellow) – state determined by operating mode as described below

When the Power button is pressed, the Power LED will be lit. If the system is on and the Power button is pressed, the system will turn off.

A. Auto Fill Mode

When the Auto Fill button is depressed the Auto LED (green) will be turned on.

If the tank is full, the Full LED (yellow) will remain lit.

If the (foam) tank full switch is Open, but the low level switch is still closed the refill pump will not self activate until the low level switch opens, then the refill pump will activate and begin filling the foam tank, the Filling/Full LED (yellow) will begin flashing.

When the (foam) tank full switch closes, the system will deactivate the refill pump and the Filling/Full LED (yellow) will remain lit.

The refill pump will not automatically turn back on until the system level drops back down and the low level switch is open.

The system will operate as automatic until the power switch is depressed and turned off, or the Manual button is pressed.

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B. Manual Fill Mode

When the manual Fill button is depressed, the Fill LED will turn on.

This will override the tank fill switches and run the pump as long as the button is depressed allowing for filling of the system.

If the tank full switch is open, the Filling/Full LED (yellow) will blink.

If the tank full switch is closed, the Fill/Filling LED (yellow) will stay on continuously.

Caution: Care must be used. If the button is depressed and held on the system will continue to run the refill pump past the tank full to allow the foam tank to be filled further than the tank full switch limits.

The system should not be run dry.

In order to protect the pump from dry running due to an empty concentrate container or inadvertent powering up of the system without a foam supply the system will go into an automatic shut-down mode.

The automatic shut-down mode will activate if the pump accumulates 7 minutes of run time without closing the tank full switch. The automatic shutdown mode will be indicated by flashing Power LED (Red), Auto LED (Green), and Filling /Full LED (Yellow) lights.

The system may be reset into normal operation mode by initiating the power up sequence.



Figure 3 Typical valve installation

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C. Flushing

With the wand in clean water and the Tank Fill/Flush valve in the Flush position, depress and hold the Manual Fill button.

This will override the tank fill switches and run the pump as long as the button is depressed allowing for flushing of the system.

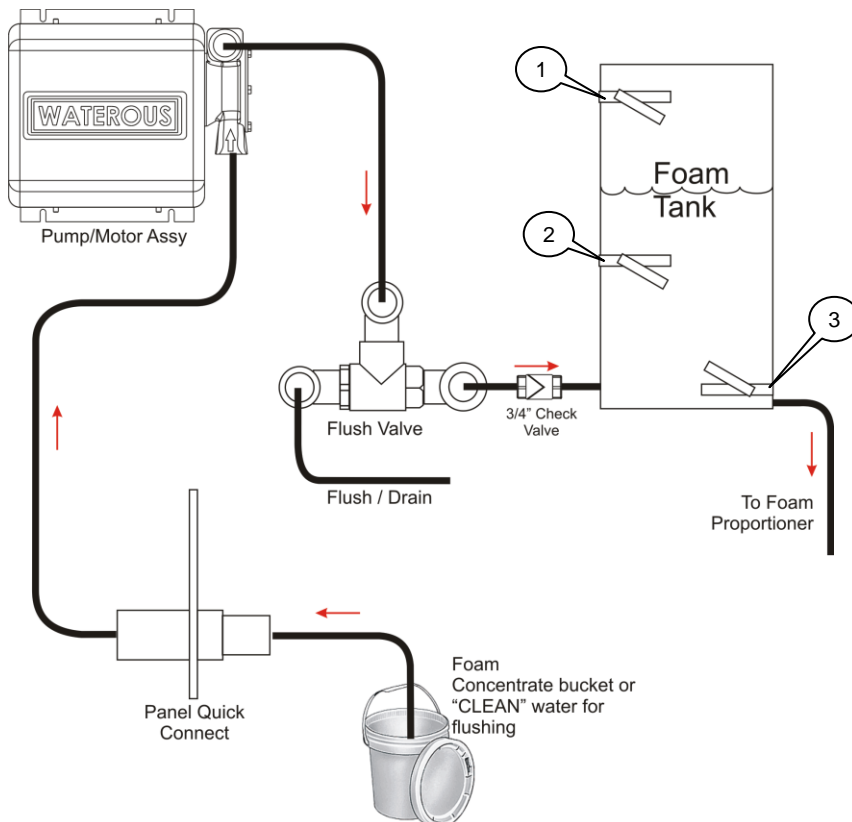
Caution: Care must be used. If the button is depressed and held on the system will continue to run the refill pump past the tank full to allow the foam tank to be filled further than the tank full switch limits.

The system should not be run dry.

In order to protect the pump from dry running due to an empty concentrate container or inadvertent powering up of the system without a foam supply the system will go into an automatic shut-down mode.

The automatic shut-down mode then will activate if the pump accumulates 7 minutes of run time without closing the tank full switch. The automatic shutdown mode will be indicated by flashing Power LED (Red), Auto LED (Green), and Filling /Full LED (Yellow) lights.

The system may be reset into normal operation mode by initiating the power up sequence.



Notes:

1. FoamFill High level switch
2. FoamFill Low level switch
3. Foam system "LCON/NCON" switch

Figure 4 Plumbing

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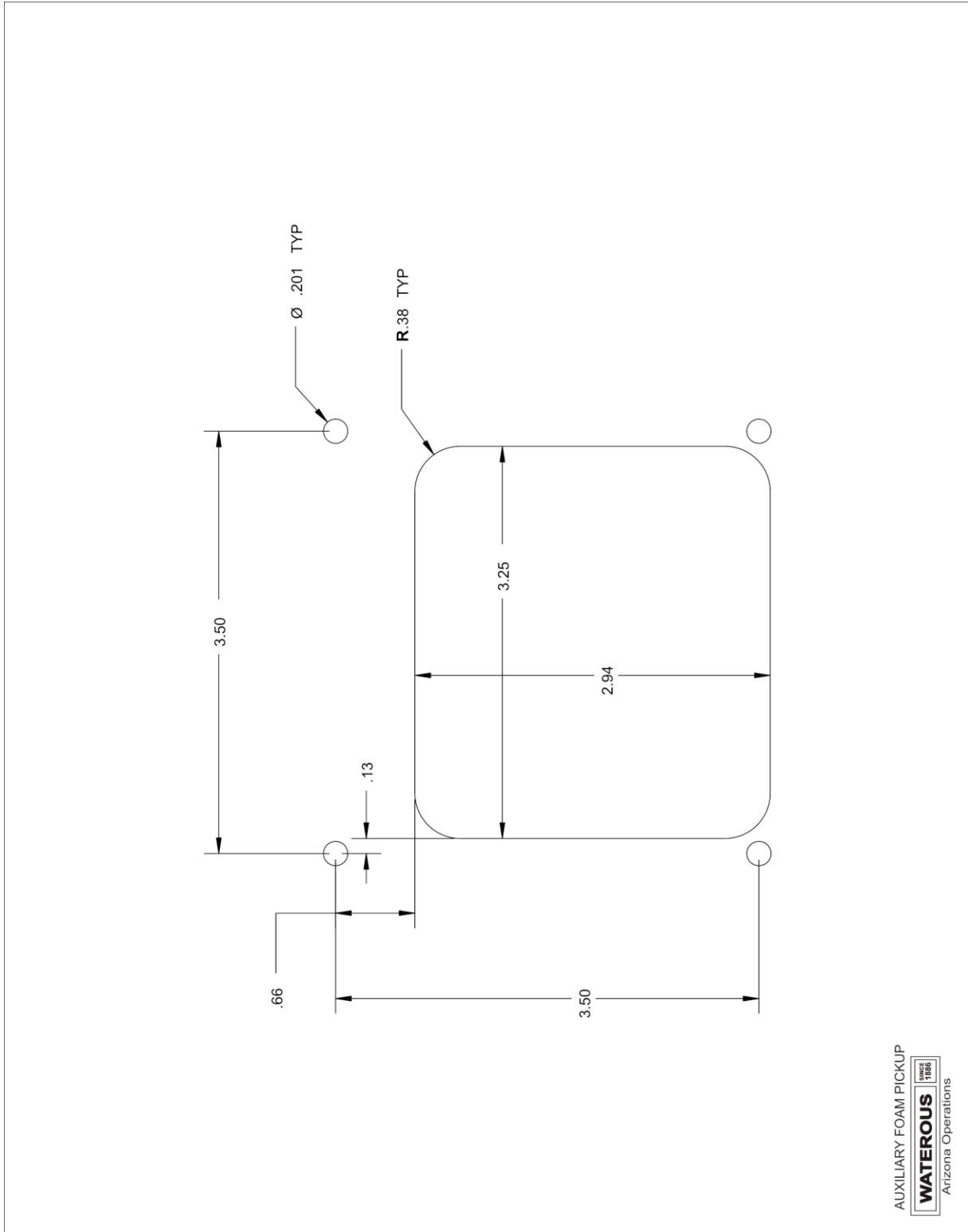
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AUXILIARY FOAM PICKUP
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Figure 5 Auxiliary Foam Pickup Cutout

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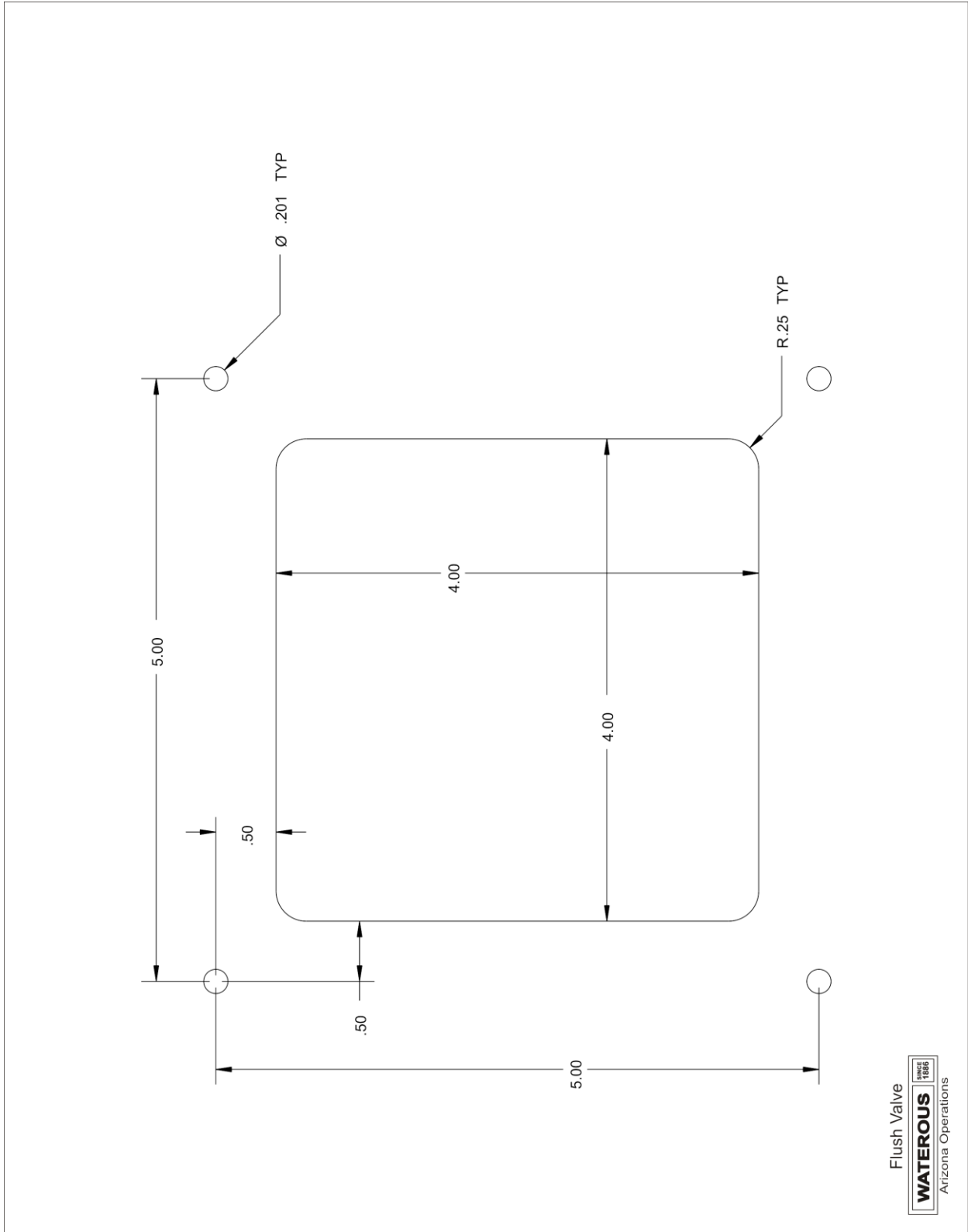


Figure 6 Flush Valve Cutout

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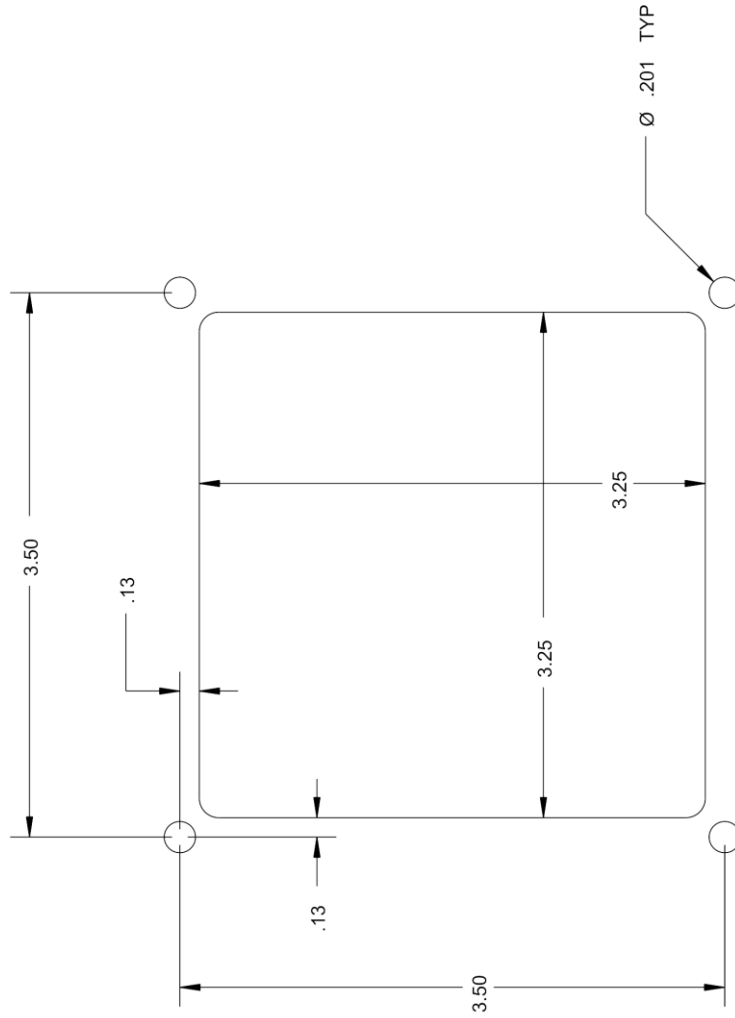
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FOAMFILL CONTROL
Cutout
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Figure 7 FoamFill Control Cutout

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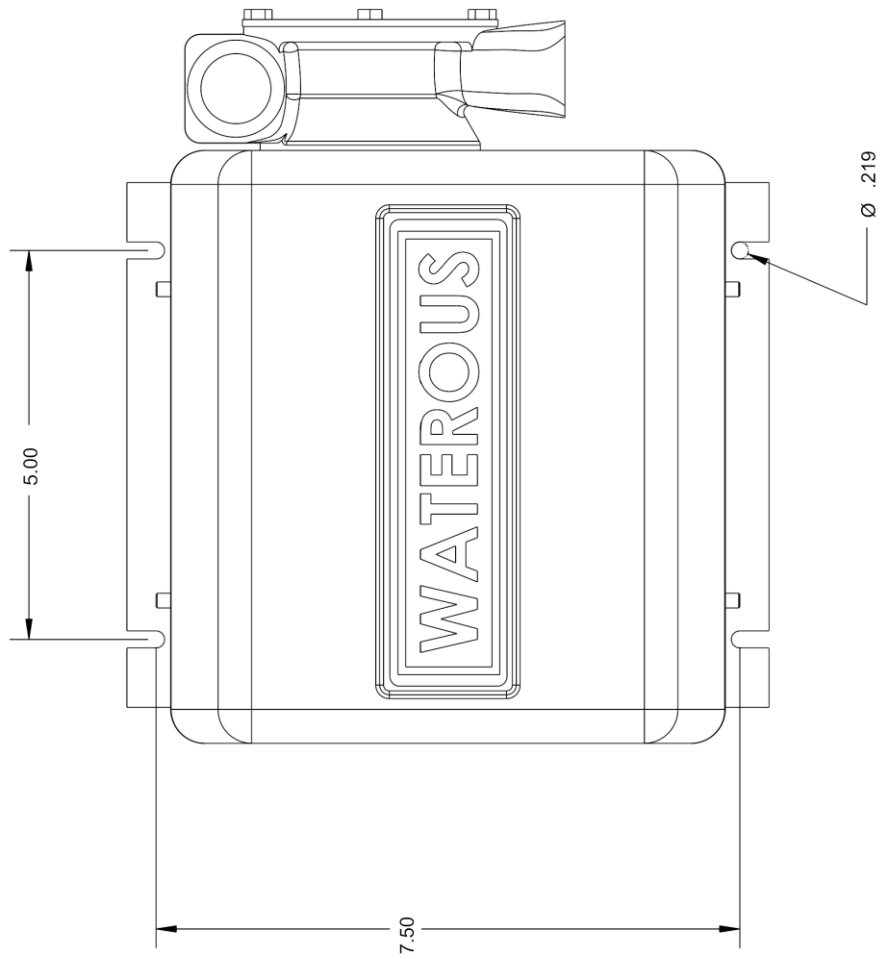
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FOAMFILL PUMP
MOUNT Foot print
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Figure 8 FoamFill Pump Mount foot print

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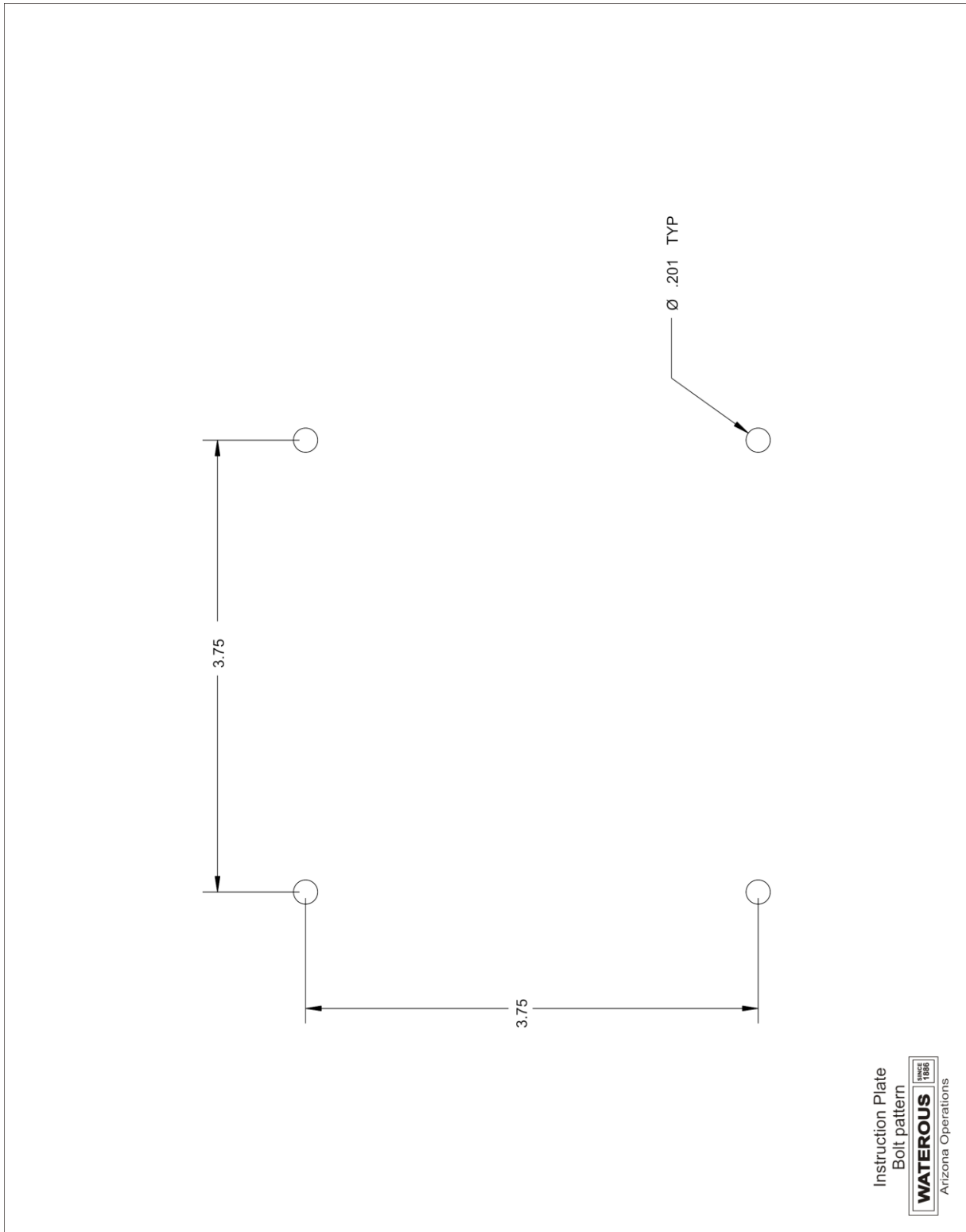


Figure 9 Instruction Placard bolt hole pattern

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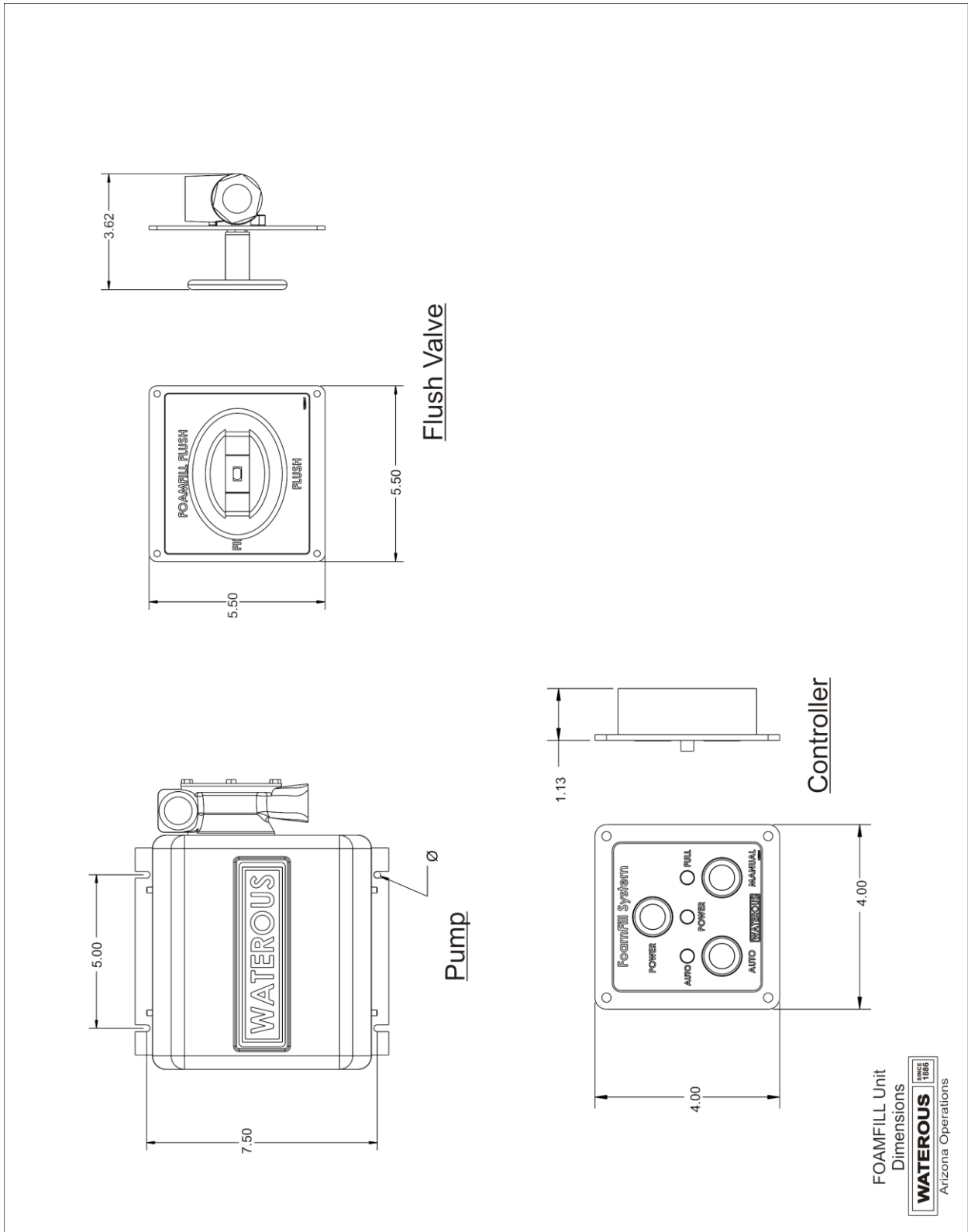


Figure 10 Unit Dimensions

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SECTION 4. FOAMFILL COMPONENTS

>Reference Only<

Item	Description		Qty	
1	Harness - 10' Foamfill System (not shown)	0314078	1	
2	Plate - Foamfill Operating INS	0315342	1	
3	Overboard Foam Pick-Up	3/4" BR 3/4" SS 1" BR 1" SS	0390192 0390193 0390194 0390195	1
4	Motor/Pump	12v 24v	0390196 0390197	1
5	Foamfill Flush Valve Assembly		0390200	1
6	Label - Foamfill Connection (not shown)		1230318	1
7	Check Valve 3/4" BRZ F x F EPR SEA (Stainless only)		2410132	1
8	Side Level Switch		4190000	2
9	Control Head Foamfill System		4290026	1

This covers part of template 2130062, 2130063, 2130065 and 2130066.

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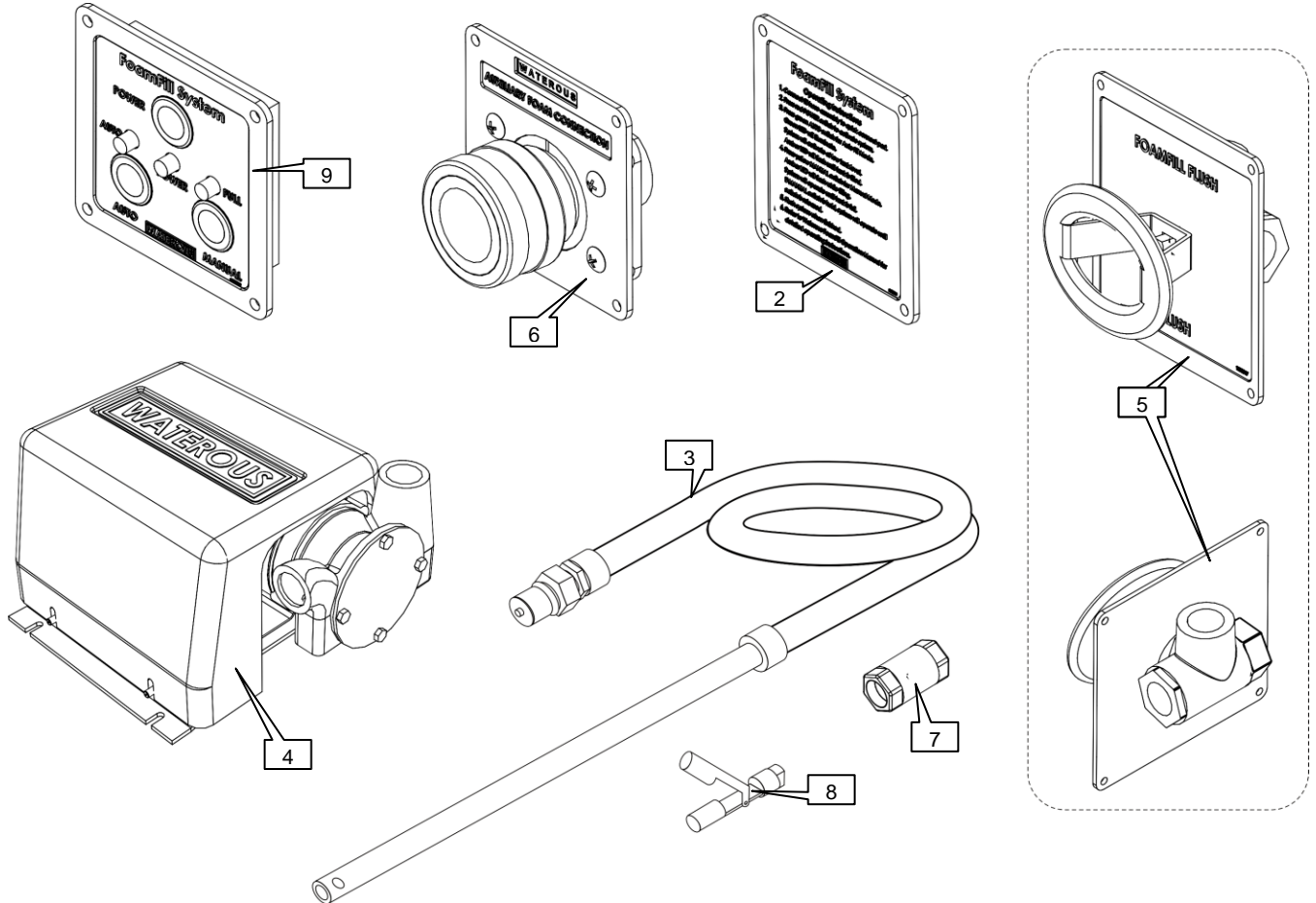
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A. Foamfill Components drawing

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SECTION 5. CONDITIONAL 2-YEAR WARRANTY POLICY

WATEROUS warrants, to the original Buyer only, that products and parts manufactured by WATEROUS will be free from defects in material and workmanship under normal use and service for a period of two (2) years from the date the product is first placed in service, or two and one-half (2-1/2) years from the date of shipment by WATEROUS, whichever period shall be the first to expire; provided the Buyer notifies WATEROUS, in writing, of the defect in said product within the warranty period, and said product is found by WATEROUS to be nonconforming with the aforesaid warranty. When required in writing by WATEROUS, defective products must be promptly returned by Buyer to WATEROUS at WATEROUS plant at Peoria, Arizona, or at such other place as may be specified by WATEROUS, with transportation and other charges prepaid. A Returned Material Authorization (RMA) is required for all products and parts and may be requested by phone, fax or mail. The aforesaid warranty excludes any responsibility or liability of WATEROUS for:

- a) damages or defects due to accident, abuse, misuse, abnormal operating conditions, negligence, accidental causes, or improper maintenance, or attributable to written specifications or instructions furnished by Buyer;
- b) defects in products manufactured by others and furnished by WATEROUS hereunder, it being understood and agreed by the parties that the only warranty provided for such products shall be the warranty provided by the manufacturer thereof which, if assignable, WATEROUS will assign to Buyer, if requested by Buyer;
- c) any product or part, altered, modified, serviced or repaired other than by WATEROUS, without its prior written consent; and
- d) the cost of dismantling, removing, transporting, storing, or insuring the defective product or part and the cost of reinstallation.
- e) normal wear items (including, but not limited to belts, hoses, check valves, packing, strainers, filters, light bulbs, anodes, intake screens, mechanical seals, etc.).

This warranty is subject to WATEROUS Conditions of Sale (detailed on WATEROUS Invoice) as currently in effect all of which are herein incorporated and by this reference made a part hereof

All other warranties are excluded, whether express or implied by operation of law or otherwise, including all implied warranties of merchantability or fitness for purpose. WATEROUS shall not be liable for consequential or incidental damages directly or indirectly arising or resulting from the breach of any of the terms of this limited warranty or from the sale, handling, or used of any WATEROUS product or part. WATEROUS liability hereunder, either for breach of warranty or for negligence, is expressly limited at WATEROUS option:

- a) to the replacement at the agreed point of delivery of any product or part, which upon inspection by WATEROUS or its duly authorized representative, is found not to conform to the limited warranty set forth above, or
- b) to the repair of such product or part, or
- c) to the refund or crediting to buyer of the net sales price of the defective product or part. Buyers remedies contained herein are exclusive of any other remedy otherwise available to Buyer.

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