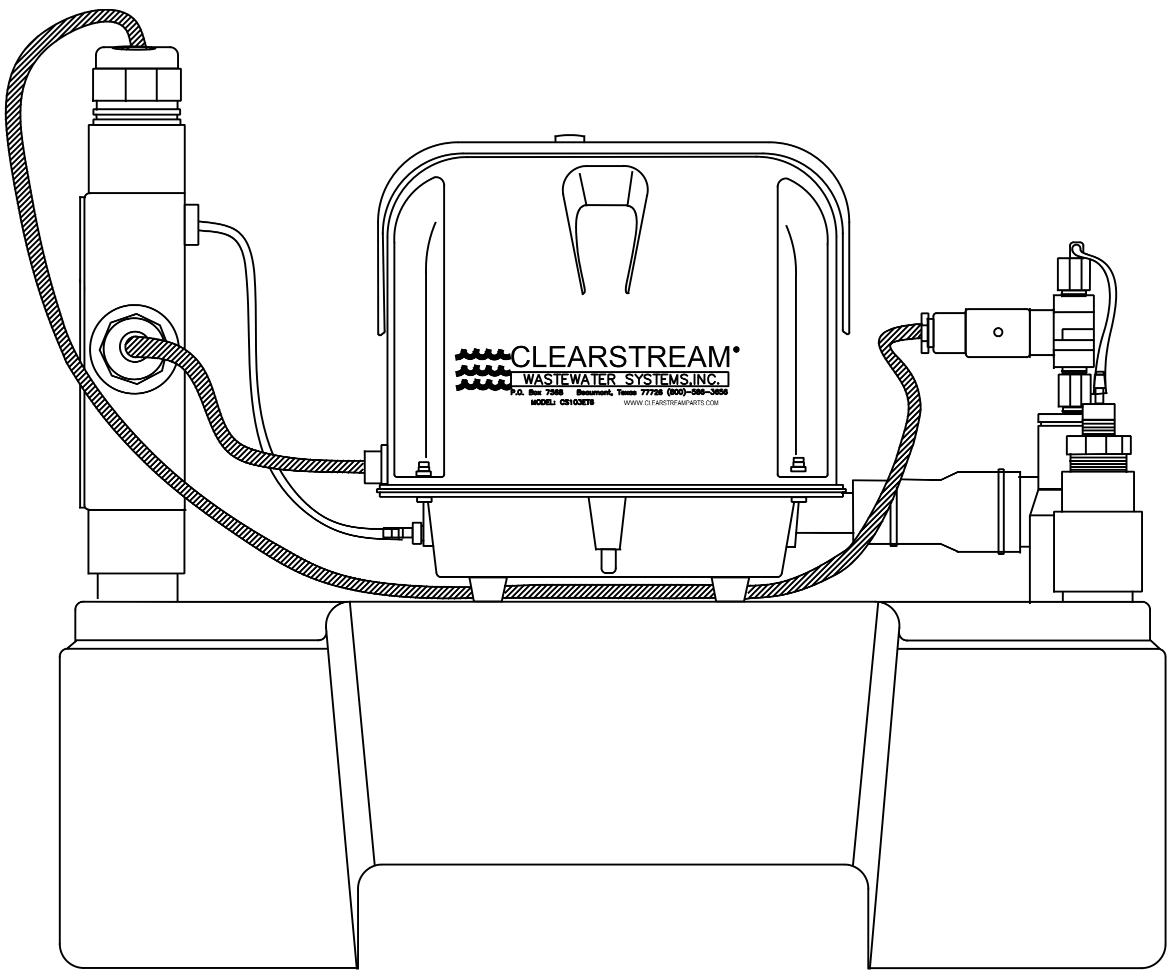


DA AERATOR
Assembly and Installer Guide

DA INSTALLER GUIDE:

This guide assumes the pre-caster has completed his system assembly before transport for the installation. Some materials must be provided by the installer such as:
¾” Sch 40 pvc conduit
¾” electrical pvc conduit
¾” flex pipe (appx 4’ to make up 2 lengths @ 2’ each)
assorted ¾” pvc pipe fittings, glue etc.
wiring - #18 stranded for the aerator and control. Suggested coloring to be black, white, green, blue and yellow or other available colors that can be identified easily.
wire nuts for connections in the junction tee box
12” Phillips screwdriver extension to remove the 4 aerator cover screws.

Take a few minutes and review the drawings to understand the general layout needs for the installation and the airlift return flow calibration. Although the air flow valve has been preset, verification is needed by completing the calibration procedure. Have fill water going into the aeration tank, this must be at operating level for proper airlift flow setup.

Drawing #1 is the Clearstream model 600DAC2 used in this guide to show the general layout of the equipment, other models will use similar procedures when installing those.

STEP: 1
View drawing #2, this is the Clearstream DA aerator CS103ET6 unit. Locate the placement of the aerator unit and wall mount the control panel. Run the ¾” electrical conduit to the Clearstream CS103ET6 aerator unit. Remove the aerator housing cover using the 12” Phillips screwdriver extension. As shown in drawing #3 the power junction tee box is on the left side slot of the unit. Bring the ¾” electrical conduit into the bottom of the junction tee box.
There are a total of (7) wires to be pulled from the wall mounted control to the aerator. Drawing #5 is an expanded view of the internal wiring connects to be made. The pull wiring is 1-black, 1-white, 1-green for 120vac supply to the aerator; 2-blue, one each for the low pressure air sensor; 2-yellow, one each for the air solenoid. Complete the wiring inside the junction tee box and then replace the access cover back securely with the (2) screws. Check to be sure the 1/8” airline from the aerator port to the junction box barb fitting is connected as shown in drawing #2.

STEP 2:
The Clearstream model P5238 control panel is used with your system. Refer to drawing #6 to show the field wiring connections. Bring 120vac supply into the control panel and make the (7) wire connections to the aerator. Make the other, if needed, wiring connects for pump, low level float, high level float and disinfection alarm in the pump tank.

STEP 3:
Review drawing #4 to see the (2) ¾” pvc air supply lines needed from the aerator unit to the aeration tank riser. Use a 2’ flex pipe length added to each pvc pipe end for the coupler connections thru the riser.

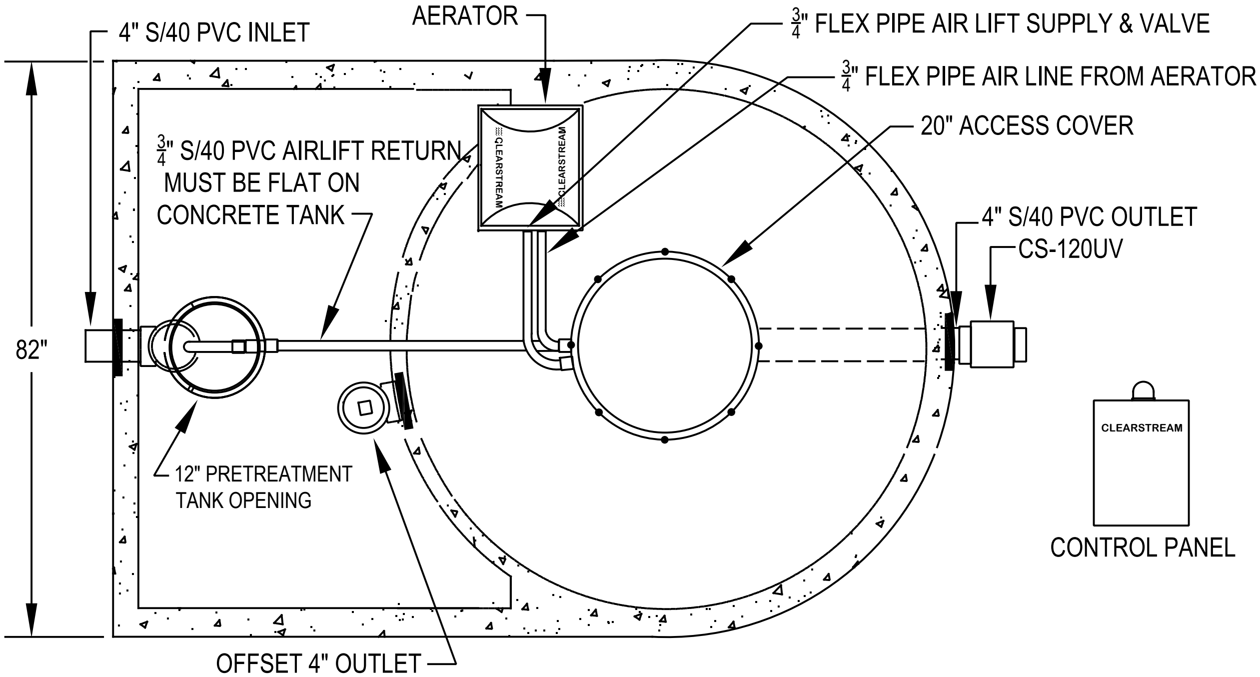
STEP 4:
Refer back to drawing #1 for the ¾” pvc rigid pipe for the airlift flow return to the pretreat tank. When making this run be sure to keep the pvc pipe flat or downslope to the pretreat riser coupler. Make the connection into the pretreat tank. Drawing #7 shows the pretreat connection using the internal flex pipe.

STEP 5:
AIRLIFT FLOW CALIBRATION
Drawing #7 shows the pretreat riser assembly. Unscrew the 17” flex pipe and set it aside to allow access for the flow test. In the control panel, switch the pump circuit breaker to OFF. Next pushing the PUMP TEST button once will start the Aux power, as soon as the program is counting, push a 2nd time to get 300 sec of continuous run time. If you need to stop at any time, pushing the PUMP TEST button again will stop the aux power. The Aux power ON light indication shows the power to the air solenoid and allows a small air flow into the airlift pvc side.
Wait approximately 1 minute to stabilize the water flow return back to the pretreat tank. A flow rate of 1 gallon per minute is the desired setting. Use a 1 liter container and time the flow to fill it. A 1 liter flow in 16 secs equals the I gpm. If adjustment is need to increase or decrease the flow rate, refer to drawing #4 for the needle valve location. Loosen the needle valve lock nut, a small turn ccw will increase the flow, or cw to decrease the flow. Be sure to snug the lock nut tight when completed to keep that setting. Return the pump circuit breaker to ON position. Replace the 17” flex pipe back into the pretreat baffle.

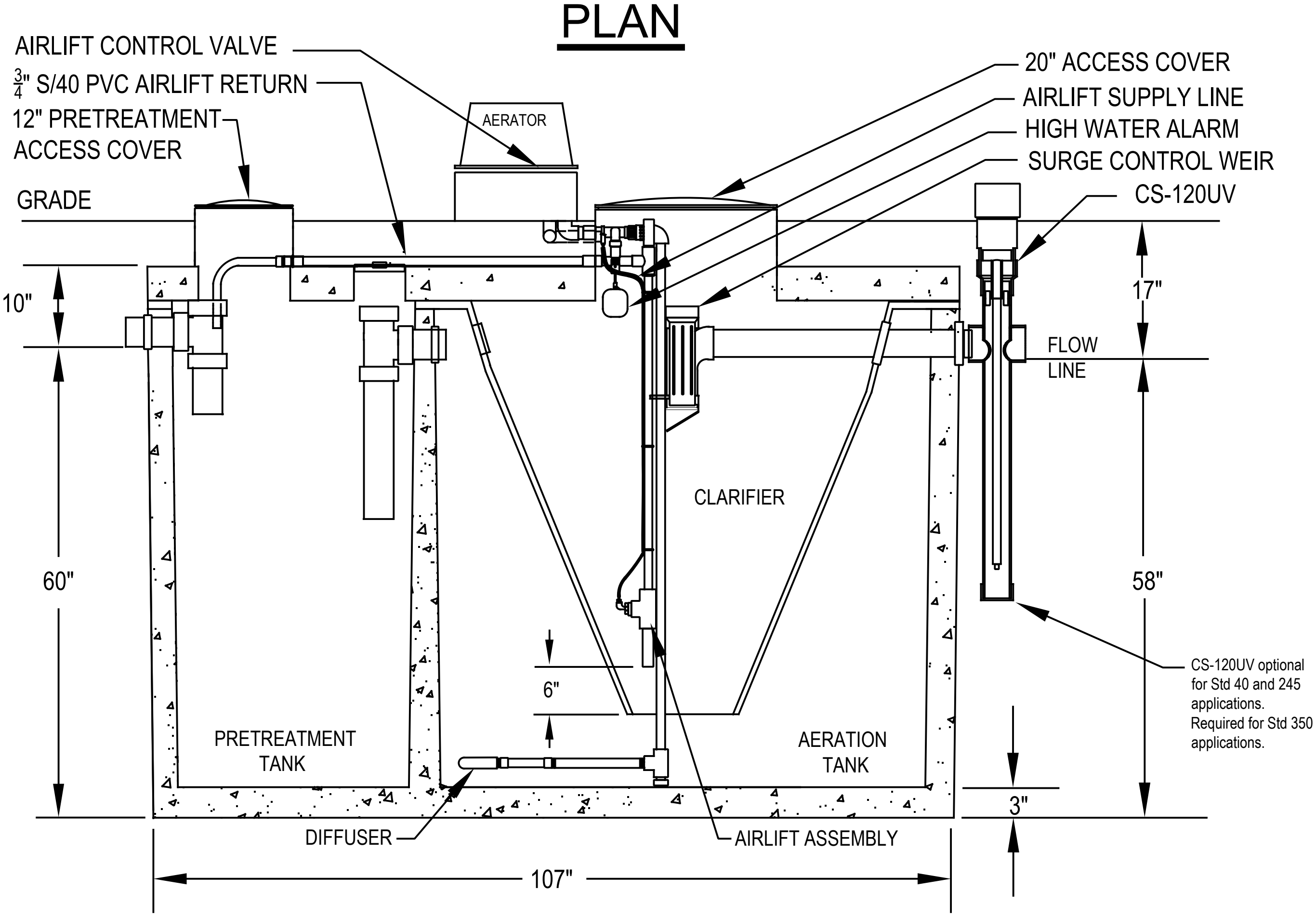
STEP 6:
Replace the aerator top cover and secure in place with the (4) Phillips screws. Use the 12” Phillips extension to ensure proper vertical insert.

DESIGN DRAWING # 1
CLEARSTREAM 600DAC2

NOTE: AERATORS MAY BE INSTALLED NO MORE THAN 100' FROM AERATION TANKS



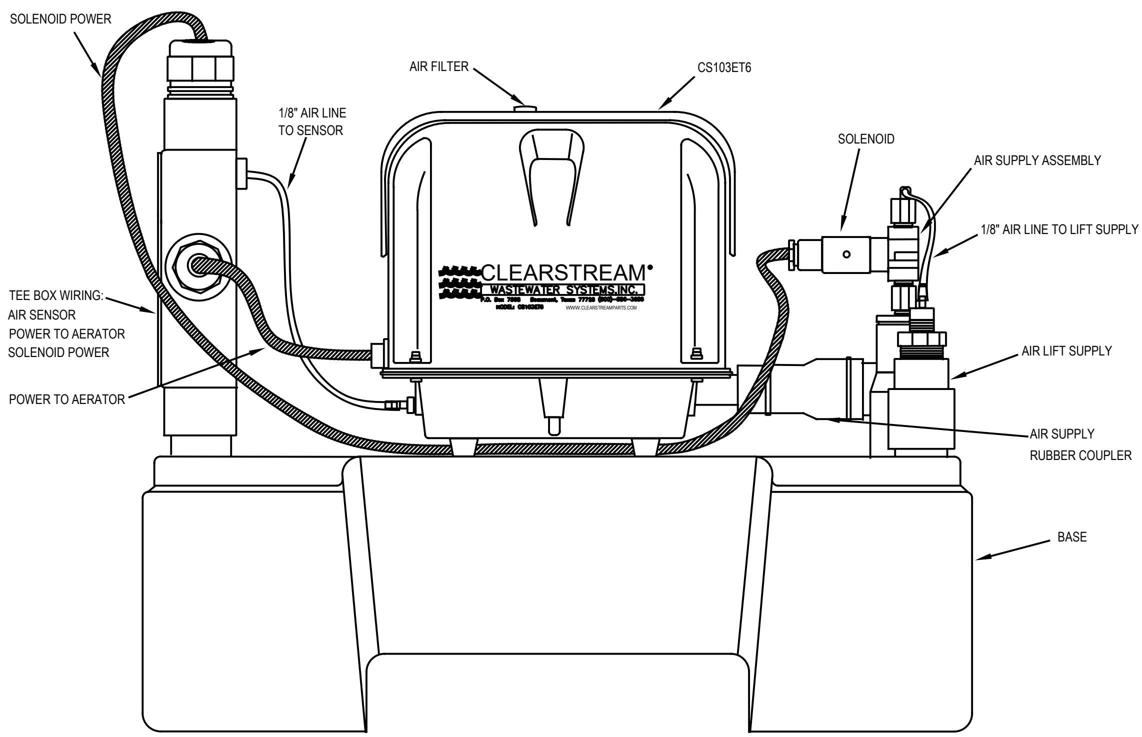
PLAN



SECTION

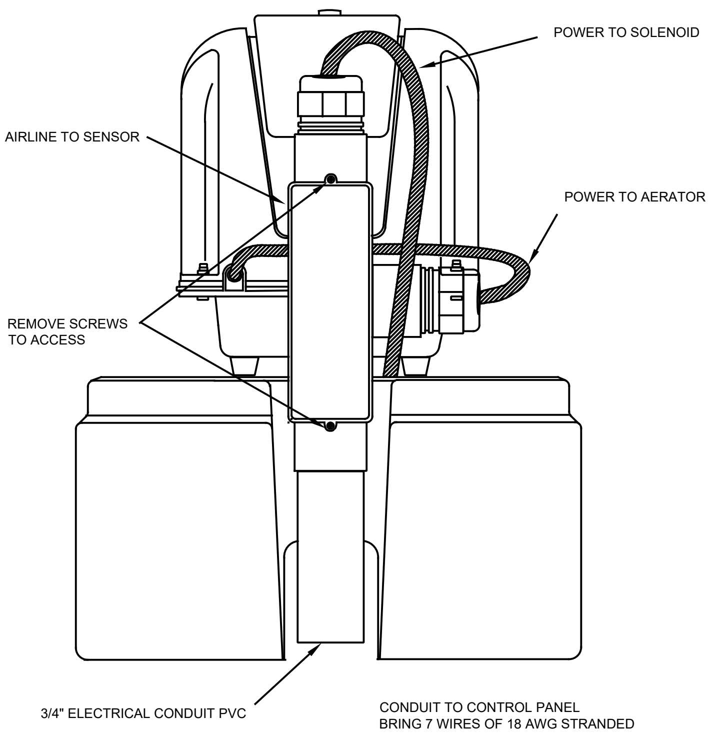
DRAWING # 2

DA AERATOR CS103ET6



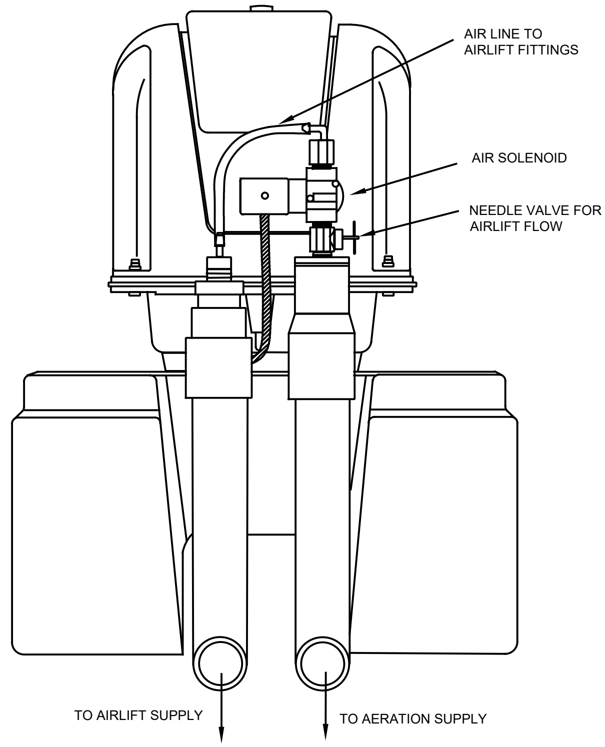
DRAWING # 3

DA AERATOR CONNECTIONS FOR POWER AND AIR SENSOR



DRAWING # 4

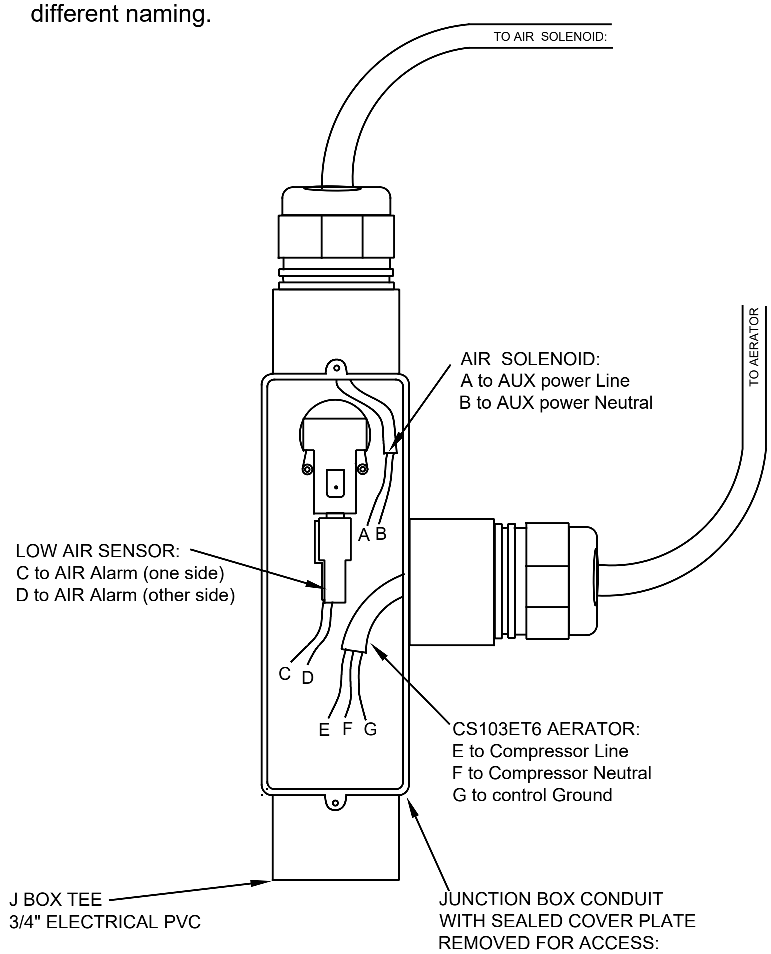
DA AIR CONNECTIONS TO CLEARSTREAM PLANT:



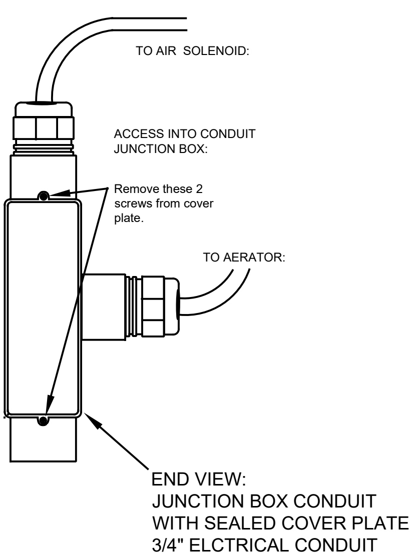
DRAWING # 5

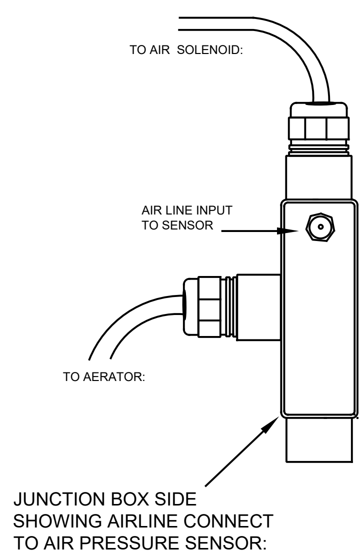
JBOX TEE WITH EXPANDED WIRING VIEW:

NOTE: There are seven (7) wires needing to come form the control panel for aerator power, air solenoid operation and low air sensor. Follow expanded view diagram for wiring connection. Depending on type of control panel terminal reference may be different naming.

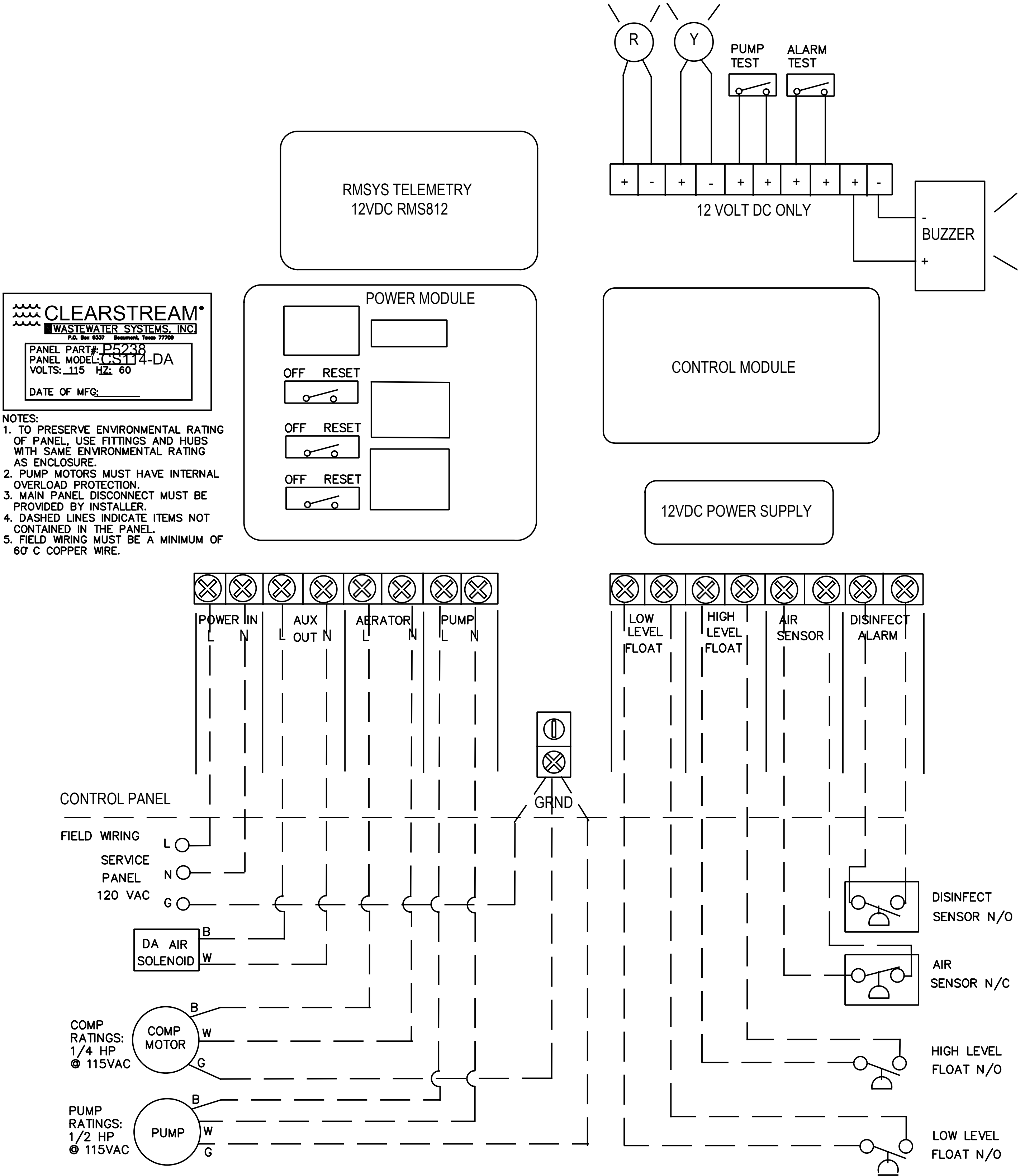


EXPANDED END VIEW FOR WIRING





DRAWING # 6



NOTES:
1. TO PRESERVE ENVIRONMENTAL RATING OF PANEL, USE FITTINGS AND HUBS WITH SAME ENVIRONMENTAL RATING AS ENCLOSURE.
2. PUMP MOTORS MUST HAVE INTERNAL OVERLOAD PROTECTION.
3. MAIN PANEL DISCONNECT MUST BE PROVIDED BY INSTALLER.
4. DASHED LINES INDICATE ITEMS NOT CONTAINED IN THE PANEL.
5. FIELD WIRING MUST BE A MINIMUM OF 60° C COPPER WIRE.

CONTROL MODULE BUTTONS:

↑ Scroll UP
↓ Scroll DOWN
● ENTER

Press ENTER one time to wake up screen display.
If no button action display returns to operate in 4 minutes.

DRAWING # 7

PRETREAT HOSE ASSEMBLY: