FlexWORKS
BY OPW FUELING CONTAINMENT SYSTEMS

E-Vac™ Installation Instructions

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IMPORTANT: Please read all warnings and follow the installation instructions completely and carefully. Failure to do so will void all warranties and may cause product failure, or result in environmental contamination due to liquid leakage into the soil, creating hazardous spill conditions.

IMPORTANT: Check to make sure the unit is intact and undamaged and all parts have been supplied. Never substitute parts for those supplied. Doing so may cause product failure.

WARNING - DANGER: Using electrically-operated equipment near gasoline or gasoline vapors may retult in fire or explosion, causing personal injury and property damage. Be sure that the working area is free from such hazards, and always use proper precautions.

The E-Vac™ is a simple proprietary monitoring system used for continuous monitoring of the interstitial space of the double wall pipeline. This simple, yet effective, monitoring system applies a continuous vacuum, generated by the fuel pump, to the interstitial space of an entire piping run. If a leak develops in the primary or secondary wall of the pipe, liquid that is present (fuel or water) in the interstice will be immediately drawn by vacuum toward the submersible pump where it is detected by a liquid sensor. Any leaking product is automatically drained into the underground storage tank while in the alarm condition. E-Vac™ monitors can be connected to a tank monitoring console or a stand alone alarm console.

E-Vac™ uses the vacuum generated by the submersible pump's venturi syphon to the closed interstice of the double wall piping run. An internal check valve maintains the level of vacuum applied to the pipe's interstice and each time the submersible pump turns on, the vacuum level can be topped-off if necessary.

Applying a constant vacuum to the pipes interstice increases the rate a leaking liquid will flow from the source of the breach in the primary or secondary pipe. A leak, either water or fuel, present in the interstice will rapidly migrate towards the source of the vacuum (submersible pump) while passing through the E-Vac™ liquid sensor. A liquid float sensor located inside the E-Vac™ will automatically close and open circuit when a liquid is present.

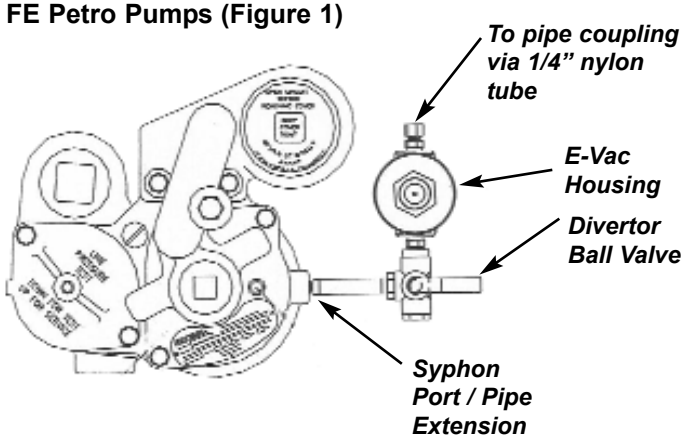
Check Parts

Remove the E-Vac™ from the box. Check to make sure all components are undamaged.

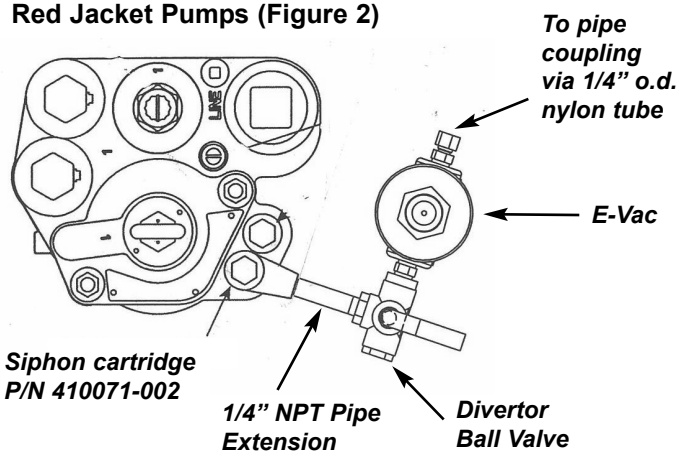
Connections

E-Vac easily connects to the vacuum syphon port of the submersible pump. If using a Red Jacket Pump, you will need a to purchase a syphon kit (Red Jacket part number 410071-002). A small 2” or 3” 1/4” NPT Pipe Extension will be needed (apply proper thread sealant to all threads on pipe extensions). With the 2-way ball valve tank to tank syphonning is possible. See Figure 1 and 2 for the FE Petro and Red Jacket Connections.

FE Petro Pumps (Figure 1)



Red Jacket Pumps (Figure 2)



Electrical Connections

Once the unit is mounted to the submersible, it will then need to be wired up.

Junction box and conduit (not supplied) are required. Installation needs to follow Article 501, Class 1, locations in the NEC Code.

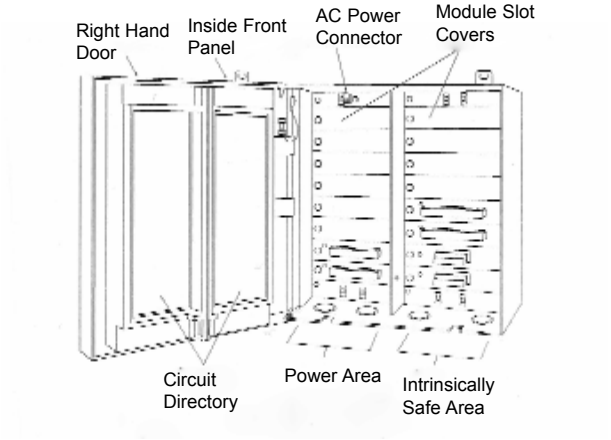
WARNING: Interconnect wiring between the switch and the alarm unit must be kept totally isolated and separate from any other wiring. This wiring must not share any junction box, conduit, raceway, or fixtures with circuits other than those defined by NEC as being intrinsically safe for all Class 1 locations.

Wiring Connection to Control Panel (Veeder Root TLS-350 / 450)

Preferred wiring installation to the panel should be on the intrinsically safe modular side of the box. Be sure there is a terminal block installed for wire hook-up. These blocks are referred to as “Sensor Interface Mudules”.

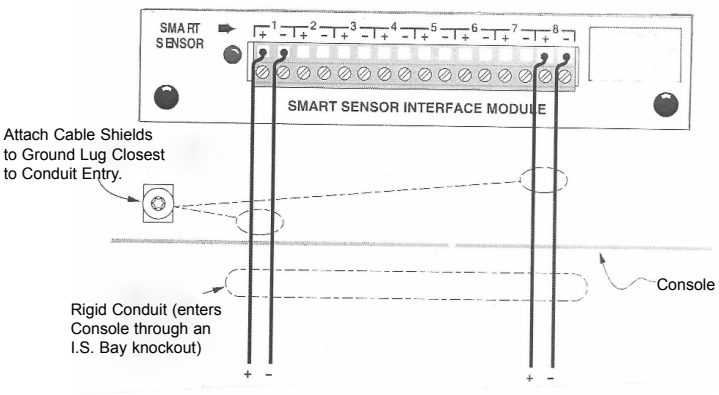
The following diagram shows the Intrinsically Safe Area (where PLLD and LVPLLD Modules are placed) of the TLS Console:

TLS-350 CONTROL BOX (Inside View)



If running through a program which is “normally closed”, a smart sensor interface module (or PC Board) will be needed to achieve a “normally open” status. You can also use the system in the “normally closed” status with no smart module. The alarm or indicator will sense when the switch is activated by a leak. Be sure all wire connections are secure.

TLS-350 SMART MODULE



Wiring Connection to OPW 444TA Alarm Box

Step 1: Insert electrical conduit from junction box through one of the two holes in the bottom of the enclosure only.

Step 2: Trim wires to approximately 10 - 12 inches long. Use wire strippers to strip back approximately 1/4” of thread insulation.

Secure the wires to two (2) inputs on one of the four terminal blocks available, and note which block goes to which sensor. **NOTE:** Wire orientation in terminal block is not important.

Step 3: Repeat steps 1 and 2 for each of the sensors that wil be in use.

Step 4: Fasten lid assembly to rear enclosure using the four (4) provided plastic screws.

Step 5: Test alarm following the “Instructions for Testing Tank Alarm”.

Step 6: Use a sharpie or equivalent style marker to write which alarm goes to which tank or operation on the upper label. When finished, apply the clear cover to the label.

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