



# Fuel Technologies International

## **Model FTI-1.5A** Single Tank Automated Diesel Fuel Maintenance System

### **Installation Manual**

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## 1. Installation Notes

- a. FTI systems operate on either above ground or underground tanks. Any installation to be completed by a qualified plumbing contractor and qualified electrician.
- b. Wall mount or pedestal mount is bolted into place. Engineer to comply with local jurisdiction regarding seismic compliance.
- c. 115/230V AC, Single Phase, 15 Amp. Power supply shall be available at system location.
- d. All FTI models are factory tested using lightweight oil. Some of this fluid may remain in the system. It will not interfere with the performance of the equipment.
- e. Pipe plugs were installed in the supply and return line for shipping purposes only, and must be removed prior to installation.
- f. Holes will need to be added in cabinet for Electrical, Fuel supply line and Fuel return line.
- g. On initial startup, if the system does not fill with fluid, the pump may require priming. (see priming tee location on 3.a. diagram)
- h. System inlet connection: 0.5" NPT
- i. System outlet connection: 0.5" NPT

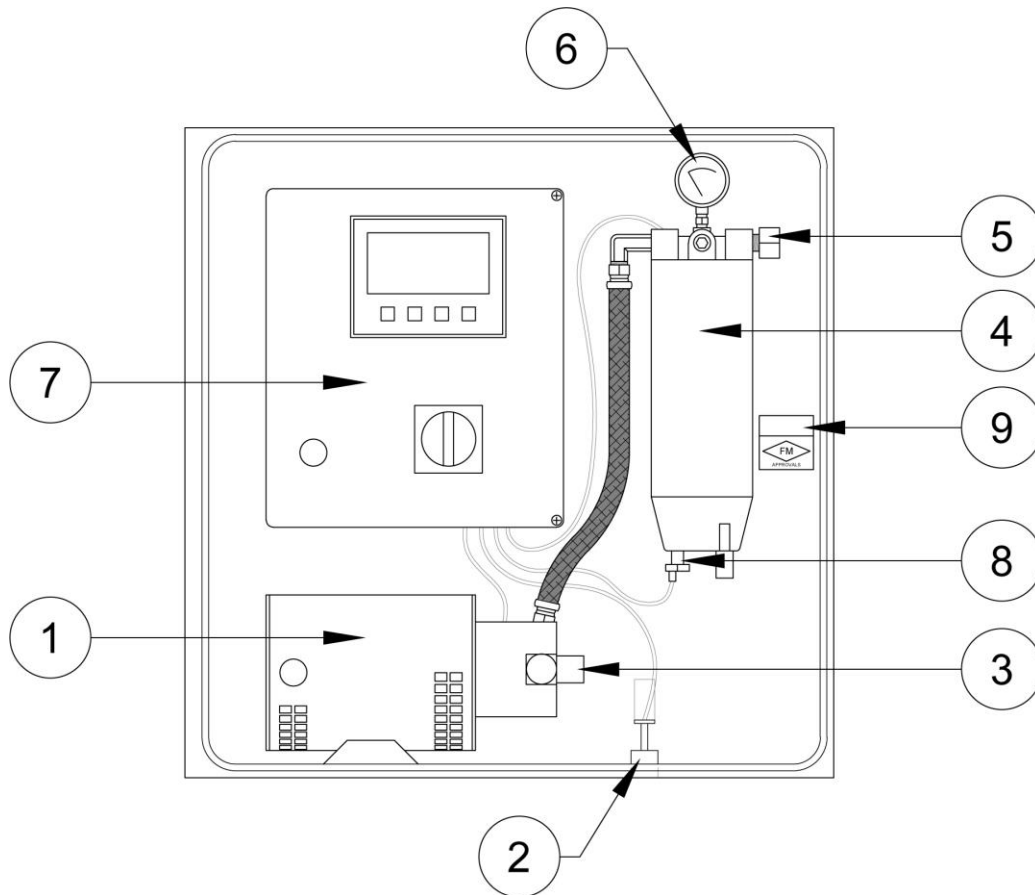
## 2. Strong Recommendations

- a. The **supply** or suction line to be installed at the **sump**, or low end of the Diesel Fuel Storage Tank, with a **Foot Valve**, 1" from the bottom. (not supplied)
- b. **Ball Valves** shall be installed on the fuel supply line and return line to isolate the system for any required filter maintenance. (ball valves not included)
- c. Return line shall be installed to return fuel to the opposite end of the storage tank. A **check Valve** may be required on return line, on some installations to prevent back flow pressure.
- d. Caution should be taken **not to exceed the 15-ft. lift** capability of the fuel circulation pump.
- e. Stabilizer to be added to the existing fuel tank, and proportionally when additional fuel is added to the storage tank.
- f. Biocide to be added to stored diesel fuel annually.

## 3. Installation Precautions:

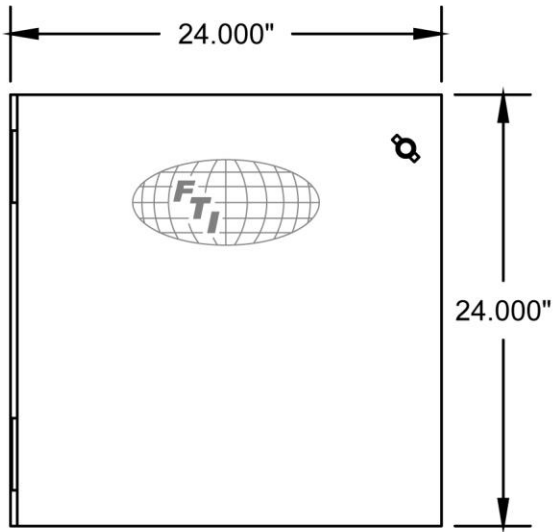
- a. Model FTI-1.5A Single Tank has no protection against thermal expansion for the fuel lines. If the fuel lines are installed without pressure relief, damage may occur to the pump, motor or filters.
- b. Installer should prevent any closed loop with the FTI-1.5A system in the middle.
- c. FTI will not be responsible for any damage due to excessive line pressure caused by thermal expansion.
- d. **DO NOT RUN LONGER THAN THREE MINUTES WITHOUT FLUIDS**

## Identifying Parts

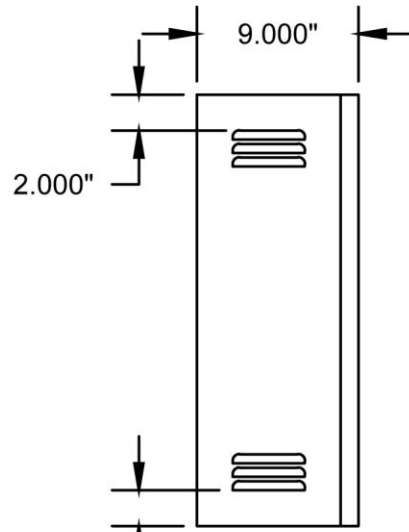


1. Pump / Motor
2. Leak Detector
3. Return Line Connection
4. Water Separator & 2 Micron Filter
5. Supply Line Connection
6. Vacuum Switch Gauge
7. Control Panel
8. Water Sensor

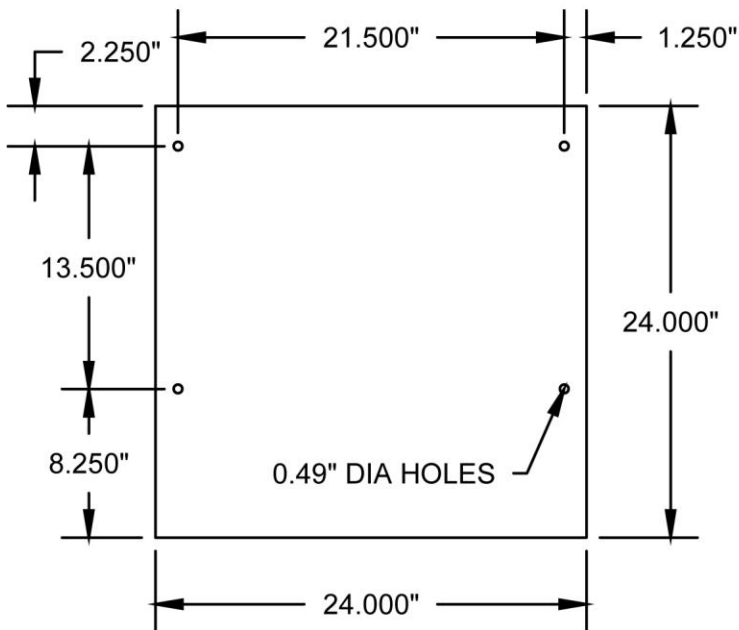
## FTI-5A – Cabinet Specifications



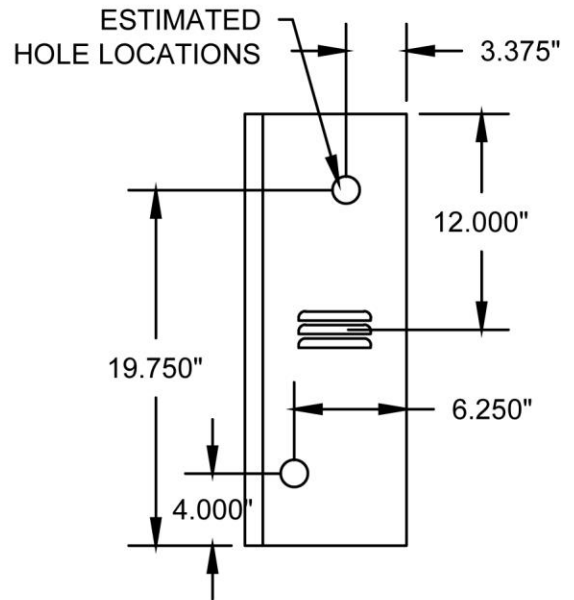
FRONT VIEW



SIDE VIEW



INTERNAL VIEW



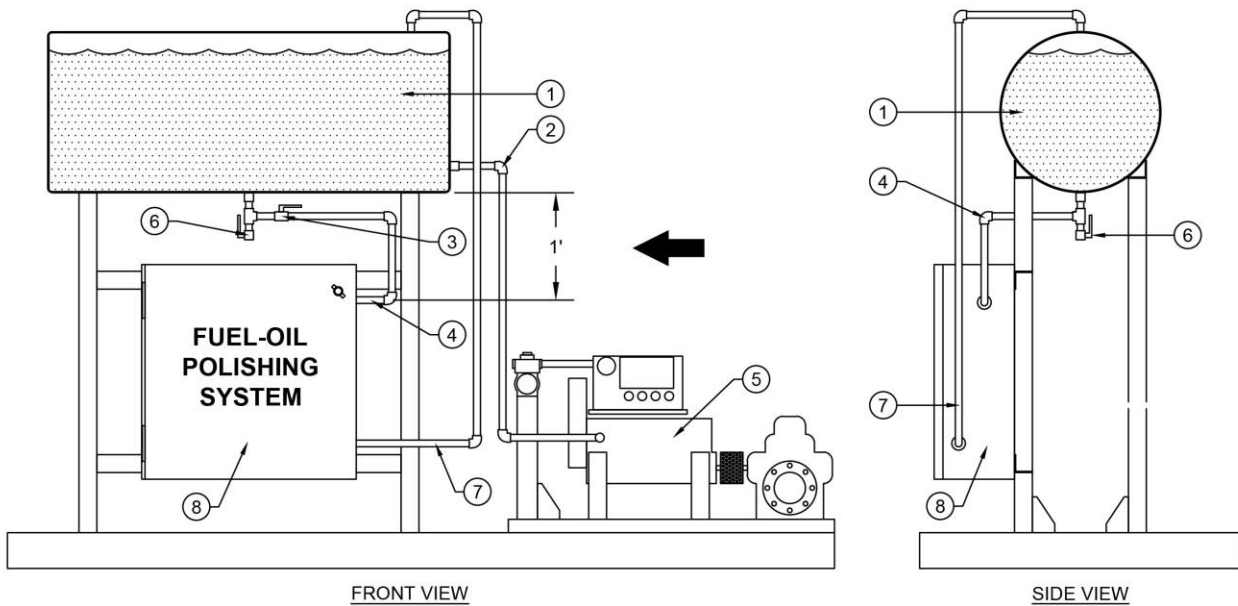
SIDE VIEW



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## Fire Pump Tank installation

FTI-1.5A - FIRE PUMP APPLICATION

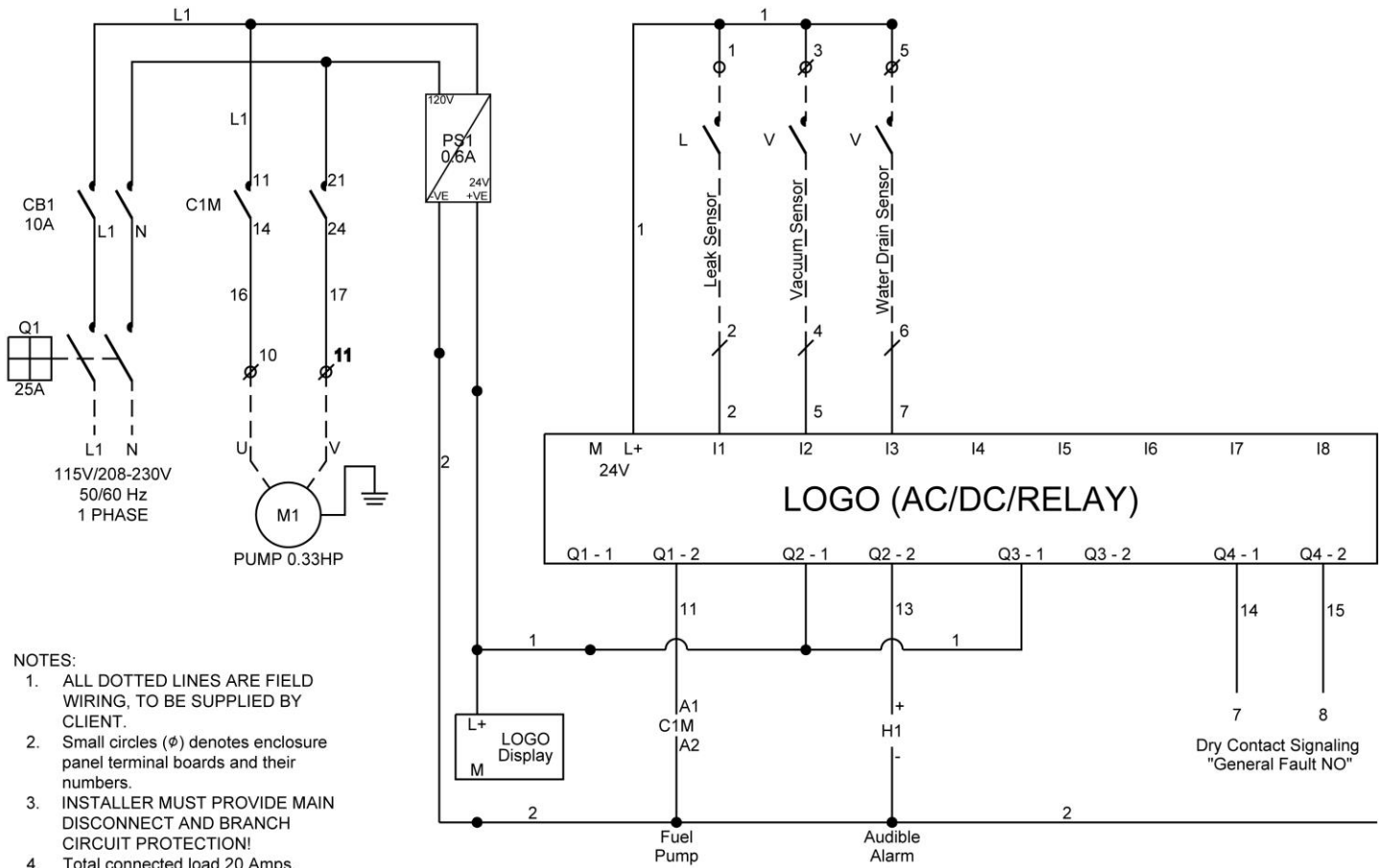


- |                                                                                        |                                                                           |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| 1. DIESEL TANK, BY OTHERS                                                              | 5. FIRE PUMP MOTOR, BY OTHERS                                             |
| 2. SUPPLY LINE FOR FIRE PUMP MOTOR, BY OTHERS                                          | 6. MANUAL BALL VALVE FOR DRAIN, BY OTHERS                                 |
| 3. MANUAL BALL VALVE, BY OTHERS                                                        | 7. 1/2" OR 3/4" RETURN LINE FROM FUEL MAINTENANCE SYSTEM (FMS), BY OTHERS |
| 4. 1/2" OR 3/4" SUPPLY LINE FOR FUEL MAINTENANCE SYSTEM (FMS) - GRAVITY FED, BY OTHERS | 8. FTI-1.5A - FUEL MAINTENANCE SYSTEM                                     |



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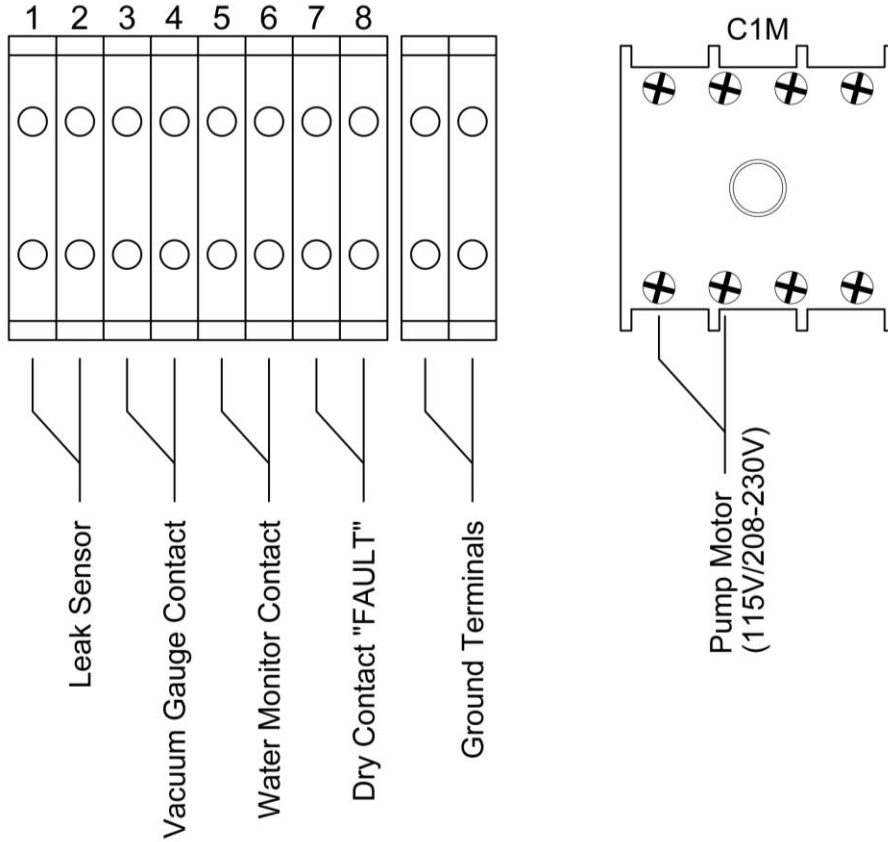
## Electrical Schematic





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## Terminal Connections (Electrical Cont.)



## FTI Automated Filtration system Start-up Procedure

Technician \_\_\_\_\_ Observer \_\_\_\_\_

### 1. System to be tested

- a. FTI automated filtration system – Model **[FTI-1.5A]**

### 2. FTI Filtration System Start-up Procedure

- a. Program system to automatically filter for 1 hour. Reset clock to within 1-5 minutes of start time (See Operations Manual for instructions) Place the Control Panel in AUTO mode.

Wait for filtration to start

- i.  Check FILTER PUMP RUNNING status.

NOTES: \_\_\_\_\_

- b. Place the control panel in MANUAL mode.  
Start manual filtration. (See Operations Manual for Instructions)

- i.  Check FILTER PUMP RUNNING status.

NOTES: \_\_\_\_\_

- c. Simulate a strainer HIGH VACUUM ALARM at the strainer ball valve.  
Slowly close supply line ball valve until the needle at the strainer/Vacuum Gauge contacts set point and alarm sounds

- i.  Check filter high vacuum alarm. (16-18 in hg)

NOTES: \_\_\_\_\_

- d. Simulate a LEAK in cabinet. Lift leak detector. Alarm will sound  
Reset control panel.

- i.  Check leak alarm.

NOTES: \_\_\_\_\_

- e. Simulate WATER FULL in the collection bowl. Remove water sensor cable from 1 Micron Filter Housing. Short with wire between the 2 pins.  
Reset control panel.

- i.  Check Water alarm.

NOTES: \_\_\_\_\_

**TEST COMPLETE**