

# Model FTI-2.8



## Engineering Specifications Automated Diesel Fuel Maintenance System Diesel Fuel Tanks Up To 5,000 Gallons

### 1. Description

- A. The diesel fuel storage tank shall be equipped with a **FM APPROVED**, and **NFPA EQUIPMENT COMPLIANT**, automated fuel maintenance System to remove particulate through 2.0 microns and near 100% water separation from stored diesel fuel.
- B. A fuel stabilizer shall be added to the diesel fuel in storage.
- C. A fuel biocide shall be added to the diesel fuel in storage

### 2. Pump / Motor Ratings

- A. Pump: 2.8 GPM, Spur Gear, Iron Casing, Viton Seals, Pressure Relief Valve  
Motor: 1/3 hp, 115V AC @ 6.5 Amps, 1 Phase, 60 HZ, TEFC, Thermally Protected

### 3. Filtration Shall Consist of:

- Stage 1: 2 Micron Particulate Removal
- Stage 2: Water Separation and Removal (With See-Thru Bowl and Water Sensor Probe)  
(Filter shall be Spin-on Removable)

### 4. Filter Replacement PN: FL-S3207S

### 5. Controller Specifications:

1. The controller shall be a: **UL 508 LISTED ASSEMBLY CONSISTING OF:**
  - A. **Siemens / IDEC PLC** - inputs:6, outputs:4, relays:10 Amp, UL/CSA/CE/FM Approvals
  - B. **Siemens / IDEC 24VDC Power Supply** - UL/CSA/CE/FM Approvals
  - C. **Motor Contactor** - DC 24V, 20 Amp, UL/SA/CE Approvals
  - D. **Motor Overload** – 115V AC rated at 8 Amps, UL/SA/CE Approvals
  - E. **Terminal Block** - 26 Amp, 18-12 AWG.
  - F. **LED Lighted Switch [On, Off, Auto]** - Rated at 600V, 10 Amp, UL/SA/CE Approvals
  - G. **Lockable Disconnect Switch** - Rated at 600V, UL/CE Approvals
  - H. **Dry Contact General Alarms** - One set dry contacts provided [normally open for all alarms.]
  - I. **Siemens Logo TD – Touch Display**

### 6. Enclosure

1. The complete FTI assembly is housed in a single door cabinet with **Zinc Primer for corrosion, and then Powder Coat Finish. (door is removable)**
2. Manufactured to NEMA 3R standards and designed for rack or wall mount.
3. **Cabinet Size:** 24" W x 24" H x 9" D, System Weight - 90 lbs.
4. **Leak Detection:** Provided in Cabinet
5. **Shipping Weight: 95 lbs.**

## 7. Electrical Connection

115V AC, Single Phase, 15 AMP, 60 Hz. (equipment is shipped as 115V AC standard)

## 8. Vacuum Switch

5 Amp, SPDT @ 120/240V AC and 12/24V DC, Buna-N Seals

## 9. Auto - Shutoff with Audible Alarm

A. System will Shut off and Sound an Audible Horn for the following Alarms:

1. Filter Plugged: Vacuum Gauge: 16- 18 In. Hg
2. Water level in See-Thru bowl at Maximum.
3. Leak in Cabinet.
4. Motor Overload

## 10. Leak Detector

20 VA, 0-240V AC or DC, N.O. (closes with liquid present)

## 11. Plumbing

1. The supply line shall be installed at the **sump**, or low end of the diesel fuel storage tank, with a **Foot Valve**, 1.0" from the bottom.
2. The return line to be installed at the opposite end of the storage tank.
3. Caution should be taken not to exceed the 15-ft. lift capability of the fuel circulation pump.
4. A **Fuel Stabilizer** to be added to the existing fuel in the tank annually.
5. Additional **Fuel Stabilizer** to be added in proportion to new fuel added to the storage tank.
6. A **Fuel Biocide** shall be added to the diesel fuel in storage annually.
7. **Ball valves** should be installed at supply and return lines to isolate system for maintenance.

**System Inlet Connection – 1/2" NPT**

**System Outlet Connection – 1/2" NPT**

**Minimum Recommended Supply Line Pipe Size – 3/4" NPT**

### INSTALLATION PRECAUTIONS:

THE MODEL FTI-2.8 HAS NO PROTECTION AGAINST THERMAL EXPANSION OF THE FUEL LINES. IF THE FUEL LINES ARE INSTALLED WITHOUT PRESSURE RELIEF, DAMAGE MAY OCCUR TO THE PUMP, MOTOR OR FILTER. INSTALLER SHOULD PREVENT ANY CLOSED LOOP WITH THE FTI-2.8 SYSTEM IN THE MIDDLE.

FTI WILL NOT BE RESPONSIBLE FOR ANY DAMAGE DUE TO EXCESSIVE LINE PRESSURE CAUSED BY FUEL THERMAL EXPANSION.