



Model FTI-2.8

Engineering Specifications

Automated Diesel Fuel Maintenance System

Single Diesel Fuel Tank up to 5,000 Gallons

1. Description

- a. Diesel fuel storage tank shall be equipped with an **FM APPROVED**, and **NFPA EQUIPMENT COMPLIANT** automated fuel maintenance system.
- b. Filtration system shall remove particulates to 2microns & water to 99.5% from stored diesel fuel
- c. Fuel stabilizer shall be added to the diesel fuel in storage.
- d. Fuel biocide shall be added to the diesel fuel storage annually.

2. Pump / Motor Ratings

- a. Pump: 2.8 GPM, spur gear, Viton seals, positive displacement, pressure relief valve.
- b. Motor: 1/3 HP, 115/208-240V AC @ 6/3 Amps, 1 Phase, 50/60Hz, TEFC.

3. Filtration Process

- a. Stage 1: Particulate removal to 2 microns.
- b. Stage 2: Water separation to 5PPM.

4. Filter Replacement PN: FL-S3207S

5. Controller Specifications

- a. Control panel shall be UL 508.
- b. Siemens LOGO / IDEC PLC: Inputs=6, Outputs=4, Relays=2 Amps, UL/CSA/CE/FM approvals.
- c. Siemens LOGO / IDEC 24VDC power supply: UL/CSA/CE/FM approvals.
- d. Motor contactor: 24V DC coil, 7 Amps, AC-3, UL/SA/CE approvals.
- e. Motor overload: 240V AC rated at 2.4-4 Amps, UL/SA/CE approvals.
- f. Terminal block: 26 Amps, 18-12 AWG
- g. LED- Lights when system is on and blinks when in alarm: 24V DC, UL/SA/CE approvals.
- h. Lockable disconnect switch: 300V AC, 32 Amps, UL/CE Approvals.
- i. Dry contact general alarms: One set of dry contacts provided. (Normally open for all alarms)
- j. Siemens Logo TDE: Touch screen display.
- k. PLC shall monitor items 1-5.
- l. Alarm conditions 1-5 shall be indicated by an audible horn.
- m. Visual alarm descriptions for items 1-5 shall be shown on the touch screen.
 - i. Filter Plugged (High Vacuum)
 - ii. Water level in "See-Thru" bowl at maximum. (Water Detected)
 - iii. Leak in Cabinet. (Leak Detected)
 - iv. Motor overload. (Motor / Pump Issue)
 - v. Dry Contact for system shut off: stops system if running.
- n. **Optional:** Control panel strip heater shall be a 50-watt, thermostat controlled.
- o. **Optional:** Modbus RTU RS485 communications.





6. Enclosure

- a. Cabinet shall have one lift off removable doors.
- b. Cabinet shall be treated with “Zinc Primer” for corrosion resistance and “Powder Coat” finish.
- c. Cabinet shall be manufactured to “NEMA 3R” standards and designed for rack/wall mounting.
- d. Cabinet size: 24”W x 24”H x 9”D.
- e. Leak detection: Provided in cabinet.
- f. System weight: 95 Lbs.
- g. Cardinal Powder Coat PN: T075-WH34 Semi-Glass Vein White/Black

7. Voltage Options

- a. Choose one (115V AC, 1 Phase, 50/60Hz) (208-240V AC, 1 Phase, 50/60Hz)

8. Vacuum Switch Gauge

- a. 30V DC, 3 Amp

9. Leak Detector

- a. 24V DC, N.O. (closes with liquid present)

10.Plumbing

- a. Supply line shall be installed at the sump, or low end of the fuel tank.
- b. Supply line shall be installed 1” from the bottom of the fuel tank, with foot valve.
- c. Return line to be installed at the opposite end of the fuel tank.
- d. Caution should be taken not to exceed the 15 feet lift capability to the fuel circulation pump.
- e. Ball valves shall be installed (not included) at supply and return lines to isolate system for maintenance.
- f. Inlet Connection = 3/4” NPT.
- g. Outlet Connection = 3/4” NPT

11. Installation Precautions:

- a. Model FTI-2.8 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-2.8 system in the middle.
- c. FTI will not be responsible for any damage due to excessive line pressure caused by thermal expansion.

**Model FTI-2.8 System as Manufactured by
Fuel Technologies International**

