



Fuel Technologies International

Model FTI-1.5A Engineering Specifications Automated Diesel Fuel Maintenance System Single Diesel Fuel Tank up to 1,000 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 2 microns and 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: 1.5 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, ODP.

3. Filtration Process

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

4. Filter Replacement PN: FL-R120S

5. Controller Specifications

- a. Control panel shall be UL 508.
- b. Siemens PLC: Input=6, Outputs=4, Relays=2 Amps, UL/CSA/CE/FM approvals.
- c. 24VDC power supply: UL/CSA/CE/FM approvals.
- d. Motor contactor: 24V DC coil, 7 Amps, AC-3, UL/SA/CE approvals.
- e. Terminal block: 26 Amps, 18-12 AWG
- f. Lockable disconnect switch: 300V AC, 32 Amps, UL/CE Approvals.
- g. Dry contact general alarms: One set of dry contacts provided. (Normally open for all alarms)
- h. Siemens touch screen display.
- i. PLC shall monitor items 1-3.
- j. Alarm conditions 1-3 shall be indicated by an audible horn.
- k. Visual alarm descriptions for items 1-3 shall be shown on the touch screen.
 - i. Filter Plugged (High Vacuum). Vacuum gauge set at 16-18 In. Hg.
 - ii. Water level in "See-Thru" bowl at maximum. (Water Detected)
 - iii. Leak in Cabinet. (Leak Detected)
- l. **Optional:** Control panel strip heater shall be a 50-watt, thermostat controlled.
- m. **Optional:** Modbus RTU RS485 communications.

6. Enclosure

- a. **Must Specify Color: RED or WHITE Powder Coat**
- b. Cabinet shall have one lift off removable doors.
- c. Cabinet shall be treated with “**Zinc Primer**” for corrosion resistance and “**Powder Coat**” finish.
- d. Cabinet shall be manufactured to “**NEMA 3R**” standards and designed for rack/wall mounting.
- e. Cabinet size: 24”W x 24”H x 9”D.
- f. Leak detection: Provided in cabinet.
- g. System weight: 85 Lbs.

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 = 1/2” NPT.
- g. Outlet Connection = 1/2” NPT

11. Installation Precautions:

- a. Model FTI-1.5A 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-1.5A System as Manufactured by
Fuel Technologies International**