

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 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 in storage.

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, 50/60 Hz, TEFC.

3. Filtration Shall Consist of:

- 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.
 - 1. Filter plugged (High Vacuum)
 - 2. Water level in "See-Thru" bowl at maximum. (Water Detected)
 - 3. Leak in Cabinet. (Leak Detected)
 - 4. Motor overload. (Motor / Pump Issue)
 - 5. 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 door.
- 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 or 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-Gloss Vein White/Black

7. Voltage Options

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

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 a 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 of the fuel circulation pump.
- H. Ball valves shall be installed (not included) at supply and return lines to isolate system for maintenance.
- I. Inlet Connection = 3/4” NPT.
- J. Outlet Connection = 3/4” NPT.

11. Installation Precautions:

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 THERMAL EXPANSION.

Model FTI-2.8 as Manufactured by
Fuel Technologies International