

Model FTIA-2.8



Engineering Specification

Automated Diesel Fuel Maintenance System Diesel Fuel Tanks Up To 15,000 Litres

1. Description

- A. Diesel fuel storage tank shall be equipped with an 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: 640 L/Hr, spur gear, viton seals, positive displacement, pressure relief valve.
- B. Motor: 0.3Kw, 240V AC @ 3 Amps, 1 Phase, 50 Hz, TEFC.

3. Filtration Shall Consist of:

- A. Stage 1: Particulate removal to 2 microns.
- B. Stage 2: Water separation to 99.5%.

4. Filter Replacement PN: FL-S3207S, or equal.

5. Controller Specifications:

- A. Control panel shall be UL 508.
- B. Siemens / IDEC PLC: Inputs=6, Outputs=4, Relays=2 Amps, UL/CSA/CE/FM approvals.
- C. Siemens / 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. "MANUAL-OFF-AUTO" LED lighted switch: 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 TD: Touch screen display.
- K. PLC shall monitor items 1-4 below.
- L. Alarm conditions 1-4 shall be indicated by an audible horn.
- M. Visual alarm descriptions for items 1-4 shall be shown on the touch screen.
 - 1. Filter plugged.
 - 2. Water level in "See-Thru" bowl at maximum.
 - 3. Leak in Cabinet.
 - 4. Motor overload.

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: 600mm W x 600mm H x 300mm D.
- E. Leak detection: Provided in cabinet.
- F. Shipping weight: 45 Kg.

7. Electrical Connection

- A. 240V AC, 1 Phase, 20 Amps, 50 Hz.

8. Vacuum Switch

- A. 12/24V DC, 5 Amps, SPDT, Buna-N Seals.

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 diesel storage tank.
- B. Supply line shall be installed 25mm from the bottom of the diesel storage tank, with a foot valve.
- C. Return line to be installed at the top of the opposite end of the diesel storage tank.
- D. Caution should be taken not to exceed the 4.5 Metres lift capability of the diesel circulation pump.
- E. Ball valves shall be installed (not included) in supply and return lines to isolate system for maintenance*
- F. Inlet Connection = 7/8" JIC M
- G. Outlet Connection = 7/8" JIC M

11. Installation Precautions:

* MODEL FTIA-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 FTIA-2.8 SYSTEM IN THE MIDDLE.

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

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