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COMPACT AUTOMATIC FUELPORTR Sample Specification Flush mounted multi tank system

Engineer's specifications for a storage tank fill box with automatic overflow prevention and automatic fill shutoff.

1.0 Fuel Filling System

1.1 Provided for freestanding installation at delivery truck curbside, a Simplex Compact Automatic Fuelport grade level fill box with spill containment, overflow prevention and automatic fill shutoff in the filling of a fuel oil storage tank.

1.2 The Fuelport shall be installed outdoors upon a concrete pad at a location as specified.

1.3 The Fuelport shall include the following fittings and features:

- Steel, weatherproof, lockable box with hinged doors finished in powder coat.
- Flush mount construction with 2" perimeter wall flange and rear discharge fitting
- External, stainless steel ground stud for attachment of delivery truck ground cable.
- Ground stud for connection to earth ground
- Quick detachable coupling for attachment of delivery hose (Specify, 2", 3", or 4")
- Inlet check valve
- Inlet motorized ball valve for closure on storage tank high level and leak conditions. Shipped loose, one per tank
- 7gallon spill containment sump with drain hand pump. To remove spill contents to storage tank via fill pipe. Includes check valve and shutoff valve.
- Threaded outlet fitting for attachment of fill pipe to storage tank.
- Thermal expansion pressure relief valve, shipped loose for installation around single motorized ball valve

1.4 The Fuelport shall include a control system with tank gauging, alarm, overflow alarm and automatic shutoff system as described below. The system requires an external source of AC power, 115v, 1-ph, 15-amp circuit.

1.5 A, shipped loose, PLC with 3" HMI fill limiting control system shall be provided and shall include:

- UL508A TYPE 3R rainproof, lockable enclosure with hinged door
- Flush mount construction with 2" perimeter wall flange and rear discharge fitting
- 4-20mA Level transmitter for installation in the storage tank
- Leak sensor floatswitch for installation in the storage tank's interstitial space
- Level display reading in Percent and Gallons
- High visibility notification on HMI: 90% level
- High visibility red alarm banner on HMI: 95% level
- High visibility red alarm banner on HMI: 98% level
- 90 dB audible alarm horn activated at 90%, 95%, 98% and on storage tank leak
- Control power ON/OFF switch
- Fill Start/Stop controlled via HMI
- Automatic valve closure at 90% level
- Override circuit and 30 second timer to permit override of 90% shutoff to allow pump-out of delivery hose or spill containment. 95%, 98%, and leak lockout cannot be overridden.



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- Leak sensor alarm circuit input which activates automatic valve closure
 - Indicators for:
 - Power available
 - Fill valve disarm/closed
 - Fill valve open
 - Tank leak
 - Tank selection via HMI on multi-tank systems. The fill valve for the selected tank shall be operated by the fill controller described herein. Furthermore, the controller shall be dedicated to the selected tank. Any none selected tank shall have its fill valve disabled and rendered inoperative. The 90%, 95%, and leak floats are also monitored to prevent inadvertent cross filling.
 - Control power fuses
 - Remote alarm contacts:
 - Summary Tank Critical High
 - Summary Tank High
 - Summary Leak
 - Selected tank Full
 - Modbus via 485
- 1.6 The COMPACT AUTOMATIC FUELPORT system shall be supplied with manufacturer's warranty.
- 1.7 The services of a factory-authorized or factory based, field service technician to provide start-up services, including inspection, calibration and first operation are available for the COMPACT AUTOMATIC FUELPORT
- 1.8 System shall be a Simplex COMPACT AUTOMATIC FUELPORT, Model "CAFP" as described above. To be supplied by Simplex, Inc, 5300 Rising Moon Rd., Springfield, IL 62711. 217-483-1600.