

AUTOMATIC FUELPORT Sample Specification Single tank system

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

1.0 Fuel Filling System

- 1.1 Provided for (wall-mount or freestanding) installation at delivery truck curbside, a Simplex Automatic Fuelport grade level fill box with spill containment, overfill prevention and automatic fill shutoff in the filling of an above ground storage tank.
- 1.2 The Fuelport shall be installed outdoors as specified. (Example: Upon a concrete pad using the optional 3" post assembly with clamps, bolted to the side of the storage tank or hung from the fill pipe)
- 1.3 The Automatic Fuelport shall include the following fittings and features:
- Steel, weatherproof, lockable box with hinged door finished in powder coat.
 - Tank mounting weld brackets (2)
 - External, stainless steel ground stud for attachment of delivery truck ground cable.
 - Quick detachable coupling for attachment of delivery hose (Specify 2", 3" or 4")
 - Inlet angle check valve
 - Inlet motorized ball valve for closure on storage tank high level and leak conditions
 - 20 gallon spill containment sump with drain hand pump. To remove spill contents to AST via fill pipe. Includes check valve and shutoff valve.
 - Threaded outlet fitting for attachment of fill pipe to AST.
- 1.4 The Fuelport shall include a control system with tank gauging, alarm, overfill 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 cabinet mounted, PLC fill limiting control system shall be provided and shall include:
- UL508A TYPE 3R rainproof, lockable enclosure with hinged door
 - 3" HMI touch screen
 - 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.
 - 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%, 98%, 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
-
- 4-20mA Level transmitter for installation in the storage tank
- Leak sensor float switch for installation in the storage tank's interstitial space (option FSOP-051)
- Digital level gauge, reading in percent level
- High visibility red alarm light: 90% level
- High visibility red alarm light: 95% level
- 90 dB audible alarm horn activated at 90%, 95% and on storage tank leak
- Control power ON/OFF switch
- Fill valve OPEN/CLOSE switch
- Valve restriction at 90% level
- Automatic valve closure at 95% level
- Leak sensor alarm circuit input which activates automatic valve closure
- Indicators for:
 - Power available
 - Fill valve disarm
 - Fill valve open
 - Tank leak

- Remote alarm contacts:
 - Full
 - High
 - Leak
- 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 CAFP COMPACT AUTOMATIC FUELPORT as described above. Model "CAFP" with optional post assembly if needed. To be supplied by Simplex, Inc, 5300 Rising Moon Road., Springfield, IL 62711. 217-483-1600.