

## M400 Tank Fill System

### A. Manufacturers

1. Earthsafe M400
2. Controls:: Earthsafe C800

### B. General

1. Provide a fill station including spill container to facilitate the safe transfer of fuel to aboveground tanks or tanks in buildings. The system shall accept a hose connection from a pump equipped delivery truck, and provide overfill alarms and fill pipe valve closure

### C. Design Criteria

1. Spill Container: Welded steel liquid tight spill container shall have minimum 20 gallon capacity. The spill container shall have an integral lockable weatherproof enclosure. The spill container shall have an epoxy paint finish. Where indicated on the drawings the spill container shall be stainless steel construction.
2. Fuel Piping and Accessories: The hose connection shall be 2, 3, or 4" diameter as shown on the drawings. The piping shall include a camlock type hose adapter, adapter cap, manual shutoff valve, and check valve.
3. Controls: Provide an electronic tank level controller consisting of a tank level sensor, inlet actuated valve, and control module. The module shall be microprocessor based and shall monitor tank levels during the fill operation. The panel shall respond to tank fill levels as follows: green light ( normal operation at 85% or less ), yellow light ( active at 85%), red light and audible alarm ( active at 90% ), and flashing red light / audible alarm ( active at 95%)
4. Control Valve: Provide an actuated butterfly valve for the fill pipe high level shutoff. The valve shall be a lug style iron body butterfly valve with stainless steel trim and viton soft goods. The valve actuator shall be NEMA 4 enclosure with limit switches, position indicator and manual override.

### D. Accessory Equipment

1. Overfill Prevention Valve: Where indicated on the drawing provide an in-tank overfill prevention valve for the tank fill connection to close automatically at the tank 90% fill level.
2. Hand Pump: Where indicated on the drawing the spill container shall include a hand pump for transfer of spilled fuel to the tank fill pipe.
3. Indicator for Tank % Fill: Where indicated on the drawing the fill station control panel shall include a readout of the tank % fill.
4. Architectural Access Door: Where indicated on the drawings, the fill station shall be recessed into the building wall and an architectural access door shall be provided. The access door shall have a highly finished aluminum or stainless steel surface, or other finish as approved by the engineer.
5. Multi-Tank Fill Selection: Where indicated on the drawing the control panel shall include capability to select one of multiple tanks for filling. High level fuel conditions in any tank shall disable the fill function for that tank but shall allow for filling of other tanks.