



### DUPLEX PUMP

Open skidded design with containment, pad mountable, indoor, duplex pump set under control of Master Control Panel. Starters included with pump set or integrated with master panel.

1. Duplex Positive displacement gear pumps, cast iron body, mechanical shaft seal, machined steel gears construction, typical 45 gpm at 150 psi, 1800 RPM, 7.5 HP, 230/460-3-60v, TEFC direct drive. Flanged inlet/outlet.
2. Pressure relief valve, integral to each pump
3. Duplex type strainer, 3-inch, cast-iron construction
4. Vacuum gauge inlet and outlet of strainer, with isolation valves
5. Differential pressure switch across strainer with alarm contacts to PLC
6. Leak detector in skid containment basin, with alarm contacts to PLC
7. Flow switch, each pump, with alarm contacts to PLC
8. Fusible link valve on inlet, ferrous construction
9. Ball type shutoff valves, each pump in/out, 2-inch and main in/out: 3-inch
10. Check valves each pump, cast iron or steel, swing-type, 2-inch

11. Main outlet pressure gauge with shutoff
12. 3-inch flanged main inlet and outlet
13. All-welded or flanged construction of piping and devices. All ferrous fittings and devices. Schedule 80. 200psi or greater rated.
14. Controller: Intended for slaved operation from Master Control Panel. Includes PLC and MODBUS interface for transmission of pump-run signals from remote controller and transmission of alarm indication and pump running indications to remote controller.
15. Dual power inlet, 460-3-60v, with power transfer relay and power available/connected/fail indicators to MODBUS network.
16. Pump starters for each pump. NEMA1 enclosed, unit mounted, hinge-open front door, full-voltage, 3-phase circuit breaker combination motor starter, with control power transformer, HOA switch, run indicator, power available indicator

### DAY TANK

Day Tank consisting of the following principle elements:

1. Double-wall UL142 tank of required capacity
2. Day tank controller including redundant level sensors
3. Fill control valves

### SIMPLEX DOUBLE-WALL TANK

1. UL142 secondary containment tank, double wall construction.
2. Capacity as required, typically 200-600 gallons
3. Pipe fittings, top mounted, including primary and secondary emergency vents
4. Leak sensor
5. Dual redundant inlet valves, motorized, self-closing, including limit switches. Motorized drain/commissioning valve

### DAY TANK CONTROLLER

1. UL508 listed industrial control panel. NEMA4, tank mountable, hinged, lockable and gasketed access door. Finish painted dark gray polyurethane enamel over epoxy primer, white interior
2. PLC based control system.
  - a. MODBUS communication capability
  - b. Day tank differential level control with critical low level and critical high-level integration.
  - c. Communication with Master Panel
  - d. Ultrasonic level transmitter, dual redundant, with waveguides. 4-20mA output
3. Mimic type control panel with one-line schematic overlaid on systematic alarm and switch panel
4. Dual power supply with preferred source relay; normal, fail indicators and alarms.
5. Master alarm audible signal with silence pushbutton
6. Master indicator press-to-test pushbutton
7. Dual level transmitter integration, backup reversion
8. Digital display of tank level
9. LED alarm indicators with common press-to-test pushbutton
10. Remote alarm outputs via MODBUS



### MAIN TANK SMARTPUMP

Simplex SmartPump for use in filling of one or multiple remote bulk storage tanks:

1. 3-inch quick disconnect coupling with check valve and isolation/shutoff valve
2. 3-inch pipe thread fitting for connection of fill line
3. Weatherproof and lockable steel enclosure with leak/spill containment basin and basin hand pump. Painted white. Suitable for pad mounting.
4. Controller with PLC based and MODBUS compatible control for monitoring, high level detection and control of fill valve of each remote bulk supply tank
5. Digital level indicator
6. Level transmitters for field/contractor instal
7. Fill valve, 3-inch, motorized ball valve for field/contractor installation
8. 300 GPM transfer pump, including check valve and shutoff valve

