

Simplex Smart Filter

Automated Diesel Filtration Systems for Multiple Storage Tanks
with auto drain to wastewater holding tank
(x-number of tanks)

Model SFG40-A/(x)

- Filtration, maintenance system for fuel oil in bulk, long-term storage
- For permanent, on-site installation, outdoor
- Comprehensive system: pump, filter and water removal elements, controller
- Fully automated
- 40 gpm
- 5 micron final filtration
- <50 ppm water removal
- Tank selection including (2) 2.0" Motorized Ball Valves for each tank
- Float sensor with low, full, and high level monitoring (1) for each tank
- Outdoor, heated enclosure
- 25 gallon waste-water retention tank with heater. Automatic water drain from separator

The SFG40-A/(X) combines several elements to form a comprehensive, integrated, automated system:

- Multi-stage, progressive particulate filtration and water removal
- Integrated, high-performance pump
- Flow control and monitoring devices
- User-programmable controller

The SFG40-A/(X) uses a progressive filtration and conditioning regime:

1. Coarse straining through 40 mesh washable screen
2. Pre-filtration through 10 micron disposable media filter
3. Final filtration through 5 micron disposable media filter
4. Water coalescing to <50 PPM.
5. Water separation and collection

Fuel circulation and transfer is accomplished via an on-board, high-performance, cast-iron, positive-displacement gear pump direct-driven via an industrial, heavy-duty motor. The pump combines high vacuum prime maintenance with linear flow versus pressure performance. Drive motors are NEMA class industrial type, conservatively applied and include ball-bearings, class H insulation, continuous duty ratings.

Multi-tank Filtration systems offer tank to tank transfer. Motorized ball valves and float sensors are used to monitor direction of fuel transfer and prevent overfill of the receiving tank or complete depletion of the source tank.

The SFG40-A/(X) includes check valves, flow switches, pressure and differential pressure gauges, differential pressure sensors across each filtration element for the supply and return lines to the storage tank.

The UL508 listed and labeled industrial control panel features a user programmable cycle timer and rugged, industrial-analog operator interface. The controller provides full automatic operation of the system and is operator field programmable to set filtration cycle duration, time of day, day of week operation. Manual override capability is included. Differential pressure sensors across each filtration element, and a high water level sensor are included with alarms.

System Includes

- Outdoor, weatherproof, pad-mountable enclosure, also suitable for indoor installation.
- On-board, integrated controller, UL508. See Controller Section
- Check valve
- Pressure differential gauges across pre-filter and across final filter-separator
- Differential pressure switches, high water detector. See Controller Section
- Circulation pump, 40 GPM, 3.0 HP
- Filtration elements:
 - Strainer, 40 mesh, wye-type
 - Pre-filter, 10 micron, spin-on type, disposable media
 - Final filter-separator, 5 micron, <50 PPM, canister type with replaceable cartridge
 - 120v cabinet heater with thermostat
- 25 gallon, water retention tank. Includes control solenoid valve and check valve. Includes gauge and vent. Includes high level sensing float switch

Controller, UL508 Listed, NEMA-3R enclosed:

1. Auto-off-manual switch
2. Time of day, day of week, interval programmable timing
3. Control devices
 - a. Pump motor starter
 - b. Control power fuses
 - c. Terminal blocks
 - d. Valve control relays
4. Automatic water drain control
 - a. Water detection sensor
 - b. Back-up oil detection sensor to prevent transfer of fuel to holding tank
 - c. Automatic control of water drain solenoid valve
 - d. High level, water tank alarm
5. Heated control box with thermostatic control
6. High pressure differential alarms
7. Main power disconnect switch