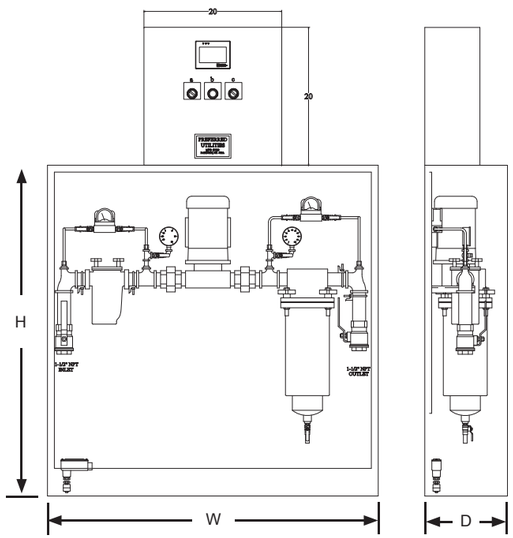
MODEL PF FUEL OIL FILTRATION SET

Specifications / Ordering Information



Ordering Information

Select Catalog Number from the table below.

Catalog Number	G.P.H. Oil #2	P.S.I.	Motor		Dimension			Connection Size	Shipment
			R.P.M.	H.P.	W	H	D	Inlet - Outlet	
PF-401	180	15	1725	¼	48"	48"	12"	¾" - 1½"	2-3 Weeks
PF-402	480	15	3450	⅓	48"	48"	12"	¾" - 1½"	2-3 Weeks
PF-403	600	30	1725	½	48"	48"	12"	¾" - 1½"	2-3 Weeks
PF-404	900	30	1725	¾	48"	48"	12"	1½" - 1½"	2-3 Weeks
PF-405	1200	25	1725	¾	48"	48"	12"	1½" - 1½"	2-3 Weeks

Note: All pumps are 115V 60 Hz 1 phase

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FUEL OIL FILTRATION

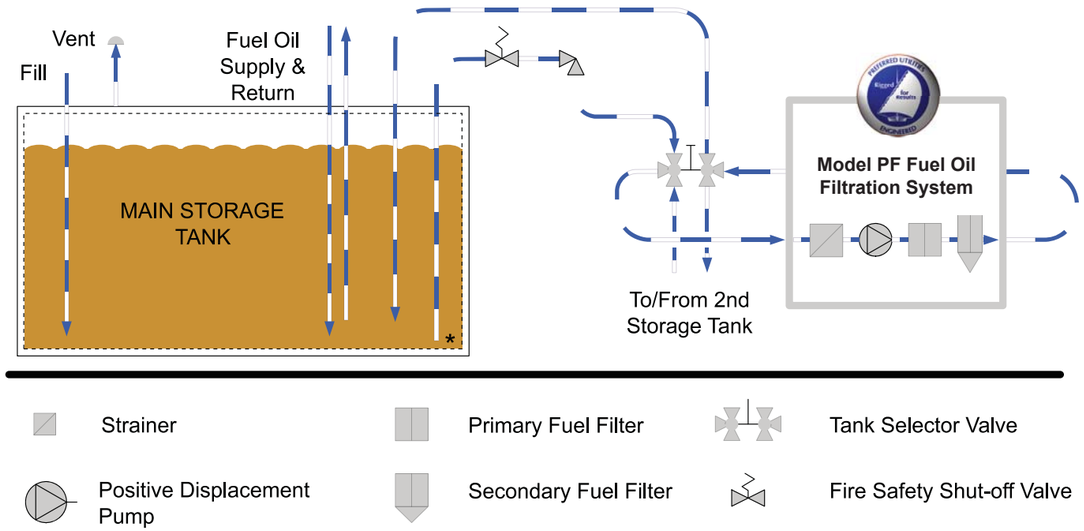
PREFERRED UTILITIES

FUEL OIL FILTRATION SETS

Recommended by NFPA 110

Standard for Emergency and Standby Power Systems

The Automatic Fuel Oil Filtration Set Model PF are the most complete, efficient, and reliable engine protection systems that you can install. These self-contained and touchscreen enabled, fully automatic systems remove water, suspended rust, dirt and other contaminants in order to maintain the quality and purity of stored diesel fuel.



“3 STAGE” FUEL OIL DE-WATERING AND CLEANING PROCESS

Custom Fuel Oil Filtration Set with 10” OIT color touchscreen

The Model PF Automatic Fuel Oil Filtration Set combines microprocessor-based control and monitoring with a “three stage” fuel oil de-watering and cleaning process:

1. Fuel Straining: Large contaminates are removed.
2. Filtration: Fuel filtration to 5 micron.
3. Water Removal: Removes water through filter design.

Systems are available in standard sizes ranging from 180 to 1200 gallons per hour, to custom units for processing 50 gallon per minute or more.

Standard Equipment

- Primary filter
- Secondary filter
- Simplex strainer
- Leak detector switch
- Pump and motor assembly
- Pump “Hand-Off-Auto” switch
- Control power “On-Off” switch
- Primary/secondary filter DP switch/gauge
- Microprocessor-based control, color touch screen

Key Benefits

- NEMA 4 cabinet (Standard)
- Available for Biodiesel applications
- Cleans and de-waters fuel with 99% particulate removal,99% water removal
- Standard flows from 180 to 1200 GPH
- Factory mounted and wired control cabinet
- Alarm and Safety Shutdown for filter water level “High”, filter “Saturated”, system base “Leak” detected
- Automatic cycling based on the time of day and the day of the week ensures continuous fuel maintenance.

Tank Turnover Time In Hours

(Rounded to Nearest Hour)

	Storage Tank Size (Gallons)					
	1,000	2,000	4,000	8,000	16,000	20,000
PF-401	6	11	22	44	89	111
PF-402	2	4	8	17	33	42
PF-403	2	3	7	13	27	33
PF-404	1	2	4	9	18	22
PF-405	1	2	3	7	13	16

Note: Due to the mixing of filtered fuel with unfiltered fuel, a minimum of three tank turnovers are recommended to ensure fuel quality. Shaded hours are not recommended.

Water enters fuel systems through vents, leaks, and sometimes with the delivered fuel. Microorganisms can grow in fuel, especially in the presence of moisture. The resulting sludge left in the system can cause tank, fuel line, strainer, pump and engine injectors to clog. Water induced corrosion (rusting) can reduce tank life expectancy and reliability of the emergency diesel generator or boiler.

The separated contaminants and water are monitored by an integral filter water level detector. Depending on the size of the system, this waste water is piped to an optional Waste Water Holding & Removal System or connected directly to the customer’s waste tank (by others). A differential pressure switch/indicator is installed around the filter units to provide a visual indication of filter element condition. An alarm notifies plant personnel when the filter elements require replacement.

U.L. Approved Oil Strainers

Our Simplex and Duplex Oil Strainers are designed for applications where easy maintenance and large capacity straining are required.

Pump and Motor Assemblies

The Model LO, Light Oil Pump and Motor Assemblies are compact, direct drive units designed to meet the performance and reliability standards demanded in commercial, industrial and institutional applications. The pump & motor assemblies are for No. 2, No. 4, and diesel oils. Typical installations include diesel generators, oil burners, and day tanks.

OIT Color Touchscreens

All of the system control functions can be accessed through a 4”, 10” or 15” color touch screen display. Supported communication protocols include; 10/100 Base Ethernet, Modbus TCP/IP, Modbus RTU, SCADA/BAS connection one RS-485 port

Waste Water Holding & Removal System

A gear pump automatically pumps water from the secondary filter housing to the holding tank based on an integral filter water detector signal. Automatic isolating valves prevent water leakage into the fuel or fuel into the water holding tank when the system is idle. The holding tank is equipped with a high level switch to alarm and shutdown the fuel maintenance system until the tank is emptied. A hand pump is provided for periodic removal of waste water from the holding tank. Requires mounting skid. Specify P/N-WR-01.

Chemical Additive Holding Tank & Injection System

Chemical treatment helps to prevent fuel degradation and improve cetane rating. Higher cetane rating improves cold starting, reduces white smoke, and maximizes engine efficiency. A gear metering pump injects additives into the oil while the oil is circulating in order to ensure complete mixing. The additive feed pump operating cycle runs when requested. A welded steel chemical additive holding tank is provided. Separate skid if ordered in conjunction with standard PF series. Specify P/N-CA-01.

Specifications

Power

120 VAC (external)

Fluid

No. 2 Fuel Oil (diesel fuel) is standard. Consult factory for other fuel types.

Pump

Positive displacement type with cast iron housings:
Model PF-401, 402 & 403 are Spur Gear;
Model PF-404 & 405 are internal gear

Motors

Base mounted, Totally Enclosed Fan Cooled (TEFC) construction

Strainer

Simplex 1” , or 1½” (according to inlet line size) complete with 100 mesh perforated basket

Automatic Controls

Adjustable run-time period (4, 8, 12, or 24 hour operation)

Indications/Alarms

Control Power On, Pump Run, Excess Water in Fuel, Filter Saturated,
Filter Water Level High, System Basin Leak Detected