

The FTRFS 11 Fuel Recirculating System automatically recirculates and polishes fuel at 11 gpm, for a single fuel storage tank on a preprogrammed schedule. The system consists of an SkimOil universal fuel purifier, a continuous-duty motor and fuel pump, stainless-steel fittings, and a standard high-efficiency fuel filter with optional water-block element. FTRFS systems are designed for use with diesel fuel. Duplex pump units (DPU) and multi-tank units (MTU) are also available.



The system is PLC-based, with an operator interface touch panel that allows for system programming and alarm monitoring. Automatic controls are governed by a programmable 7-day, 24-hour real-time clock with user-definable start and stop times. There are four (4) alarm outputs: General Alarm, Programmable Alarm, High Water Level Alarm, and Catch Basin Leak Alarm.

The electronic controller is housed in a separate NEMA 4, key-lockable enclosure located outside of the primary system cabinet.

System Details

Standard Power	120V, 60Hz, 1Ph
Available Power Options	208/240V, 60Hz, 1Ph
Power Upgrades	208/240/380/480V, 50/60Hz, 3Ph
Max. Operating Pressure	Factory preset at 75 psi
Cabinet Dimensions	48" W x 48" H x 12" D
Cabinet Material	NEMA 4 powder-coated steel (white)
Cabinet Mounting	Wall and floor (mounting tabs included)

Filtration

Y-Strainer	100-mesh wye strainer
The Fuel Purifier (separator)	TFP 1000 (FP 1000-F optional)
Nominal Flow	40 gpm
Particulate Removal	10 micron nominal for heavy particulates
Water Removal (per SAE J1839)	99% efficiency for free water
High-Efficiency Fuel Filter	IBF 35
Particulate Removal (per ISO 16889)	3 micron Beta 1000 (1, 2, 5, 10, 25 options available)
Water Removal	n/a (optional water block down to 10 micron Beta 1000)

Sensors and Gauges

Leak Sensor	Liquid Detection
Pressure Sensor	Analog Pressure Transducer
Purifier Water Sensor	Water-in-Fuel
Differential Pressure Gauge	Mechanical

Pump and Motor

Pump Type	Positive Displacement
Product to Pump	Diesel Fuel
Pump Rate	11 gpm
Pump Housing	Aluminum
Pump Gears	Steel
Motor Horsepower	1 HP
Motor Enclosure	TEFC
Motor Frame	56C
Motor Duty	Continuous
Motor Type	Capacitor Start

Separate Electronic Controller

Controller Type	PLC, UL listed 508A
HM Interface	6" touchscreen
Enclosure Dimensions	30" H x 24" W x 12" D
Enclosure Material	NEMA 4 powder-coated steel (white)
Enclosure Location	External to primary system cabinet
Enclosure Mounting	Wall (top/side mounting brackets included)

Plumbing

Inlet/Outlet Manual Ball Valves	1" stainless steel (x2)
Unions	1" stainless steel (x3)

The FTRFS 11 is also available in the following styles: **Duplex Pump (DPU)** and **Multi-Tank (MTU)**

FTRFS 11-DPU (Duplex Pump Unit)

The FTRFS 11-DPU automatically recirculates and polishes fuel in a single storage tank using two alternating 11 gpm pumps and motors on a preprogrammed schedule, providing excellent back-up protection. 11 gpm flow rate is provided through the TFP 1000 fuel purifier.

NOTE:

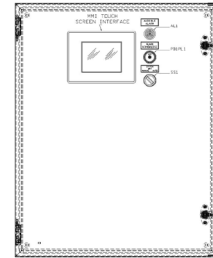
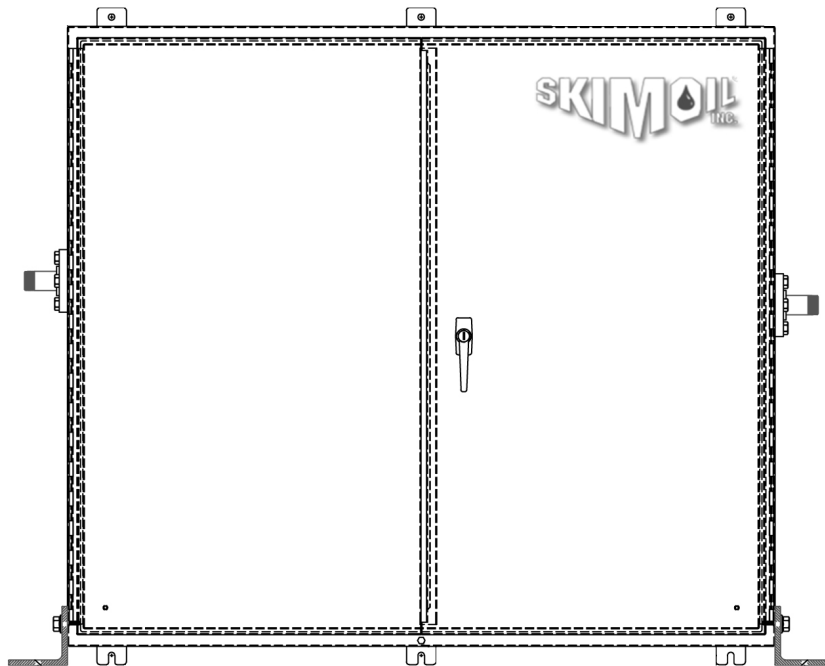
This option will increase cabinet size to 60" W x 42" H x 12" D.

FTRFS 11-MTU (Multi-Tank Unit)

The FTRFS 11-MTU automatically recirculates and polishes fuel at 11 gpm in up to four storage tanks, on a preprogrammed schedule. All other FRS 11 specifications are applicable to this model, in addition to 1" automated ball valves (4 for two tanks, 6 for three tanks, 8 for four tanks).

A 115V actuator is used on brass automated ball valves rated at 600 WOG. It is constructed with a NEMA 4 protective cover.

(Supply side automated ball valve always closed.
Return side automated ball valve always open.)



ALL FTRFS UNITS ARE CYCLE- AND LEAK-TESTED FOR A MINIMUM OF 2 HOURS PRIOR TO SHIPPING.

Partial List of Options

CABINET

- High-Intensity Stack-Light Alarm
- Main Disconnect with Rotary Handle
- Mounting Legs
- Secondary Containment Flanges
- Stainless-Steel NEMA 4X Cabinet

COMPONENTS

- Basket Strainer
- Bio-Mag (Decontamination Unit)
- Water-Block Fuel Filter
- Flow Switch

COMMUNICATION

- BACnet Interface
- LON Communication
- Modbus RTU Interface
- Modbus TCP/IP Interface

HMI

- Internal Touchscreen
- Touchscreen Cover

SAFETY

- Hydrocarbon Waste Conversion Kit
- Universal Spill Kit

SYSTEM

- Automatic Drain with High Water Alarm & 15 gal. Waste Tank
- Auto/Manual Chemical Injection
- Fuel Transfer
- Automated Ball Valves
- Power Changes and Upgrades
- Thermostatically Controlled Internal Heater
- Thermostatically Controlled Ventilation Fan