

# Pump Sets for Mission Critical Applications

# Pump Set Module and Accessories

The most powerful generators in the world are worthless without high quality fuel to run them. Critical Fuel Systems (CFS) designs and fabricates pump sets and tests them to the highest standards, exceeding industry norms.

Every system undergoes a stringent functional and operational test and is leak tested under true hydrostatic pressure. CFS encourages our customers to travel to our facility and witness these tests for themselves.



For capacities from about 35gph to over 3000gph CFS offers standard pump sets. In our standard products we utilize a modular approach to pump set configurations, giving the client choices in system design.

A standard pump set can be sized for low pressure or high pressure applications by simply choosing the “L Series” for pump discharge pressures under 50 psi or the “H Series” for higher pressures up to 100 psi.

Once a series selection has been made, the following system types are available: X, Y or Z. The system type determines the level of standard controls that’s included. The system capacity can then be selected as well as any additional options.

## Type “X” Pump Set

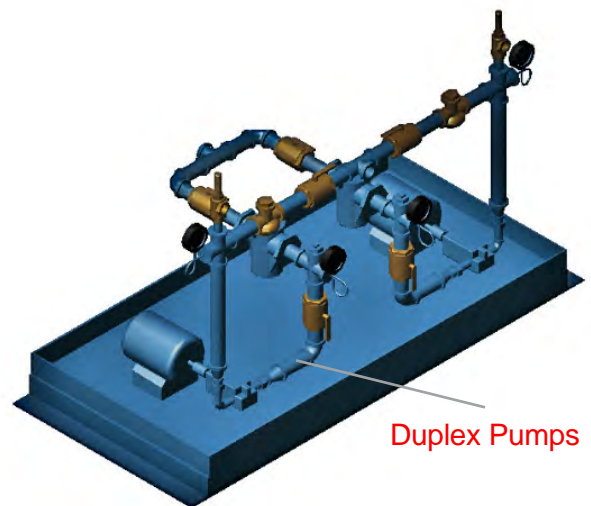
This is a complete packaged pumping system and includes a basic set of necessary trim. The electrical and controls are not included with this basic package and must be installed in the field. All control and monitoring is to be provided by others.

### Standard Features

- Two permanently aligned positive displacement pumps
- Cast iron basket strainers
- 3” high containment basin pump base
- 4” stainless steel, liquid-filled pressure/compound gauges
- Bronze full-port ball valves
- ODP motors

### Options

- Pump flow proving switch
- Individual pump pressure gauges
- Containment basin leak detector switch
- Duplex strainer
- TEFC or high efficiency motors
- Analog pressure and flow transmitters



### Type “Y” Pump Set

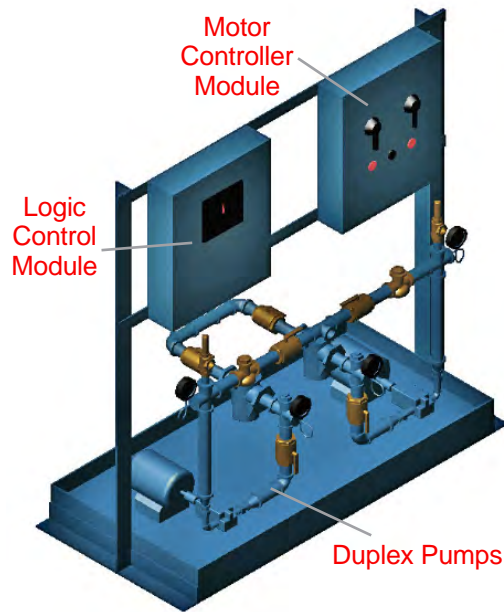
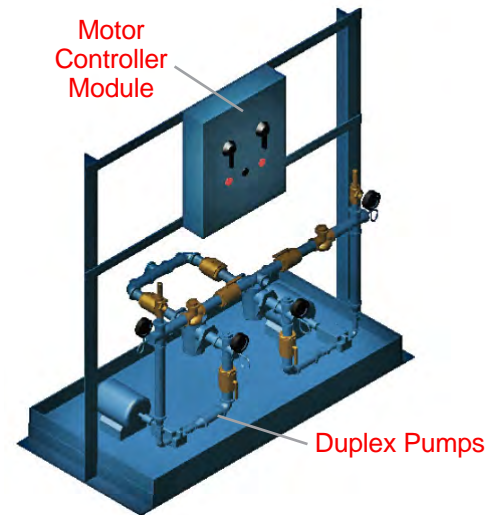
The type “Y” system includes all of the mechanical components of the type “X” package with the addition of the Motor Controller Module. The panel is mounted on the pump set complete with all interconnecting wiring. Control logic and monitoring to be provided by others.

All of the standard features of the type “X” plus:

- UL508 Motor Controller Module
- Basin leak detector
- Pump flow switch

All of the options of the type “X” plus:

- Duplex Strainer DP switch installed
- Individual pump flow switches installed



### Type “Z” Pump Set

This is a complete pump and control set. The Motor Controller and Logic Control Modules are included. All of the on-skid wiring is completed at the factory.

All of the Standard Features of the type “X” and “Y” plus:

- UL508 Logic Control Module
- Modbus Communications
- Basic touchscreen HMI

All of the options of the type “X” and “Y” plus:

- Multiple communication protocols
- Multiple tank monitoring and leak detection
- Full graphic touchscreen HMI

### Custom Pump Sets

A standard pump set won’t fit all of the applications. In cases where a custom solution to a fuel pumping project is required you may rely on our engineering department to provide expert assistance in designing a pumping package for your application.

Critical Fuel Systems has experience with all types of fuel oil pumping systems operating at practically any capacity and pressure range.



*This custom pump and heater set is designed for a flow of 10,000gph of #6 oil with a steam turbine driven pump.*

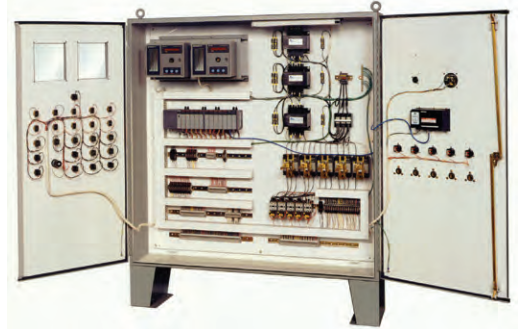


## Fuel Oil Maintenance Systems

The demands placed on today's fuel oil systems are brutal. The fuel sits in tanks unused for months or years, degrading from the moment it leaves the refinery. The emergency generators relying on this fuel require a supply of clean, quality fuel oil ready to go at any time. Critical Fuel Systems' complete line of fuel oil maintenance equipment ensures the fuel is clean, free of water, and meets specifications when it's needed.

## Fuel Oil System Control

Our TFM Control Module gives the operator complete control over the mission critical fuel system. Our modular approach to fuel systems gives the operators and design engineers flexibility in the design and deployment of their systems. Our UL-listed controls provide the security of fail-safe operation with a focus on communications.



## Day Tank Systems

Critical Fuel Systems builds complete day tank systems. More customers are demanding the security provided by complete-containment, sealed double wall design. Even though the double-wall tank is now our standard, we still offer the single-wall systems with or without rupture basins. We also provide a complete line of day tank accessories, including fill manifolds, to meet your fuel equipment needs.

## Fuel Oil Specialties

Critical Fuel Systems offers an extensive line of fuel system specialty devices including:

- Anti siphon valves
- Angle check valves
- Foot valves
- Overfill prevention valves



Your Representative