

FireWatch Self-Contained Pump Package 500 gpm

Description

The FireWatch 500 gpm self-contained, fast response, high performance, “low” flow water/foam pumping module has a nominal performance rating of 500 gpm at 150 psi when operating with a three foot suction lift. The unit utilizes welded aluminum structural shapes in its frame construction, covered with aluminum sheet metal, and is divided with a removable top section for major maintenance. The centrifugal pump and water cooled diesel engine are mounted on a self-supporting aluminum base frame which also acts as a sealed containment area complete with drain outlet. A separate welded aluminum box holds and retains two deep cycle batteries.

The removable roof section of the unit contains an aluminum fuel tank complete with vented cap and lockable fuel door on the outside. The electrically actuated hatchway opens for air circulation during operation and an opening for the elevating monitor. The fuel volume is sufficient for four hours continuous operation under load. A residential grade muffler wrapped with an insulated blanket is held in place with a rigid bracket system.

The unit's suction consists of a 4" storz inlet complimented by galvanized steel piping, a check valve, electrically actuated suction control valve, and compound pressure gauge connection. An adjustable discharge relief valve bypass is piped back to the suction inlet in order to maintain desired operating pressures. The common pump discharge is constructed of galvanized piping, check valve, and individual electrically actuated valves controlling flows to the electrically actuated elevating 500 gpm monitor or 4" storz master discharge at the outside of the unit. The onboard foam proportioning system is constructed of compatible materials and is capable of flows as low as 70 gpm. The maximum limit extends to the pump rating. There is a

manually operated metering valve that can be set from 1% to 10% concentration. The unit's foam supply has a 50 US gallon capacity with external sight level gauge, fill/drain, and external foam connection for backup supplies. An electrically operated foam injection valve is controlled from the operator's panel.

Also, inside the recessed master operator's panel are the engine controls, monitor controls, manual throttle with push-button release, fuel level gauge, outboard, inboard, and panel lighting switches, electrically actuated valve controllers, dual battery charge condition indicators, and master battery selection and disconnect switch. All electrical components, with the exception of the battery maintenance charger and indicator lights, are 12volt DC.



(shown mounted on smooth tire shop cart)

Features

- Compact, easily deployed, stored, and maintained.
- Sized for fast response in limited access areas.
- Standard model includes use with fresh water only (See Options)
- Tested to provide a minimum of 500 gpm at 150 psi at draft conditions

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- Suitable for use with draft or pressurized water supplies
- Can be placed ground level, mounted on a flat-bed truck or trailer, or air lifted using lifting lugs.

Applications

- This unit is designed to comply where NFPA, pamphlet # 11, requires that semi-fixed supplemental foam capable hose streams be made available for incidental spills in flammable liquid tank farms. The onboard foam capacity will provide for three, 50 gpm hose streams for a 30 minute duration per NFPA using 1% concentrate.
- Can provide pressurized fire-fighting foam solution for fixed cone roof storage tank, using semi-fixed foam discharge devices up to 500 gpm system demand. Additional supply of foam concentrate is required.
- Can provide pressurized fire-fighting foam solution for internal or open top floating roof tanks, using semi-fixed foam discharge devices having a maximum system demand of 500 gpm. Additional supply of foam concentrate is required.
- Can provide water/foam applications for spill suppression around manifolds and pumps
- Provides cooling streams for exposure fires
- Forestry applications, with or without foam concentrate. Capable of multiple line applications at 60 gpm each to a maximum of 500 gpm.
- Can be used as a back-up to an existing fire system supply or as a part of a water pump relay.
- Louvered and lockable apparatus doors are provided on both sides for access.



Specifications

The FireWatch self-contained foam and water pump package. It shall consist of a centrifugal pump, 4" IPS inlet x 3" IPS outlet with mechanical pump shaft seals. The pump is to be designed for operation at a nominal pump discharge of 500 gpm at 150 psi. The design is based on the a lift of not more than 52"(1.32m). The power for the pump to be provided by a Kubota, model V3600, turbocharged diesel engine with a 12VDC charging alternator and starting system. The diesel engine shall have a fuel supply capable of running four hours under full load. A rotary vane primer is to be provided for suction conditions from draft.

A foam proportioning system shall be capable of flows not less than 70 gpm and volumes equal to the performance of the pump. The foam tank is to be constructed of heavy polyethylene, have a visible external level sight gauge complete with isolation valves, drain, offloading, and external supply valves.

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Technical Data

Pump: Darley and Company model HE500, 4" suction x 3" discharge

Driver: Kubota, Model v3600, four cylinder, 68.5 continuous HP. Radiator cooling to be provided and electric starting. Engine panel (installed within the master control cabinet) provided has indicator lights for engine operation, start/stop lever, in addition to RPM and engine hours gauge. Driver will be mounted on heavy duty vibration isolation pads and bolted to the structural base.

Monitor: Task Force Tips assembly consisting of a Model MD-ERP-18A Nozzle 100-500 gpm, NH Inlet connected to a Model XFIH-EL1A Monitor Base, 3" NPT x 2 1/2" NH outlet. The monitor base shall be connected to a Model XGA38PL-RL 18" Extension, 3" Vic In x 3" NP out. Controls for the nozzle spray and monitor position is controlled by a Mod. Y4E-RP-D, operators Station with Display

Foam Tank: DOT rated, 50 USG capacity, with external 1" connections for fill/drain, offloading, and tank isolation. 1/2" valves are provided for sight level glass isolation. An 8" inspection opening with screwed cap is provided for cleaning and inspection inside the tank.

Foam Proportioning: Proportioning capabilities are from 70-600 gpm. As a minimum, proportioning can be provided for a single hose stream and the monitor nozzle.

Exhaust: consists of a flexible metal connection from the engine manifold and includes a residential muffler, ridged brackets to the roof structure, and completely wrapped in high temperature rated material.

Fuel: Welded aluminum construction, 1/2" drain connection to a sump area, and 1/2" supply and return connections. A vented

fuel cap is located on the top, hidden by a lockable fuel access door on the roof.

Consumption: The diesel engine, under full load, uses approximately 5.25 gph.

Fuel Tank: 25 US gallon capacity Welded aluminum construction, 1/2" drain connection to a sump area, and 1/2" supply and return connections. A vented fuel cap is located on the top, hidden by a lockable fuel access door on the roof.

Operators Panel: is a lockable, fully recessed panel with latching handle. The panel is sealed at the wall of the enclosure and has door seals as well. All circuits are headed up by properly rated breakers located in an independent water resistant cabinet in the module. The operators panel inside has independent lighting and also controls:

- Exterior forward LED lights
- Exterior aft LED lights
- Complete Interior LED lighting
- Hatchway actuator OPEN/CLOSE control
- Diesel Engine Controls
- Fuel level Gauge
- Engine Throttle control
- Monitor and monitor nozzle control
- Monitor position indicator
- Suction Electric valve control
- Discharge Electric valve control
- Monitor Electric valve control
- Foam Electric valve control
- Main/Reserve battery ON/OFF and selector switch
- MAIN/RESERVE Battery charge level and condition LED Indicator
- 120 VAC Battery charger connection indications light.

Conveyance: Minimum (trailer) Dual Axle, 10,000 LBS GVW

Package Weight: Dry weight 4,500 LBS.

Lights: Complete LED exterior and interior lighting package

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Connections:

Suction: 4" Storz (standard)

Discharge: 4" Storz (standard)

Finish: Primer basecoat with two heavy light gray finish coats (standard)

Options:

- Local Operators panel starboard or port-sides
 - Lanyard or Wireless monitor controls
 - Variety of conveyance choices, i.e., flatbed truck, trailer, or cart.
 - Any style hose and coupling choices
 - Any additional discharge devices, nozzles, wyes
 - Exterior color (based on availability)
- On-Board water and/or external foam concentrate storage tanks
 - Soft supply or discharge hoses
 - 4" hard suction hose
 - Suction strainers
 - High expansion foam generators
 - Other high quality accessories
 - ERP plans
 - Trained Fire Fighters
 - Personnel training
 - Choice of quality, EPA conforming, FDA approved, UL-Listed fire-fighting foam concentrates

