



Includes:

- Waterax B2X
- Foam System Scotty

Training **not** included call for details & pricing

SCOPE AND GENERAL DESIGN COMPONENTS

A fire fighting system shall be provided for offensively attacking a fire. The high pressure fire fighting system shall allow the operator to attack fire from a safe position. The system shall be extremely effective on wildland fire and initial fire attack operations with limited water supplies.

COMPONENTS AND BASE PLATE DESIGN

The fire fighting system shall consist of:

- Engine: 23 HP Engine driven
- Water pump: Low pressure centrifugal pump
- Foam System: Eductor type .1-3%
- Hose Reel: 1" high pressure hose reel X 100'
- Nozzle: Manually operated low pressure pistol grip style fog nozzle

The major components shall be assembled on a removable assembly with integral hydraulic motor. The entire system shall be designed to be a quickly installed or removable "plug-and-play" module.

SAFETY COMPLIANCE

The system shall be designed for the safety of the operator and fire fighter in mind with a safety margin of 4:1 built into all components.

PERFORMANCE CAPABILITES

The fire fighting system shall be tested and proven to be highly effective in the following scenarios:

- Wildland, grass, and brush fire applications
- Automobile and truck fires
- Limited structural fires
- Confined or concealed space fires
- Limited industrial fires
- Shipboard and marine firefighting
- Military fire fighting applications
- Container fires

BASE FRAME MOUNTING

The fire fighting system shall be mounted in a frame assembly. The mounting assembly shall be powder coated and shall be designed to contain the specified major components of the system. The envelope of the system shall not exceed 43” wide by 41” high. The envelope can be up to 96” deep. The hydraulic cooler shall mounted vertically at the rear face of the frame and dissipate heat to the rear of the module. Adequate venting shall be provided on the frame for intake and discharge air flow.

WATERAX LOW PRESSURE – HIGH FLOW SYSTEM

On the low pressure/high volume side can operate at the following flow rates

- 274 GPM@50PSI
- 220GPM@100PSI
- 112GPM@150PSI

ENGINE DRIVE PACKAGE

The fire fighting system shall be powered by gasoline 23HP Briggs and Stratton package consisting of the following components;

- 23HP Twin piston engine
- Muffler with vertical exhaust and exhaust primer
- Throttle positioned on the panel

INSTRUCTIONS AND LABELING

A fire fighting pump instruction nameplate and necessary warning labels shall be installed on the assembly (English language).

PANEL LIGHT

The pump control panel shall be provided with an LED 12 volt light with switch.

PUMP CONTROL PANEL

The control panel shall be ergonomically designed and operator friendly. The panel shall be labeled and installed to be easily visible from the operator’s position. The following instruments and controls shall be installed:

- Emergency Stop/Master Switch (red)
- Low oil shut down indicator
- Control panel light and switch
- One (1) pressure gauges

PLUMBING

The fire fighting system shall be plumbed with high pressure hydraulic type hose, plumbing and fittings. This shall include high pressure hoses of various sizes, zinc plated steel hose ends, and plated steel hydraulic fittings. The threads shall be male and female NPT, JIC, SAE O-ring style in various sizes. Rigid plumbing shall be in zinc plated steel piping with pipe fittings of zinc plated steel. There shall be a painted manifold that will also have manual valves for 2 x 1.5" NH outlets and caps.

The intake plumbing shall be 3" threaded female and 4" victaulic connections.

ELECTRICAL WIRING

Necessary low voltage automatic circuit breaker protection shall be provide where required. Wiring shall be stranded copper automotive type, sized for the appropriate electrical load. Exposed wiring shall be protected with convoluted split plastic loom; such looms shall be mechanically secured. Wiring shall be run in protected areas or enclosed in metal panels where subject to mechanical injury. Electrical connections and termination of wiring shall be within weather proof plastic enclosures with waterproof strain reliefs and connectors.

WATER TANK SUPPLY LINE

A 3" (76 mm) water tank to fire pump line shall be installed as follows:

- From the fire pump to the water filter shall be a 3" (76 mm) flexible transparent hose.
- Up to 15' (5 m) of 1.25" (31 mm) flexible water hose tank fill with removable connections, clamping devices, and push pull rod on the manifold

DISCHARGE PRESSURE GAUGE

One (1) 2.5" (62 mm) liquid filled pressure gauge shall be installed from the discharge side of the ultra high pressure fire pump, with the gauge mounted on the pump panel.

ELECTRIC REWIND HOSE REEL – LOW PRESSURE

One (1) painted low pressure steel hose reel shall be installed. The reel shall have a leak proof ball bearing swing joint, electric 12 volt rewind provisions. The reel system shall have a minimum of 4:1 safety ratio and designed for a 600 PSI (41 bar) working pressure.

Each reel shall be equipped with a locking pin assembly.

One (1) push button electric rewind control shall be installed near the reel. The wiring from the hose reel electric box shall be protected with conduit or loom.

The hose reel shall be equipped with a electrical wiring junction box of plastic construction with a sealed cover assembly. The box shall house the reel solenoid, circuit breaker, and electrical wiring for the rewind control circuit and electric rewind motor power supply. The electrical supply shall be sized for the reel motor for both positive and neutral cables. The electrical supply wiring shall be supplied from the main electrical supply box for high pressure pump skid or module. The supply line to the reel shall have a quick disconnect connection at the main electrical supply box.

The low pressure hose reel shall be supplied by a 1" (25 mm) hydraulic type wire braided flexible hose line.

Low Pressure System with Foam Cell

Pg 4

One (1) chrome plate hose roller assembly shall be supplied for protection of the hose during hose removal and rewind operations.

The hose reel shall fit in a 26" (66 cm) wide by 26" (66 cm) deep by 26" (66 cm) high envelope.

REEL MOUNTED LOW PRESSURE HOSE

100 foot (30 m) length x 1" (25 mm) hose shall be installed with threaded couplings. The hose shall have a working pressure of 600 psi (41 bar).

NOZZLE --LOW PRESSURE

One (1) 60 GPM (227 LPM) ultra-high pressure pistol grip fog nozzle shall be provided for the high pressure fog reel.

FOAM CLASS A FOAM SYSTEM

The system shall be equipped with a Class A Foam System.

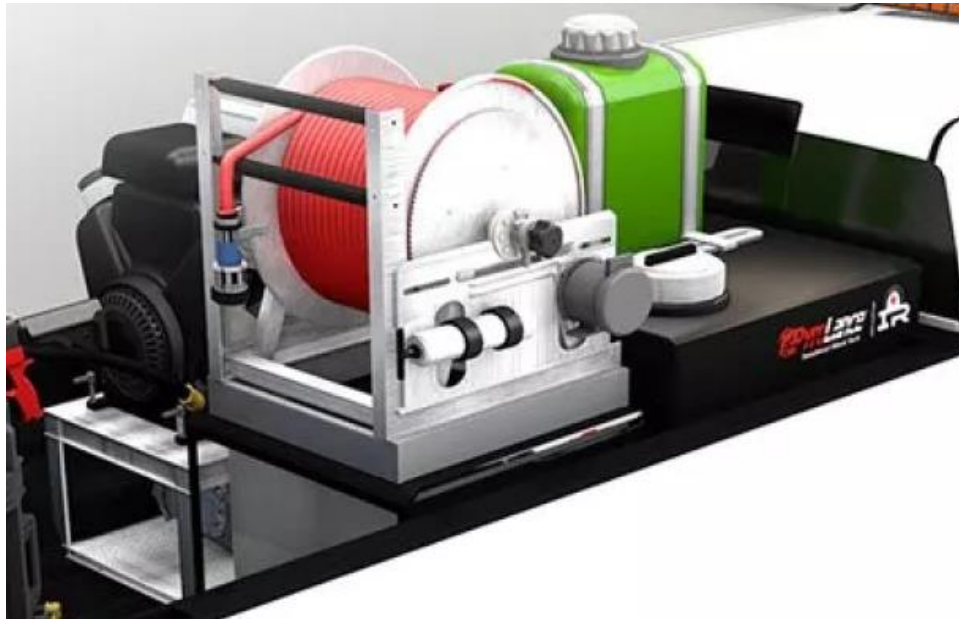
The system shall inject concentrate on the suction, (low pressure), side of the low pressure water pump. It shall be plumbed to prevent contamination of the water supply tank with foam concentrate and/or foam solution.

FACTORY TESTING PRIOR TO SHIPMENT

The entire pump and the plumbing system shall undergo a complete factory test. These test results shall be provided with shipment.

WATER/FOAM/SKID UNIT

500 gallon water tank with integrated 10 gallon foam cell on a 1" poly skid with 1"+ skid plates for easy forklift access. The tank portion will also have a 1" top giving the option mount additional tools. *Need skid dimensions.



Includes:

- Odin CAFS Mongoose Gas Driven 2 line system
- Hannay Reel 100' X 1" Electric Rewind includes smooth bore nozzle
- Water (500g) Foam(10g) Skid System

CAFS Training 8 hours up to 12 people **not** included call for details & pricing

Odin® Mongoose 46/23 Specifications;

This model provides a “self-contained” gasoline powered “slide-in” type Compressed Air Foam System (CAFS). The CAFS shall be designed to fit into the back of a standard length and width pick-up truck or fire service body.

The CAFS shall be designed to discharge water only, air only, foam solution only or compressed air foam from the same discharge outlet. In addition, the consistency of the compressed air foam (expansion ratio), wet/dry shall be fully adjustable.

Engine

The engine shall be a Kawasaki, 2 Cylinder, 4 Cycle gasoline fueled, pressure lubricated engine. It shall develop 31 hp at 3600 rpm. It shall be digital fuel injected liquid cooled, choke free. It shall have a 15-amp charge coil, 12VDC electric start. It shall be equipped with a dry cartridge air filter and a muffler. The fuel pump is a high pressure electric fuel pump.

Diesel option available

Water Pump

The water pump shall be a Darley 2BE single-stage centrifugal pump with a vertically split aluminum case. It shall have replaceable bronze impeller and seal rings on a stainless steel shaft. The pump seal shall be of a mechanical design.

Air Compressor

The air compressor shall be of the encapsulated screw type, designed and installed to supply a minimum of 50 cfm @ 125 psi (1416 L/min @ 8.6 b) of free air at maximum engine rpm. The compressor air/oil receiver shall be built and designed by the compressor manufacturer. *Manufacturer approved for Flows of 40 cfm @ 150 psi.

All air-lines shall be rated to a minimum of 250 psi (17.24 b). All control air fittings shall be of brass or chrome construction. Stainless steel or brass check valves shall be utilized at air injection points to prevent water/solution back-flow into air-lines.

Foam Concentrate Proportioner

The automatic foam proportioner shall be the Darley Fast Foam 50. It shall be provided and installed to inject foam concentrate into all foam discharges. The proportioner shall automatically meter the correct percentage of foam concentrate, based on current flow, into the water stream. A check valve shall be provided ahead of the foam injection point to prevent foam solution back-flow. The concentrate pump shall be a 12VDC, electrically driven, positive displacement pump. The concentrate pump shall be rated to flow ½ gpm @ 150psi (1.89L/min @ 10.3b). The proportioner on/off switch, ratio controls, operating instructions and low concentrate warning light shall be mounted on the pump panel. For sustained operation of the injection system, it may be necessary to operate the vehicles main engine for adequate voltage.

Drive System

The water pump is directly driven off the engine crankshaft. The air compressor is belt driven off the engine crankshaft to the side of the engine. They shall be driven via a dry Gates Polychain® drive system. The complete drive system shall have a 2,000 hour rated service life and shall be designed and rated for the imposed speed and load.

Electrical System

All electrical equipment installed by the manufacturer shall conform to current automotive electrical system standards and the requirements of the applicable NFPA apparatus standards. The wiring shall be individually and permanently color and function coded. The installation shall meet SAE Standard J1128 in its latest edition for GXL or SXL temperature rating.

All exposed wiring shall run in loom with a minimum of 280°F (137.8°C) rating. All wiring loom shall be properly supported and attached to frame members along the entire run. At any point where wire or looms must pass through metal, rubber grommets shall be installed to protect the wire from abrasion. The main low voltage electrical terminal block and circuit breaker panel shall be provided behind the pump operator's panel in a location providing easy service access. The electrical connections shall be made using heat shrink and/or weatherproof connectors. All electrical circuits shall be protected with automatic reset circuit breakers or fuses.

Priming System

A Darley 12 VDC electric, oil-less, rotary-vane priming system shall be utilized. The primer is capable of priming the water pump through 20' of hard suction hose with a 10' lift. Primer controls and instruction plate shall be mounted on the operator's panel.

Plumbing, Hoses and Lines

All piping shall be stainless steel. Uses of grooved end pipe couplings are required for flexibility and movement of system components on mobile equipment. Hydraulic hoses will only be used for air injection lines and not control air lines. Flexible piping may be used where applicable. Check valves are required throughout the system to maintain integrity and shall be placed so that the air, water foam and foam solution do not inadvertently mix. Drain cocks shall be provided on the water pump to prevent freeze damage.

Tank to Pump

There shall be a 2.5" tank to pump suction valve fitted in the module and controlled from the operator's panel.

Inlets

A 2½" NH male suction inlet with cap and lanyard shall be provided on the operator's panel.

Water Only Outlet

There shall be one 2½” water only discharge with valve operator push pull provided on the control panel.

CAF Outlet

There shall be one (1) CAF mix point. There shall be a 1½” NH Male CAF outlet on the panel, controlled by the single mix point. A swing check valve shall be installed on the mix point to prevent foam from back flowing into the pump. The CAF mix point controls shall be grouped together on the panel with easy to read calibration marks laser cut into the panel. The mix point foam solution valve shall be an Akron 1 ½” selflocking, swing-out valve.

Direct Tank Fill

A separate valve with a 2½” NH female swivel connection and plug shall be provided and controlled at the operator’s panel for “direct tank fill” operations with a pressurized water source.

Tank Refill

A 1½” tank refill line with a 1½” valve and flexible, reinforced wire-braid, hydraulic hose shall be provided.

Module Frame

The module frame shall be constructed of aluminum and designed for rigorous fire service use. Main structure will use 1.5” square wall 6061 grade tubing, ¼’ thick wall. The structure will be rectangular in shape to facilitate the full cover lid and sides.

Lid

The lid shall be computer cut, ventilated, diamond plate aluminum with stainless steel hinge and pneumatic gas shock lift struts. The bracing of the lid will sustain the weight of 250 lbs on the module lid when closed. Two snap latches will be incorporated to fasten the lid shut.

Corrosion Resistance Treatments

Dielectric tape (laminating type UHMW) is used through out the construction of the module for dissimilar metal contact surfaces. This will include, but not be limited to control panel to frame, engine mounts to frame, and solution injection unit to frame.

All SS screws, which secure the SS panel to the aluminum frame, will be treated with dielectric liquid. The majority of fasteners throughout the module will be SS. All electrical ground connections to the frame will be treated with dielectric silicone compound. Wire ends will have waterproof and corrosion resistant shrink tube, adhesive lined type terminals and connectors. All electrical plugs in the module will be environmentally sealed Deutsch type. The entire surface of the electric fuse / connection box will be treated with a urethane seal coat, to seal out moisture.

Control Panel

The control panel shall be laser cut, 16 gauge brushed stainless steel with special powder coat infusion on the face. The instruments, indicators and controls that are located on the control panel shall be positioned in a logical manner and clearly marked to provide for simple and easy operation. Color association is used for the handles to specific discharges. The following items shall be mounted on the control panel:

1. LOFA engine control module
 - a. Hour meter
 - b. Tachometer
 - c. Ignition switch
 - d. Battery charge light
 - e. Diagnostic light
 - f. Low oil pressure light
 - g. Engine High Temperature light
 - h. Low water pressure light
 - i. High compressor temperature light

- 2. Throttle
- 3. Fast foam 50 control
- 4. Primer control
- 5. CAF valve lever
- 6. Air valve
- 7. Operating instructions
- 8. CAF discharge
- 9. Water only push pull
- 10. Water only discharge
- 11. Water pressure gauge
- 12. Air pressure gauge
- 13. Water level gauge
- 14. Tank to pump Valve
- 15. Tank refill valve
- 16. Suction Inlet
- 17. Direct tank fill valve
- 18. Direct tank fill pipe
- 19. Pump drain
- 20. Compressor Alarm
- 21. Compressor Overheat light
- 22. Compressor oil level sight gauge

Labels

All controls, inlets and discharges shall be clearly labeled. The labels shall comply with applicable NFPA standards.

Testing

The completed unit shall undergo a manufacturer’s run-in test prior to delivery. The engine, pump and air compressor shall be operated for a minimum period of six (6) hours, during which time the test operator shall monitor and record the functions and performance of each system component. Compressed air foam shall be produced during the test. This testing shall be performed to ensure proper system operation and performance prior to shipment. The manufacturer shall provide written certifications that the tested unit meets all performance criteria contained herein (NFPA). Water flow performance shall be tested in accordance with NFPA 1911. Airflow performance shall be measured with a temperature and pressure compensated air flow meter.

Manuals

One (1) copy of the Operation and Maintenance Manual and a CD copy shall be provided to the purchaser with each unit. This manual shall include detailed instructions in the operation and maintenance of the overall unit, engine, water pump, air compressor and foam proportioner.

Dimensions (without Tank)

Length	36” + 6” gap required for air flow
Width	47 ¼”
Height	33”
Weight	850 lbs

Performance

Water Pump	250 gpm @ 40psi 120 gpm @ 100 psi
Air Compressor	50 cfm @ 125 psi
Simultaneous Flow (NFPA)	46 gpm & 23 cfm @ 125 psi
Simultaneous Flow	80 gpm & 40cfm @ 100 psi
Engine Horsepower	31hp @ 3600 rpm

Warranty

Engine	1 year
Compressor	1 year
Water Pump	3 years/3000 hours
Chemical Injector	1 year
Water Tank	Lifetime

All fabrication and materials are warranted for a period of two (2) years barring accidents, abuse or negligence. Excluding from warranty are all consumables and parts subject to routine replacement. We will repair or assist in the repair or replacement of the product in its entirety.

Mongoose Options

The list of options, which follow, can be added to the standard module according to your specifications and needs of operation. These options are not included in the base price of the module.

Water Tank (500 included with CAFS module)

The water tank shall be rectangular in configuration and shall have a capacity based on the chassis GVW. The tank shall be constructed of 1/2" polypropylene sheet. All joints and seams are to be nitrogen welded. The tank cover shall be constructed of 1/2" polypropylene and shall incorporate hold-downs to assist in keeping the cover rigid under fast filling conditions. The cover shall have a combination vent and manual fill tower. The tower shall have a hinged cover and a 1/4" thick polypropylene screen.

There shall be two (2) standard tank outlets; one for the tank to pump suction line and one for the tank fill line. An anti-swirl plate shall be installed at the tank-to-pump outlet. A manufacturer's warranty shall be included for the tank.

A polypropylene foam reservoir shall be provided as an integral part of the booster tank and shall contain a low-level sensor in the bottom of the tank to signal when the foam reservoir needs to be filled. The tank shall be plumbed to supply the foam proportioner pump with a minimum 3/4" hose (size varies per customer specifications). The tank shall include all fittings, adapters, senders, switches and hoses necessary for tank to module connections.

Skid Frame and Water/Foam Tank

An aluminum weldment sub-frame shall be provided to support the entire slide-in module, with the base constructed of 2" x 4" x 1/4" tubing. The sub frame shall be strong enough to support the weight of the booster tank and pumping equipment while in the apparatus and during loading and unloading and shall be utilized as a base mount for the engine, compressor and pump. Square tubing uprights with angled gussets shall extend up from the rear of the sub frame for attachment of the full width operator's panel. Provisions shall be incorporated in the sub frame to facilitate using a forklift for loading and unloading of the unit. The tank shall be bolted to the skid frame with stainless steel hardware through full width integral flange mounts at the front and rear. The water tank shall be completely removable without dismounting the skid unit.

Discharge Valve

The discharge valve shall be a 1 1/2" ball valve mounted on the control panel CAF outlet.

Suction Valve

A 2.5" gated hydrant type suction valve, with 2.5" male NST threads and cap will be attached to the 2.5" male NST chrome suction intake.

Sides

The sides shall be computer cut, ventilated, diamond plate aluminum.

CAF Hose reel (Included)

The hose reel shall be of aluminum and alloy construction with fairleads and electric rewind, installed with 100' of 1" Niedner HotStop hose with one 1" metal pistol grip ball valve and tip. The hose reel shall be mounted on top of the water tank and shall have a straight swivel inlet.

Standard Equipment

Engine – Kawasaki 31 hp, Liquid Cooled, V-Twin, Gasoline Powered, 12 VDC Electric Start

Control Panel – Illuminated Laser Cut, Brushed Stainless Steel Panel with infused powder coat painted labels, Foam Injection System Controls Installed

Air Compressor – encapsulated screw, Manufacturer approved for Flows of 40 cfm @ 150 psi.

Pump System – Darley Model 2BE with One (1) Fully Adjustable 1½" CAF Discharge Mix Point, 2½" Water Discharge, 2½" Direct Tank Fill, 2½" NPT Suction Inlet, Darley 12V Primer, 2½" Water and Air Pressure Gauges, Pump Drain Valve, Stainless Steel Plumbing · Frame – Lightweight Aluminum · Foam Proportioner System – Darley Fast Foam 50 Class "A" Foam Proportioner

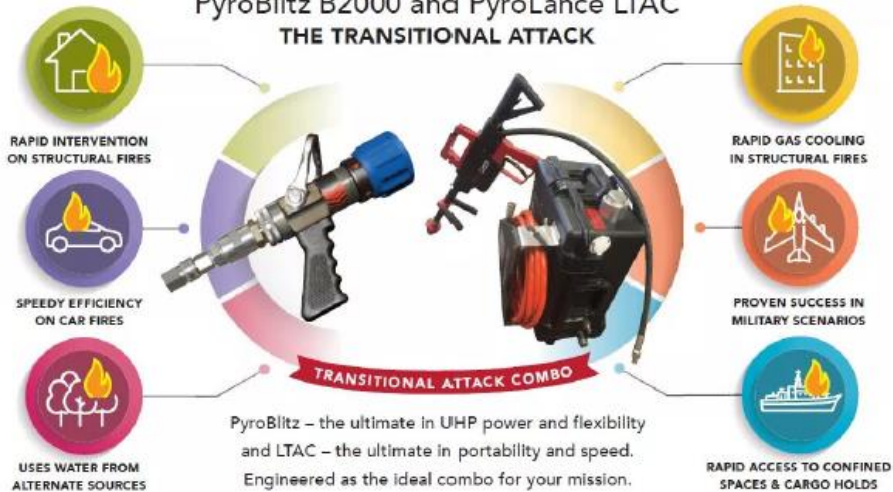
CAF Hose Reel – Aluminum, Installed with 100' of 1" Niedner Hose, 1" Pistol Grip Ball Valve and Tip Fuel Tank – 6 Gallon Fuel Tank and Mounting Bracket Assembly (shipped loose) Foam Level gaug

Ultra high pressure Pyrolance system (HYLO)



Two Synchronized Technologies **THE ULTIMATE DUO**

PyroBlitz B2000 and PyroLance LTAC
THE TRANSITIONAL ATTACK



Includes: PyroHyLo Dual Flow - Diesel
34hp Kohler 4 cylinder water cooled diesel engine

Includes: Water (500g) Foam (10g) Skid System (Tracked Vehicle)
Designed for Kodiak Tracked Vehicle

Includes: Pyrolance Training
8 hours up to 12 people

High Pressure Fire Fighting Specifications:

Pyro Blitz

- 20 Gallons (80L)/Minute at 1,200 psi (100 bar)
- Foam Capable System
- Structural Attack
- Quick Initial Attack on Limited Structural Fires
- Ideal for clean-up
- Allows for Rapid Intervention
- Car Fire Attack
- Use less than 40 gallons of water to extinguish fully involved car fire
- Rapid deployment from Hose Reel
- Rapid clean-up
- Ideal for fuel spill clean-up
- Wildfire / Drafting
- UHP technology quickly deploys
- with off-road vehicles or UTV's
- Drafting capability ensures
- quickest access to water
- Able to "cut" a fireline quickly

LTAC *Optional*

- Highly portable PyroLance unit attaches
- to any UHP firefighting system
- Connect to 1,200 psi (100bar) or 4,400
- psi (300bar) UHP systems
- Keeps fire apparatus clean when adding
- aggregate to your penetrating system.
- Simple operation / reliable communication
- Structural Attack
- Able to penetrate through structural material, keeping
- firefighter in protected position during initial attack.
- High Rise Fire Specialty Tool – Able to access confined
- space fire in a high rise environment without blowing
- out the outside window.
- Cools interior before aggressive interior attack,
- reducing the incidence of cancer in the fire service.
- ARFF Fire Attack
- Able to penetrate and cut composite materials cleanly

- with no harmful dusts.
- Able to access aircraft cargo areas, putting firefighting agent in containers from the exterior of the aircraft.
- Marine
- Lloyd's of London Certified Equipment for container ships
- Able to connect to fixed UHP fire system for access to confined space clean areas.
- Ideal below deck operations for confined space fires

SCOPE AND GENERAL DESIGN COMPONENTS

A fire fighting system shall be provided for offensively attacking a fire. The high pressure fire fighting system shall allow the operator to attack fire from a safe position. The system shall be extremely effective on wildland fire and initial fire attack operations with limited water supplies.

COMPONENTS AND BASE PLATE DESIGN

The fire fighting system shall consist of:

- Engine: PTO driven (Chelsea PTO to be supplied by fire truck OEM)
- Water pump: High pressure positive displacement piston pump
- Hose Reel: Ultra-high pressure hose reel and attack hose
- Nozzle: Manually operated ultra-high pressure pistol grip style fog nozzle

The major components shall be assembled on a removable assembly with integral hydraulic motor. The entire system shall be designed to be a quickly installed or removable "plug-and-play" module.

SAFETY COMPLIANCE

The system shall be designed for the safety of the operator and fire fighter in mind with a safety margin of 4:1 built into all components.

PERFORMANCE CAPABILITIES

The fire fighting system shall be tested and proven to be highly effective in the following scenarios:

- Wildland, grass, and brush fire applications
- Automobile and truck fires
- Limited structural fires
- Confined or concealed space fires
- Limited industrial fires

- Shipboard and marine firefighting
- Military fire fighting applications
- Container fires

BASE FRAME MOUNTING

The fire fighting system shall be mounted in a frame assembly. The mounting assembly shall be powder coated and shall be designed to contain the specified major components of the system.

The envelope of the system shall not exceed 43” wide by 41” high. The envelope can be up to 36” deep. The hydraulic cooler shall be mounted vertically at the rear face of the frame and dissipate heat to the rear of the module. Adequate venting shall be provided on the frame for intake and discharge air flow.

DUAL FLOW SYSTEM

This system will be driven by hydraulic system, the PyroUHP on one side and the Waterax low pressure/high volume pump on the other side.

NB: ONLY ONE PUMP CAN BE USED AT A TIME.

ULTRA HIGH PRESSURE FIRE PUMP SPECIFICATIONS

The fire fighting system shall be equipped with a heavy duty ultra high pressure three plunger type positive displacement fire pump. The pump shall be driven as specified under the “drive system” section of these specifications.

The pump shall have the following features:

- Pump rating: 20 GPM @ 2,200 PSI (80 LPM @ 150 bar)
- Operational rating: 20 GPM @ 1,450 PSI (80 LPM @ 100 bar)
- Solid Keyed Shaft
- Brass Manifold
- Stainless Steel Check Valve
- Stainless Steel Plunger Guides
- Bronze Connecting Rods
- Tapered Roller Bearings
- Solid Ceramic Plungers
- Heavy Duty Flat Base
- High Pressure Seals
- Heat Treated Crankshaft.

WATERAX LOW PRESSURE – HIGH FLOW SYSTEM

On the low pressure/high volume side can operate at the following flow rates

- 274 GPM@50PSI
- 220GPM@100PSI
- 112GPM@150PSI

Diesel Power Package

- Diesel 999CC engine
- Integrated Battery with starter wiring
- Fuel Pick Up Line for customer supplied vehicle
- Auto Idle feature when nozzle bale is closed

HYDRAULIC DRIVE PACKAGE (PTO Option Only).

The fire fighting system shall be powered by a hydraulic package consisting of the following components;

Hydraulic Pump
Hydraulic Motor
5 gallon (19 L) Hydraulic Reservoir
Hydraulic Cooler
Thermostat
12 VDC hydraulic control valve
PTO (supplied by OEM)

INSTRUCTIONS AND LABELING

A fire fighting pump instruction nameplate and necessary warning labels shall be installed on the assembly (English language).

PANEL LIGHT

The pump control panel shall be provided with an LED 12 volt light with switch.

PUMP CONTROL PANEL

The control panel shall be ergonomically designed and operator friendly. The panel shall be labeled and installed to be easily visible from the operator's position. The following instruments and controls shall be installed:

- Emergency Stop/Master Switch (red)
- Override water “on” push button
- Override abrasive “on” push button
- Override safety control button
- Control panel light and switch
- One (1) pressure gauges

PLUMBING

The fire fighting system shall be plumbed with high pressure hydraulic type hose, plumbing and fittings. This shall include double wire braided high pressure hoses of various sizes, zinc plated steel hose ends, and plated steel hydraulic fittings. The threads shall be male and female NPT, JIC, SAE O-ring style in various sizes. Rigid plumbing shall be in zinc plated steel piping with pipe fittings of zinc plated steel.

BYPASS UNLOADER VALVE

The ultra-high pressure plumbing system shall include a bronze adjustable by-pass unloading valve set for the maximum working pressure of the system. The valve shall unload the main pump to the intake side of the pump.

PRESSURE SAFETY, EASY START, THERMAL RELIEF VALVE

The ultra-high pressure plumbing system shall include the following devices:

- a.) One (1) pressure safety relief valve which shall relieve water pressure to atmosphere; set at a slightly higher pressure than the unloading valve.
- b.) One (1) thermal relief valve which shall open if water temperatures exceed 145 F (62 C) degrees; designed to protect the pump from high temperature conditions and relieve the water to atmosphere.

INTAKE FILTER

A 1-1/4" (31 mm) water filter with 32 mesh stainless steel screen shall be installed in the water supply line to the fire pump. The filter shall be accessible for cleaning the screen.

ELECTRICAL WIRING

Necessary low voltage automatic circuit breaker protection shall be provide where required. Wiring shall be stranded copper automotive type, sized for the appropriate electrical load. Exposed wiring shall be protected with convoluted split plastic loom; such looms shall be mechanically secured. Wiring shall be run in protected areas or enclosed in metal panels where subject to mechanical injury. Electrical connections and termination of wiring shall be within weather proof plastic enclosures with waterproof strain reliefs and connectors.

WATER TANK SUPPLY LINE

A 1.25" (31 mm) water tank to fire pump line shall be installed as follows:

- From the fire pump to the water filter shall be a 1.25" (31 mm) flexible transparent hose.
- 15' (5 m) of 1.25" (31 mm) flexible water hose with removable connections and clamping devices.
- One (1) 1.25" (31 mm) manual two way tank to pump control valve.

DISCHARGE PRESSURE GAUGE

One (1) 2.5" (62 mm) liquid filled pressure gauge shall be installed from the discharge side of the ultra high pressure fire pump, with the gauge mounted on the pump panel.

ELECTRIC REWIND HOSE REEL – ULTRA-HIGH PRESSURE (Optional two reel system upon request)

One (1) painted ultra-high pressure steel hose reel shall be installed. The reel shall have a leak proof ball bearing swing joint, electric 12 volt rewind provisions. The reel system shall have a minimum of 4:1 safety ratio and designed for a 2,000 PSI (135 bar) working pressure.

Each reel shall be equipped with a locking pin assembly.

One (1) push button electric rewind control shall be installed near the reel. The wiring from the hose reel electric box shall be protected with conduit or loom.

The hose reel shall be equipped with a electrical wiring junction box of plastic construction with a sealed cover assembly. The box shall house the reel solenoid, circuit breaker, and electrical wiring for the rewind control circuit and electric rewind motor power supply. The electrical supply shall be sized for the reel motor for both positive and neutral cables. The electrical supply wiring shall be supplied from the main electrical supply box for high pressure pump skid or module. The supply line to the reel shall have a quick disconnect connection at the main electrical supply box.

The high pressure hose reel shall be supplied by a ½" (12 mm) hydraulic type wire braided flexible hose line.

One (1) chrome plate hose roller assembly shall be supplied for protection of the hose during hose removal and rewind operations.

The hose reel shall fit in a 26" (66 cm) wide by 26" (66 cm) deep by 26" (66 cm) high envelope.

REEL MOUNTED ULTRA-HIGH PRESSURE HOSE

200 foot (60 m) length x 3/4" (19 mm) hose shall be installed with threaded couplings. The hose shall have a working pressure of 3,125 psi (215 bar).

NOZZLE -- ULTRA-HIGH PRESSURE

One (1) 20 GPM (80 LPM) ultra-high pressure pistol grip fog nozzle shall be provided for the high pressure fog reel.

PYROFOAM CLASS A FOAM SYSTEM

The system shall be equipped with a Class A PyroFoam Foam System.

The system shall inject concentrate on the suction, (low pressure), side of the UHP water pump. It shall be plumbed to prevent contamination of the water supply tank with foam concentrate and/or foam solution.

FACTORY TESTING PRIOR TO SHIPMENT

The entire pump and the plumbing system shall undergo a complete factory test. These test results shall be provided with shipment.

WATER/FOAM/SKID UNIT

500 gallon water tank with integrated 10 gallon foam cell on a 1" poly skid with 1"+ skid plates for easy forklift access. The tank portion will also have a 1" top giving the option mount additional tools. *Need skid dimensions.

TRAINING REQUIRED

Due to the extremely high pressure of this product and the potential for injury or death if used incorrectly, we require the end user of this product to take a minimum one day training and evaluation of proper use and care provided by Irwin's Safety.

INSTALLATION (Optional PTO system only)

The builder has requested a separate price for installation of the pump skid, this price assumes that the PTO will be installed in the appropriate place agreed upon after the contract is awarded by both parties.

GFS Terra Torch®

- The GFS Terra Torch® boasts an all-aluminum tank and frame engineered for gasoline that is lightweight. This weed burning torch is strong and built tough for years of service. The GFS Terra Torch® tank includes spill containment, internal fuel/gel mixing manifold eductor system, Betts 10” manway hatch with integral overturn spill protection, as well as a normal P/V vent and emergency venting provisions.
- The unit also features a 2-inch Protectoseal safety cap with flash arrester designed for safe fuel filling, and a tank system with rollover cage engineered and built exclusively by Superior Steel Products, Inc. The motor/pump frame is all aluminum construction designed to protect motor, pump, and plumbing system.
- Honda GX160-LX2 gas motor, brass gear pump with 12-volt electromagnetic clutch ensures instant pressure, safety and excellent performance.
- Unique 12-volt GFS GelGun activates the pump on demand combining safety with performance propelling ignited gelled fuel effectively 25 to 75 feet.
- Quick connect flush face (Dry Break) hydraulic hose fittings are included for ease of operating, transporting, and storing with no drip containment. Fire hose pulled over grounded GelHose and 12-volt wiring system provides protection and longer hose life. Plumbing system includes a 7-valve design allowing mixing/recirculation, GelGun operation, drafting from tank, auxiliary fuel source and or transferring. Safety pressure relief bypass valve system with a pressure gauge for optimum performance and accurate pressure settings.
- Also included is a 12-volt enclosed interchangeable control box which allows the operator safe pump controls for fueling, mixing and GelGun operation, plus 12-volt switch emergency shutoff. GelGun rack design secures GelGun during transportation and storage while maintaining accessibility. Dual hose racks for transporting, storing, and securing GelHose during operation. Re-tractable bonding reel and vehicle grounding cable is included. Forklift slots built into the unit frame allows for easy loading and unloading.
- Included Accessories: 12-foot, 20-foot GelHose system, 12-volt trickle charger, auxiliary 10-foot transfer hose, transfer & fill adapter, fire extinguisher with mounting rack, nylon ratchet tiedown strap, auxiliary emergency stop switch, adjustable wrench & pliers and operational manuals.



GelFire Systems GFS 75 Terra Torch® has all the benefits and features of the GFS 50 Terra Torch®, but on a larger scale. With 25 gallons of additional fuel space, the GFS 75 Terra Torch® is the unit of choice for those looking to optimize efficiency with less downtime refueling and mixing.

- Dimensions 40 in. W x 42 L x 36 in. H, Frame: Tube aluminum.
- 75 gallons – ASTM Grade B209 5052 – H32 aluminum
- 10-inch manway with lid, spill containment
- 1"x1" tube aluminum tank cage with roll-over protection
- 2 2-inch fill spouts
- Gel fuel capacity 75 gallons
- Dry weight with accessories estimated 475 pounds
- Gross weight with accessories 900 to 975 pounds



DATASHEET

FIREBOZZ MINI



SPECIFICATIONS

DIAMETER OF PROTECTIVE ENVELOPE	Up to 190' (58m)
WATER USAGE	27 - 88 gpm (102 - 333 lpm)
NOZZLE HEAD SIZE	.3", .4", and .5" (8, 10.2, 12.7mm)
INLET / OUTLET	Standard 1.5" (40mm) NPT connector for any adaptor.
WEIGHT	24 lbs (11 kg)
STORAGE DIMENSIONS	18" x 19" x 11" (46cm x 48.5cm x 28cm) / L x H x W

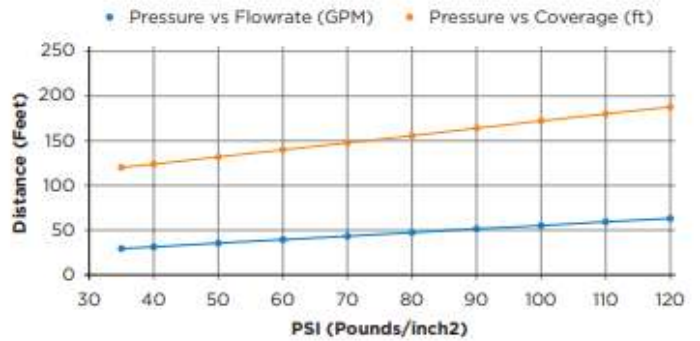
FEATURES

- Quick and easy setup on any terrain
- Tough, welded stainless and aluminum construction
- Does not damage houses located in the interface environment
- Multi-purpose water dispersal for emergency, municipal works and resorts
- Easy set up and walk-away feature allows operators to get out of harm's way
- Broken stream allows maximum conservation of water resources
- Loads the air with protective misting envelope to raise relative humidity values over a wide area
- Multiple units can be connected for quick, and extremely large, robust wet line
- Custom sizes available in both models - contact us for details

NOZZLE → TYPE.31"

PSI (Pounds/inch ²)	GPM (Gallons/Minute)	DISTANCE (Feet Diameter)
35	29	120
40	31	124
50	35	132
60	39	140
70	43	148
80	47	156
90	51	164
100	55	172
110	59	180
120	63	188

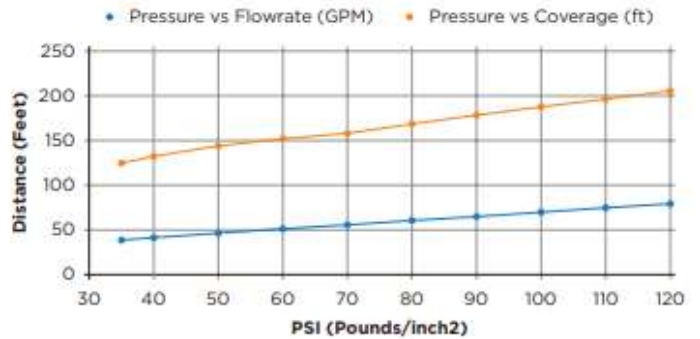
Max Coverage: 0.35 ac



NOZZLE → TYPE.39"

PSI (Pounds/inch ²)	GPM (Gallons/Minute)	DISTANCE (Feet Diameter)
35	39	126
40	41	132
50	46	144
60	51	152
70	55	158
80	60	169
90	64.5	178.5
100	69	187.5
110	74	197
120	78.5	206

Max Coverage: 0.77 ac



NOZZLE → TYPE.47"

PSI (Pounds/inch ²)	GPM (Gallons/Minute)	DISTANCE (Feet Diameter)
35	50	134
40	54	140
50	60	152
60	66	166
70	71	178
80	77.5	191
90	83.5	203.5
100	89.5	216
110	95.5	229
120	101.5	241.5

Max Coverage: 1.05 ac

