

## 1000 GALLONS RESUPPLY FOAM TRAILER



CET fire Pumps manufactures a variety of foam trailers from 150 to 2,000 gallons. These versatile trailers are ideal for use in Industrial, commercial, municipal and forestry environments.

Foam trailers provide a very effective tool for airport fuel storage and power plant installations.

### WHY DO YOU NEED FOAM?

- Foam is needed for any fire or spill involving flammable or combustible solids or liquids
- Water will not float on hydrocarbon products such as gasoline or diesel fuel.
- Water used on a fire in a contained area may sink, runoff or overflow.
- Foam reduces toxic and flammable vapors given off by fuels.

CALL YOUR CET DEALER, REGIONAL MANAGER, OR OUR OFFICE DIRECTLY FOR MORE INFORMATION.



**ACCEPT ONLY THE BEST™** 75 Hector St., P.O. Box 90, Pierreville (Québec) Canada J0G 1J0 | Telephone: 1-800-567-2719 | Fax: 1-800-434-2613 | [www.fire-pump.com](http://www.fire-pump.com)

**A CENTURY OF ENGINEERING FOR THE BRAVEST**

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## GENERAL INFORMATION:

The following specifications are for a mobile foam resupply trailer of 1000 gallon capacity with accessories for use as a firefighting unit.

The trailer is intended to be towed by a support vehicle, of adequate capacity, to the scene of a fire and/or various types of spills for the purpose of fire suppression support. A one person operation shall allow for the transfer of foam to the fire at the scene of major incidents.

Product shall be completely brand new and of the best quality materials currently used in commercial practice for emergency vehicle fabrication. Materials that deteriorate when exposed to sunlight, extreme weather or operational conditions shall not be used or shall have a means of protection against such conditions that will not prevent compliance with performance standards. Protective coatings that chip, crack, or scale with age or extremes of climatic conditions or by exposure to heat or cold shall not be used.

The foam resupply trailer shall comply with all applicable Motor Carrier Safety Regulations, as it pertains to municipal emergency firefighting, concerning size, weight, brakes, lights, load rating and balance. Conformance must meet FMVSS#108, FMVSS#115, FMVSS#120, and FMVSS#125 as stated in FCR title 49 in effect at time of delivery.

Weight shall be distributed as equally as practical over the axles and tires of the fully loaded vehicle. Fully loaded units that are unbalanced during stand alone operations or while being towed will not be accepted. Tires, wheels and axles shall be adequately sized for the load imposed by the in service weight of the completed trailer.

The use of proven nonmetallic materials in lieu of metal is permitted if that use contributes to reduced weight, lower cost or less maintenance and there is no degradation in performance or increase in long term operations and maintenance costs.

Foam resupply trailer must be constructed with lowest possible center of gravity when fully loaded with foam concentrate, tools and the appliances specified herein. Performance must be commensurate with smooth and safe highway and moderate off highway operation. Proper weight and balance configuration is essential.

## I. TRAILER, TANK, AND COMPARTMENTS

### A. TRAILER FRAME

**GVWR** – Gross vehicle weight rating shall not exceed 14000 pounds when fully loaded and equipped.

**Size** – Overall size of completed trailer (less packaging) not to exceed (approx..) 240" long, 90" wide, 70" high when measured from the ground surface.

**Frame Weldment** – The main trailer platform, cross members and a-frame hitch shall be constructed from rectangular tube steel and entirely MIG welded for maximum strength and torsional stiffness. Frame cross members shall be adequately spaced to support the load of the tank. A channel shaped rear bumper shall be included at the rear behind the tank to protect the rear of the tank. A .125 high bright aluminum diamond plate step area approximately 6" deep x 60" wide shall be provided for reaching the top of the foam tank. The A-Frame nose tubes shall under lap the main frame tubes for maximum strength in this area. A .125 thick aluminum plate shall be provided at the nose area of the trailer for the mounting of the transfer pump.



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**Lashing Points** – There shall be (4) lashing points which shall allow the trailer to be safety lashed to the deck of a trailer should the trailer need to be moved other than towing it. These lash points shall be made from  $\frac{3}{4}$ " diameter solid steel and bent to form a "V" and shall be positioned appropriately (2) each side of the main trailer frame tubes.

**Fenders** – Trailer fenders shall be heavy duty steel diamond plate type with center reinforcement supports. They shall support a firefighter in full turnout gear.

**Axles** – There shall be two axles, each with a rated capacity of 7,000 lbs. properly located under the trailer frame. Each wheel is to have individual functioning electric brake. Brakes shall have slack adjusters accessible from the back side of the backing plate. The bearings shall be sealed grease type. Hubs shall be cast type with pressed in wheel studs. The suspension shall meet or exceed the capacity of the axles and shall have slipper type springs. The main equalizer pivot point of the suspension shall have grease fittings.

**Tires and Wheels** – Tires to be ST235/80R16LRE. Wheels to be 16 x 6 rated for 3500 lbs. at 80 psi. and shall be matched to tires.

**Tow hook/Actuator** – Military pintle ring type adjustable hitch shall be provided. Safety chains with slip hooks rated for 7000 lbs. each shall be provided at the front of the trailer. A break away line and trailer mounted battery shall be provided to activate brakes should the trailer become uncoupled from the tow vehicle.

**"A" Frame Stand** – One heavy duty 2,000 pound crank down detachable type stand to support the loaded trailer during stand alone trailer operations shall be provided.

**Trailer Electrical Plug** – A round 7 pin male connector shall be provided at the extreme front of the nose tube with at least a 30" cord extending beyond the front of the trailer. The matching female plug shall be provided with a wiring diagram for proper interface between the tow vehicle and the trailer. The main power cord shall terminate into a main sealed junction box located under the nose of the trailer. All wiring shall extend from this box as required. Wiring shall be heavy duty all weather type insulated sized properly for all applied loads and protected from damage by foam concentrate overflow and normal use. Electrical schematic to be provided for wiring tow vehicle. All wiring to be GXL cross linked with color coded function imprint every 4". All wiring shall be in protected channels of metal conduit.

**Tail, Clearance and License Plate Lights** – The trailer lighting shall comply with FMVSS section 108 of FCR 49. There shall be two combination stop-tail-turn lights recess and shock mounted into a channel bumper at the rear of the trailer. Individual clearance lights on brackets shall mark the corners and rear of the trailer as required. A license plate light and bracket shall be located on the street side rear tapered plane of the fender.

**Warning Lights** – Two rear 7 x 8 red flashing LED lights shall be provided on the rear of the trailer. These lights shall be powered from the vehicles 4 way emergency flasher circuit.

**Rear Tank Overlay** – The rear of the tank below the hose bed shall be overlaid with 1/8" high bright aluminum diamond plate to protect the back of the tank from hose and couplings.

**Work Lights** – Two 2.5 x 6 clear lights shall be mounted (1) each side of the pump to illuminate all pump and piping controls for night operation. The switch for these lights shall be on the pump control panel. The power for these lights shall be from the main tail light circuit when the trailer is plugged into the tow vehicle.



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## B. FAOM TANK

**Size** – Capacity for 1000 U.S. gallons. Low center of gravity type with adequate baffles.

**Construction** – The foam tank shall be constructed of ½” thick polypropylene sheet stock with PolymarCo-PP resin. The material shall be a non-corrosive stress relived thermo-plastic, black in color and UV stabilized for maximum protection. The tank shall be designed to be an independent component of the completed vehicle. All joints shall be welded and tested for maximum weld integrity. The transverse partitions are to be fabricated from 3/8 polypropylene and shall be natural in color and shall extend from within 4” of the tank floor to the underside of the covers. The longitudinal partitions shall be fabricated from ½” polypropylene (black in color) and extend from the floor thru the covers to allow for positive welding and maximum integrity. All partitions shall be equipped with vent and flow holes to permit proper flow of foam and air within the tank under all conditions. All partitions interlock with each other and are fully welded to the sidewalls of the tank as well as to each other. The tank covers shall be of a flush design to eliminate trapping of water or foam on the top surface.

**Fill Tower** – A fill tower shall be constructed which will allow the tank to be filled from 5 gallon foam cans. This tower shall be configured to allow two cans to be poured simultaneously into the foam tank. The design shall let the main tank vent as well as positioning the 5 gallon cans to fully self draining. The tower shall have a hinged lid and a retaining devise to stop the lid from folding over on itself. A pressure vacuum vents shall be installed in this tower lid to eliminate air exchange unless foam is pumped into or out of the main tank or if thermal expansion or contraction of the liquid occurs. A label on the outside of the tower to read “FOAM CONCENTRATE ONLY”.

### Sump

A sump shall be provided to trap any foreign items that may become trapped in the tank. The sump shall be fabricated from ½” copolymer sheet stock and shall be permanently welded to the bottom of the tank.

### Sump Drain

The floor of the sump shall be fitted with drain outlet. A 2-1/2” port in the sump shall be piped to a 1-1/2” valve to allow the tank to be drained. The valve shall be labeled “DRAIN – FOAM CONCENTRATE”.

**Gauge** – A vertical 2” wide translucent section of the tank shall be provided near the pump operator’s position to accurately monitor foam level within the tank. Tanks utilizing electronic level devises will not be acceptable.

## C. COMPARTMENTS

**Hose Compartments** – There shall be two (2) cross lay type hose beds approximately 14” H x 12” W across the front of the tank. Each compartment shall have a minimum capacity of 200 feet of 1.75” double jacketed fire hose. These hose beds shall hold the hose to be used for foam concentrate transfer operations. Each cross lay shall be labeled “CROSS LAY – CONCENTRATE #1 AND CROSS LAY CONCENTRATE #2” respectively.

**Tool/Adapter/Accessory/Compartments** – There shall be one compartment on top of the foam tank immediately behind the cross lay beds on the street side constructed of polypropylene. The compartment shall be fitted with a bright aluminum diamond plate cover and equipped with a hold open devise and a draw type latch. A weather resistant seal shall be provided on the cover. Drain provisions to allow any water entering the compartment to drain out shall be provided.

**Large Diameter Hose bed** - A hose bed open to the rear of the trailer shall be provided on top of the tank. It shall be the entire top width of the tank and shall occupy approximately two thirds of the total tank top surface. The bed shall have 3 sides to form the walls. The side walls shall be capped with 1” OD tubes with a rear 3” radius to allow hose to pay out without damage. This hose bed area shall have a capacity of 1000 ft of 5” LDH or 1200 ft of 4” LDH.



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## II. PUMP

### A. Pump

There shall be a 150 GPM self-priming gasoline driven pump for on loading and off loading the foam concentrate. Pump to be cast iron with foam resistant internal components. Pump is to have an electric start with recoil back-up, gasoline driven, fuel tank and battery. A battery box shall be fabricated from ¼" co-polymer polypropylene sheet stock to hose battery. This box shall have a removable cover and shall have 5" x 5" vented side panel. The pump shall be mounted at front on the "A" frame portion of the trailer frame. A plastic isolator shall be installed under pump to eliminate contact of dissimilar metals. Provisions to manually fill the pump initially shall be provided. This shall be labeled "FILL TO PRIME". A yellow warning label shall be placed near the pump start controls which reads. "DO NOT RUN ENGINE WITH PUMP DRY OR PUMP SEAL WILL BE DAMAGED. FILL PRIME PORT PRIOR TO STARTING".

### B. Pump Connections and Piping

The permanently mounted pump shall be capable of pumping foam concentrate from the tank or from 55 gallon drums. All piping shall be stainless steel or high pressure foam resistant hose. All concentrate valves shall be bronze body full flow with chrome plated brass ball with a nylon seat. Valves shall have lever type handles for rapid opening and closing.

**NOTE :** All plumbing shall be designed for easy maintenance and/or replacement using grooved couplings or mechanical couplings.

1. Provide one (1) 2" suction piping arrangement from the tank to the pump with a ¼ turn tank isolation valve mounted at the tank. There shall be a label to identify this valve as "TANK TO PUMP"
2. Provide one (1) 1.5" NST-M inlet on main tank to pump (suction) line to be used as an auxiliary suction port connection for a pick up tube device through the suction side of the pump. Also, provide cap and chain for the 1.5" inlet. This inlet shall be labeled "AUX. SUCTION"
3. Provide two (2) 1.5" gated concentrate outlets from discharge side of pump. Both shall be plumbed to the bottom of each of the two cross lay hose compartments for concentrate transfer operations. Each discharge shall terminate in a 1.5" 90° continuous type brass swivel device mounted below hose beds to facilitate left or right side deployment of foam supply hose without kinking from the pump. Each valve shall be labeled "CROSS LAY – CONCENTRATE #1 AND CROSS LAY CONCENTRATE #2", respectively.
4. Provide (1) gated concentrate outlet from the pump back to the tank to allow foam to be on loaded into the tank from the on board pump. The inlet connection within the tank shall extend straight downward to within 1" of the floor to reduce foam agitation while filling.

## III. ACCESSORIES

Provide the following accessories for use with the foam resupply trailer:

### A. Suction Hose

Provide one (1) approximately 72" long PVC 1.5" suction line with an 18" and a 40" PVC pipe pick up tube for drawing concentrate from 5 gallon cans or from 55 gallon barrels. This suction hose assembly shall also have a PVC 1-1/2" quarter turn ball valve located at the suction end of the hose to allow the pump operator to control foam flow into the pump while switching concentrate supply containers. Provisions shall be made to safely carry these items on the trailer.



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## B. Fill Nozzles

Provide two fill nozzles for the end of each of the concentrate hose bed hoses. Each fill nozzle shall consist of a 1-1/2" quarter turn PVC ball valve with a 1-1/2 NST-F swivel inlet x 1-1/2 NST-M outlet. These are to allow for direct bottom filling of foam tanks. Two 90 degree pipe extensions shall be included that are approximately 42" in length and have a 1-1/2" NST-F swivel inlet connection. These can be added to the fill valves for top filling of other foam tanks through there fill towers. Provisions shall be made to safely carry these items on the trailer.

## C. Manuals/Instruction

Technical manuals, parts manuals, and repair manuals for all installed equipment and accessories shall be provided with the trailer. They shall include all maintenance recommendations and full operational information for each function that the trailer is designed to perform.

## Wheel Chocks

One set of wheel chocks shall be provided to allow the trailer to operate as a stand alone unit. Provisions shall be made to safely carry these wheel chocks on the trailer.

## IV. TREATING AND PAINTING

### A. Painting

A proven urethane automotive paint system shall be used to prime and paint the foam resupply trailer and the tank. Prior to priming, the entire steel trailer frame weldment shall be sand blasted to remove all mill scale and oils. Then it is to be hand sanded and primed. Any areas of overlapping seams shall be caulked after priming and before finish top coat. A bottle of touch up paint matching the top coat color shall be provided. The paint finish shall be of an automotive type quality. The color is to be as follows :

COLOR \_\_\_\_\_ Paint color number \_\_\_\_\_

### B. Lettering

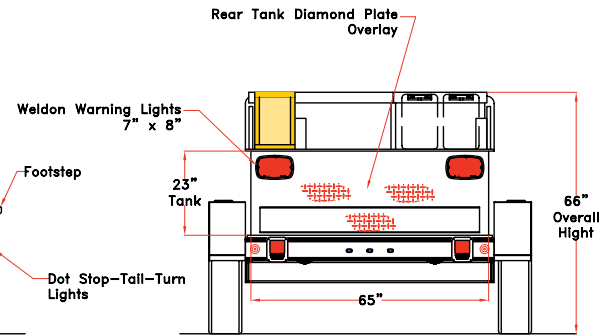
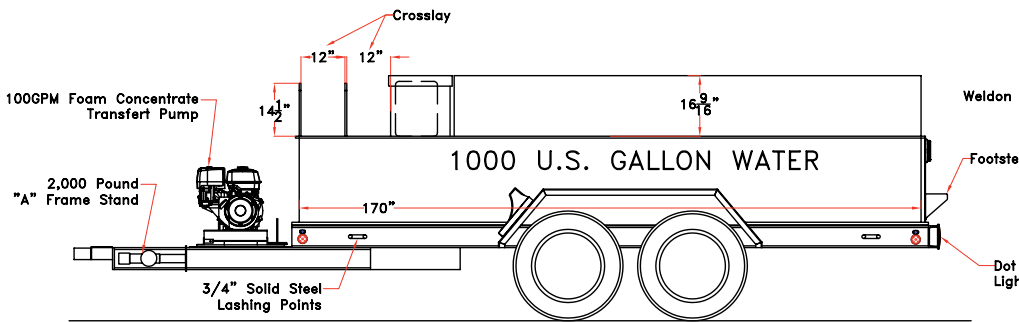
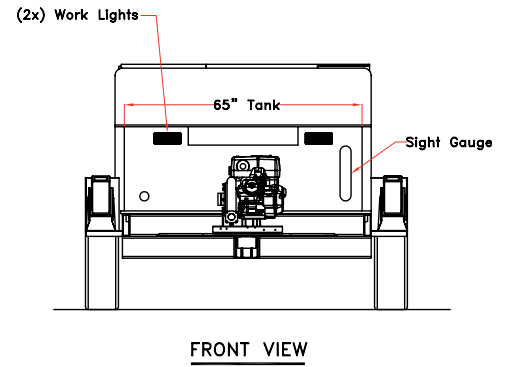
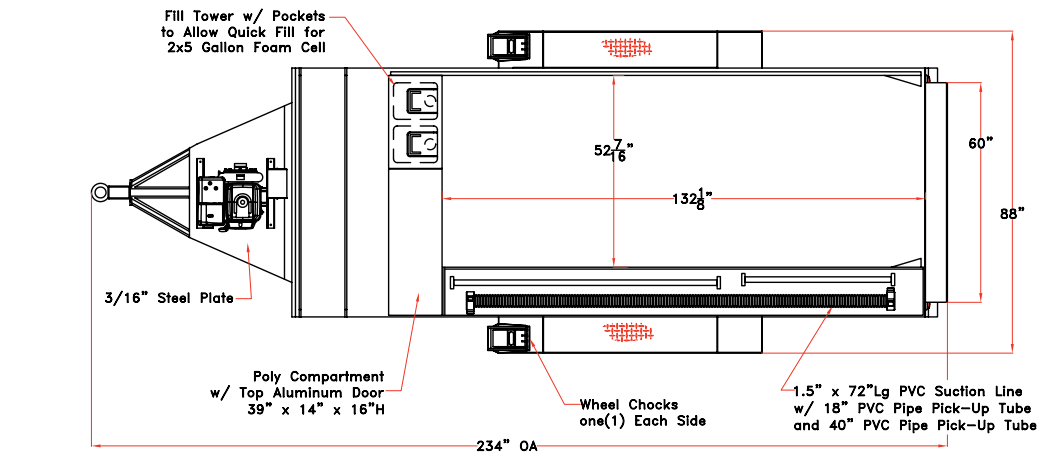
The trailer shall be lettered as directed below.  
(up to 80 2" or 3" letters are to be provided. Up to two 3" stripes may be specified. All lettering to be Scotchlite. )

Lettering sides of trailer \_\_\_\_\_

Striping sides of trailer \_\_\_\_\_



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