Feld Fire Custom Skid Unit Configuration 01

BOOSTER TANK

Construction

A 225 US gallon UPF Defender 3 tank shall be supplied and constructed of 1/2" thick textured polypropylene sheet stock with AccTuf resin. The material shall be of a certified, high quality, non-corrosive; stress relieved thermoplastic, black in color. The tank shall be so designed to have complete modular slide-in capability. All joints and seams are to be completely nitrogen welded and electronically tested for maximum strength. The unit shall incorporate transverse & longitudinal partitions manufactured of 3/8" UPF PT2E polypropylene (natural in color) which shall interlock. All swash partitions shall be so designed to allow for maximum water and air flow between compartments and are to be completely welded to each other as well as to the inside of the tank. The passenger side rear wall of the tank shall have a standard built-in liquid level sight gauge 2" in width, natural in color, and 70% transparent.

Fill Tower and Tank Cover

The tank shall be equipped with a combination vent/overflow and manual fill tower. The fill tower shall be 8" round by 6" high with a molded shoebox type cover. The cover shall be fastened to the tower with a tether to prevent loss. The tower shall be located in the rear passenger's side corner. There shall be a vent/overflow installed inside and to the extreme rear of the tower approximately 2" down from the top. This vent/overflow shall be schedule 40 polypropylene pipe and have an ID of 3". The vent/overflow shall be piped internally toward the front and exit the front tank wall with a 1" extension.

The tank cover shall be constructed of 1/2" black PT2E polypropylene, and incorporate an exclusive one-piece self-lock design. The tank cover shall be flush mounted and fully removable for up to 100% access for inspection or repair if necessary. The cover shall incorporate four (4) polypropylene dowels for hold down and lifting provisions. These dowels shall be tapped 1/2"-13 to accommodate lifting eyes with a minimum security factor of 3 to 1. These dowels shall be welded into the transverse baffles, and will assist in minimizing cover flex during normal operation.

Sump

There shall be one sump as standard per tank. The sump shall be recessed into the tank floor and be a minimum of 5/8 ". The sump shall not be visible from or protrude through the bottom of the tank.

Outlets

There shall be two standard outlets located on the same vertical plane on the driver's side rear tank wall: One (1) 2 1/2" FNPT suction fitting and one (1) 1" FNPT tank fill with flow deflector. There shall be one (1) 1" FNPT tank drain located on the rear tank wall towards the passenger's side.

Mounting Blocks

The cover shall incorporate two (2) booster reel mounting blocks that shall be slotted to accommodate two (2) each sliding "T" nut fasteners. These mounting blocks shall be welded to the covers running from the rear edge of the tank forward.

Skid Base

There shall be a full-width skid base manufactured of 3/4" PT2E polypropylene incorporated into the tank floor. This base shall be 48" wide by 96" long and shall extend 34" past the tank in the rear to provide for pump mounting. The pump mounting area shall be supported by 1/2 " PT2E polypropylene gussets 15 " high by 32" long. The gussets shall be equipped with 2" lifting holes to assist in lifting the unit.

This base shall have provisions for mounting both front and rear. These mounts shall allow for the tank to be secured directly to a truck bed. The skid base shall also incorporate a 5" raised design between the base and the bed through the use of a U channel in line with the truck frame rails. This will allow for tool storage within the frame rails between the base and the pickup bed. There shall also be a treadplate door constructed at the rear of the skid to keep the loose tools from coming out of the storage area. Door shall have a positive lock mechanism incorporated into its design.

PORTABLE FIRE PUMP

Waterous PB18-2515

There shall be a Waterous, PB18-2515, portable pump installed on the slide-in unit

Pump Engine

Briggs & Stratton, model 356447, Vanguard V-Twin air cooled, overhead valve (OHV) design delivers a maximum output of 18 HP @ 3600 RPM. 34.75 cu. In. displacement, 4-cycle, gasoline fueled, horizontal shaft.

- The engine shall be fueled from a remote 3-gallon tank with fuel level gauge.
- A full pressure lubrication system with an automotive style oil filter shall be used. An oil fill tube with dipstick shall be provided.
- A 12-volt electric starter with manual recoil shall be used.

Pump Construction

- The pump body shall be a high strength aluminum alloy, anodized for superior corrosion resistance.
- The pump impeller shall be high strength corrosion resistant bronze, fully enclosed, double hubbed to balance hydraulic thrust, mechanically balanced to eliminate vibration.
- Wear rings shall be long wearing bronze, easy to replace when required to restore original pump efficiency.
- The shaft sleeve shall be high strength stainless steel with a spring loaded mechanical type shaft seal.
- A fast and easy to use, combination spark arresting muffler and exhaust primer shall be utilized.

Performance

The pump shall be capable of the following:

-75 GPM @ 135 PSI
-150 GPM @ 90 PSI

Pump Console

The pump shall have a control panel mounted at the pump operator's position. This panel shall contain the following:

-Speed control
-Start and stop control
-Low oil pressure warning light
-2-1/2" Discharge pressure gauge
-2-1/2" Intake pressure gauge

Pump Drain

The pump shall have a brass drain valve to allow draining of the pump and plumbing on the pump side of the valves.

PLUMBING

All valves shall be ¼ turn Akron Brand, full-flow ball valves. They shall be heavy-duty forged brass with a stainless steel ball. Valves shall be installed within easy reach of the operator to allow for valve control.

A combination of Stainless Steel and High Pressure Flexible Piping, designed for the fire service industry, shall be used throughout the entire plumbing system. Units that use steel or galvanized fittings shall not be acceptable.

INTAKE PLUMBING

Tank to Pump

There shall be a 2 ½" tank to pump valve installed. There shall be a flexible connection used between the tank and the valve.

Intake

A 2 ½" hydrant/draft connection shall be provided on the intake side of the pump. It shall incorporate into the tank to pump line and have a separate ¼ turn valve to control it. It shall incorporate a stainless steel T

into the pump to allow for direct hydrant/relay pump operation into the pump. It shall terminate in a 2 ½" MNST fitting, with a cap and chain.

Discharge Plumbing

There shall be a welded **Stainless Steel** manifold constructed on the discharge side of the fire pump. This configuration allows for control of all discharge valves from a common area of the apparatus. This manifold shall contain the following:

1 ½" Discharge

There shall be one 1 ½" discharge located on the pump manifold. It shall terminate in an MNST fitting, with cap and chain.

Booster Hose Reel

There shall be an Akron ERWB-22-20, electric rewind booster hose reel located on top of the booster tank. It shall be plumbed with a 1" valve and contain 200' of 1" forestry hose. It shall also incorporate hose rollers to allow for smooth hose layout from either side of the apparatus and assist in hose rewind. There shall be a reel rewind button located on each side of the reel and one at the pump console for rewinding of the hose. Reel shall be red in color.

Tank Refill/Recirulation

There shall be a 1" pump to tank valve located on the pump manifold to allow for tank refill and recirculation of water.

Hose Tray

There shall be an aluminum tread brite hose tray installed on the skid for storage of 1 ½" fire hose. It shall be approximately 60" long by 8" wide by 8" deep. The hose tray shall have a hinged aluminum cover and netting on the open end to meet **NFPA 1901** requirements pertaining to enclosed hose storage compartments.

Hydrant/spanner wrench combination set

A combination hydrant/spanner wrench set is to be included.

Chain Saw mounting bracket

A mounting bracket for a chain saw with a 16" bar is to be included in the bid. The footprint for this bracket will be approximately 15" by 22" and shall be made of treadplate with form bent sides of approximately 6" in height. There shall be drain holes in the bottom of the bracket and it shall be fastened to the skid.

Leaf Blower mounting bracket

A mounting bracket for a back-pack style leaf blower is to be included in the bid. The footprint for this bracket will be approximately 14" by 21" and shall be made of treadplate with form bent sides of approximately 6" in height. There shall be drain holes in the bottom of the bracket and it shall be fastened to the skid.

Scotty Around the Pump Foam System

- There shall be a Scotty "Around the Pump", Foam inductor/mixer #4071, installed on the skid pump. This unit shall be calibrated to induct foam concentrate ratios of .1%, .5%, and 1% into hoses flowing 8, 15, 30, and 50 GPM.
- The system shall be plumbed in-line between the discharge manifold and the pump intake. A quarter turn valve shall be provided for turning the system on and off quickly.
- A clear pick-up tube with a strainer shall be provided to draw foam from 5-gallon pails.