



NIXA FIRE PROTECTION DISTRICT

301 South Nicholas Road Nixa, MO 65714
Business (417) 725-4025 Fax (417) 725-2393

Request For Proposal

Skid Unit

Date: 03/20/2024

The Nixa Fire Protection District is seeking bids for one complete slide-in type poly skid unit as specified below. Proposals can be mailed to (301 S. Nicholas Rd, Nixa MO 65714), or dropped off in person to the Nixa Fire Protection District Headquarters by April 12th, 2024 before 4:00pm. Proposals must be marked "Skid Unit Proposal."

The Nixa Fire Protection District reserves the right to reject any/all bids that do not meet the listed specifications listed below, waive variations or formalities, and negotiate changes, additions, or deletions. The Fire District may accept the bid that it deems to be in its best interest and is not obligated to accept the lowest bid.

If you have further questions regarding the specification listed or the proposal in general, please contact Fire Chief Lloyd Walles @ 417-725-4285 or by email @ lwalles@nixafire.org .

Specifications

Pump: The pump body shall be made of a high resistance aluminum alloy castings coupled together with stainless steel fasteners. The pump impeller and replaceable clearance ring shall be made of bronze material to inhibit galvanic corrosion. The pump shaft seal shall be an automatically adjusted, maintenance free, mechanical type. There shall be a drain petcock valve provided at the bottom of the pump body.

Priming: The pump shall be equipped with an exhaust venturi primer system. The primer shall be capable of priming at a minimum of 13 feet lift. The primer shall be actuated by a single quarter turn valve located off the engine exhaust.

Suction/Discharge: The suction port shall be 2.5" male pipe thread. The discharge port shall be 1.5" with a 1.5" female NPT flange. The flange shall be attached by stainless-steel fasteners.

Engine: The engine shall be a 4-cycle gasoline Honda GX630 series, V-twin, air cooled design. The engine shall be rated at 20.8hp @ 3,600rpm with a torque of 35.6lb-ft @ 2,500rpm. Engine displacement shall be 688cm³ and designed to meet current California Air Resources Board and

Environmental Protection Agency standards. A 12-volt electric system shall be provided with an electric starter and a 17-amp alternator. Engine shall be equipped with a residential muffler with USDA approved spark arrestor.

Engine Option 2 – The proposal shall contain an option for the engine and accompanying pump listed below. This option shall be itemized to show a clear cost difference between the two engine options along with pump performance differences. The second engine option shall be a 4-cycle gasoline Honda GX340 series, air cooled design. The engine shall be rated at 10.7hp @ 3,600rpm with a torque of 19.5lb-ft @ 2,500rpm. Engine displacement shall be 389cm³ and designed to meet current California Air Resources Board and Environmental Protection Agency standards. A 12-volt electric system shall be provided with electric starter and a 10-amp charging coil. Engine shall be equipped with a residential muffler with USDA approved spark arrestor.

Mounting Platform: The pump/engine shall be mounted onto a steel base plate that is powder coated to prevent rust and corrosion. The base plate shall be secured to the skid frame using four (4) rubber isolation feet and stainless-steel fasteners.

Instrumentation: The pump shall be supplied with a control panel. This panel shall include a keyed ignition switch, hour meter, low oil indicator, throttle lever, choke control and 2.5” liquid filled discharge gauge. The control panel shall also include a pump panel light activated by the keyed ignition switch for operations during low light conditions.

Capacity: The tank shall be able to contain an estimated 125-gallons of water. No foam system is desired.

Material/Design: The tank shall be constructed of ½” thick black textured polypropylene sheet stock designed to have complete modular drop-in capability. All joints and seams are to be fusion welded and electronically and hydrostatically tested for maximum strength. The tank shall incorporate transverse and longitudinal partitions manufactured of 3/8” polypropylene which shall interlock. All swash partitions shall be so designed to allow for maximum water and air flow between compartments. All partitions are to be completely welded to each other as well as to the inside of the tank. The tank shall be equipped with a combination manual fill tower and vent/overflow. The fill tower shall be 8” round & 8” tall with a round molded cover. The cover shall be fastened to the tower with a tether to prevent loss. The tower shall be located in the rear passenger side corner. A vent/overflow shall be installed inside the fill tower approximately 2” down from the top. The vent/overflow shall be schedule 40 polypropylene pipe and have an ID of 3”. The overflow shall be piped internally toward the passenger side and exit the tank through the sidewall. The overflow pipe shall be flush with the side wall. This tank shall be designed to fit inside a 6 ½ ft pickup bed. It shall also be designed to properly disperse weight over both front and rear axles.

Outlets: There shall be three (3) standard outlets located on the rear tank wall: One (1) 3” female NPT suction fitting located on the left side. The suction port shall have one (1) sump as standard, and the sump shall be recessed into the tank floor and be a minimum of ¼” deep. One (1) 1 ½” female NPT tank fill with flow deflector centered and slightly down from the top of the tank.

One (1) 3/4" female NPT tank drain located in the rear tank wall on the passenger side and as low as possible.

Sight Gauge: There shall be an externally mounted tank level gauge on the rear passenger wall so that the pump operator can view water level from the pump location.

Adjustable Mounts: The tank cover shall incorporate four (4) adjustable tracking mounts. These mounts can be used to secure the booster reel, hose trays, or tool storage to the tank. These mounting blocks shall be welded to the tank cover and run from the rear edge of the tank forward to the front edge.

Tank Base: The tank base shall have provisions for mounting on both the front and rear. The tank base front shall be of 3/4" polypropylene and shall incorporate pre-drilled, scalloped and reinforced welded tabs, which will allow for three (3) 3/8" bolts to be inserted through each tab for the purpose of securing the tank to the apparatus body. The rear of the tank base shall be considered the poly pump platform used to secure the tank to the apparatus body. The pump platform shall be made of 3/4" polypropylene and contain 1/2" gussets welded to the tank and platform to help strengthen the poly platform. This area shall also house the suppression skid pump/engine.

Intake Plumbing: The intake plumbing shall consist of stainless-steel piping and fittings with Akron 88 series valves. The intake shall be plumbed from the tank port, teed to pump intake and to rear of skid for an auxiliary intake. There shall be one (1) gated valve called the tank to pump valve. The valve shall be a 2 1/2" Akron 8825 fire type with a stainless-steel ball. It shall be installed between the tank suction port & the tee supplying the pump intake. There shall be a flexible connection used between the tank port and tank to pump valve to protect the pump intake from flex and vibration. There shall be one (1) Auxiliary 2.5" connection point for drafting and hydrant filling. It shall be installed rear of the tee supplying the pump intake and terminate at the rear of the skid. The port shall be terminated by a 2.5" female NST adapter with chrome plug and chain.

Discharge Plumbing: The discharge plumbing shall consist of a stainless steel 3" manifold mounted vertically. The manifold shall be attached to the discharge port by using a flange. The discharge manifold shall be located to the left of the pump and in a manner that valves can be control from rear of the apparatus. The manifold shall also be braced to the pump/engine base for added support. There shall be a total of four (4) discharge ports:

One (1) 1.5" discharge port rear facing from the manifold. This port shall have an industrial quarter turn ball valve and be terminated with a 1.5" adapter and chrome cap with chain.

One (1) 1" discharge ports rear facing from the manifold. This port shall have an industrial quarter turn ball valve and be terminated with a 1" NST adapter and chrome cap with chain.

One (1) 1" refill/recirculation port from the manifold. This port shall have an industrial quarter turn ball valve and be terminated to the tank refill port using Class 1 flexible piping.

One (1) 1” reel port from the manifold. This port shall have an industrial quarter turn ball valve and be terminated to the booster reel using Class 1 flexible piping.

Booster Hose Reel: There shall be one (1) Hannay, Model: EF4038-17-18 low-profile booster hose reel located on the adjustable mounting brackets of the tank cover. The booster hose reel shall be capable of holding 150 feet of 1” booster hose. The reel shall include two (2) chrome dual hose guide rollers to assist in hose deploy and rewind. The booster hose reel shall be an electric rewind option. The booster hose reel shall be electrically protected by an approved manual resettable circuit breaker located at or near the pump panel. The booster hose reel shall include one (1) rewind activation button located at or near the pump panel.

Booster Hose: The booster hose reel shall come equipped with 100 feet of 1” rubber booster hose. The booster hose shall be 300psi working pressure with a 600psi burst. The booster hose shall come equipped with 1” male and female NST couplers.

12 Volt Battery Coupler: There shall be a quick connect battery coupler provided on the skid engine to allow for easy removal of the skid. A mating coupler with crimp style post shall be supplied for the department to install to the chassis power and ground feed.

Skid Fuel Cell: The skid pump/engine shall have an aluminum fuel cell custom designed to hold an estimated 5-gallons of fuel. The fuel cell shall be located to the right of the pump/engine. It shall include a 2” fill neck, vented cap, pick-up tube, and secondary vent port.