**Stepp SPHD Dump Style Premix Heater**

**Bidding Specifications**

**1.0 INTENT**

It is the intent of this specification to provide for the purchase of one (1) new and unused STEPP SPHD Dump Style Premix Heater to be used for the purpose of maintaining heat in patching material in order to repair paved surfaces.

The following specification is based upon a STEPP SPHD-2.0. The Public Works Department has evaluated different styles of pothole patching equipment and has determined that this product is best suited for the DPW needs in terms of quality and features. This specification shall not be interpreted as restrictive, but rather as a measure of quality and performance against which all other pothole patchers will be compared.

In comparing proposals, comparisons will not be confined to price only. The successful bidder will be the one whose product is judged as best serving the interests of the DPW when price, product, quality, and delivery are considered. The DPW also reserves the right to reject any or all bids or any part thereof, and to waive any minor technicalities. A contract will be awarded to the bidder submitting the lowest responsible bid meeting the requirements.

**2.0 EQUIVALENT PRODUCT**

Bids will be accepted for consideration on any make or model that is equal or superior to the pothole patcher specified herein. Decisions of equivalency will be at the sole interpretation of the DPW. A blanket statement that equipment proposed will meet all requirements will not be sufficient to establish equivalence. An original manufacturer’s brochure of the proposed product is to be submitted with the proposal.

**3.0 INTERPRETATIONS**

In order to be fair to all bidders, no oral interpretations will be given to any bidder, as to the meaning of the specification documents or any part thereof. Every request for such a consideration shall be made in writing. Based on such inquiry, the DPW may choose to issue an addendum in accordance with local state laws.

**4.0 GENERAL**

The specification herein states the minimum requirements of the DPW. All bids must be regular in every respect. Unauthorized conditions, limitations, or provisions shall be cause for rejection. The DPW will consider as irregular or non-responsive, any and all bids that are not prepared and submitted in accordance with the bid document and specification, or any bid lacking sufficient technical literature to enable the DPW to make a reasonable determination of compliance to the specification. It shall be the bidder’s responsibility to carefully examine each item of the specification. Failure to offer a completed bid or failure to respond to each section of the technical specification (COMPLY: YES NO) will cause the proposal to be rejected without review as non-responsive. All variances, exceptions, and/or deviations shall be fully described in the appropriate section. Deceit in responding to the specification will be cause for rejection.

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| **TANK:**  Capacity shall be of 2.0 cubic yards (3 tons). | **YES** | **NO** |
| Hopper floor shall be flat when the hoist is down to achieve the lowest overall hopper height for driver visibility of operators at the rear of the unit. |  |  |
| Hopper is to be of oil jacketed design. |  |  |
| Oil jacket to be surrounded by 2” of 1-1/2# density high temperature fiberglass insulation covered with a 12 gauge insulation jacket. |  |  |
| The top loading doors shall be of 16 gauge material and utilize gas assist shocks with lockdowns. |  |  |
| They shall be of tapered design with water lip to allow water shedding. |  |  |
| Shall have minimal clearance between top doors and hopper to decrease heat loss. |  |  |
| Each door shall be of tapered design, 5-5/16” down to 2-3/16”. |  |  |
| Shall have a single guillotine style discharge door which also includes gas assist shocks to provide easy open/close operations and infinite positions. |  |  |
| It shall not require latches or hooks to hold open. |  |  |
| Total door size shall be 10” high by 24” wide. |  |  |
| **TRAILER:**  Trailer to be A-frame style with axles rated to carry a loaded tank at  highway speed. (225/75/R15 LR D Tires) |  |  |
| Frame constructed of 2”x 6”x 3/16" high strength, rectangular steel tubing reinforced at all stress points with 1/4”x 6"x 15" fish plates. |  |  |
| Suspension shall be of leaf spring type. |  |  |
| Shall have a one-piece bolt-on shackle. |  |  |
| Shall have electric brakes with breakaway kit to allow for breakaway protection by applying brakes in case of accidental breakaway from towing vehicle. |  |  |
| Hitch shall be of 3” pintle ring and have adjustable height from 21" to 34". |  |  |
| Fenders shall be heavy duty, minimum 12 gauge steel, and be of bolt-on design and able to support 500 lbs. without damage. |  |  |
| The trailer electrical system shall be 12 volt DC battery with charging system and a 7RV light plug. |  |  |
| Turn signals and brake lights shall be sealed beam grommeted. |  |  |
| Side markers shall be mounted at the rear and sides of unit. |  |  |
| A minimum 5000# capacity tongue jack, with swing away feature for road clearance, shall be installed. |  |  |
| Safety chains shall be grade 40 with attached eye bolts. Eye bolts will be attached to the frame with sleeved bushings. |  |  |
| All wiring and fuel lines shall be run through the inside frame for protection from outside elements. |  |  |
| **HEATING SYSTEM** |  |  |
| **BURNER CONTROLS:**  Automatic spark ignition shall light the burner with the flip of a switch and include flame-out protection to shut off the fuel supply if the flame is blown out. |  |  |
| The electronic thermostat shall have an easy-to-adjust thermostat with a setting range from 0°-550° F. |  |  |
| A large digital LED display shall make it easy to monitor the product temperature in the tank. |  |  |
| Once the operator sets the desired temperature, burner operation and temperature control shall be fully automated with this system. |  |  |
| The burner controls and thermostats are to be located in a weather proof enclosure with a transparent cover so the temperatures can be monitored without the need to open the cover. |  |  |
| The operator shall be able to read the product temperatures when standing 6 feet from the machine. |  |  |
| **DIESEL BURNER:**  The machine shall be equipped with one (1) Beckett forced air diesel fuel burner with an operating output of up to 120,000 BTU. |  |  |
| The burner fires down a single flue constructed of 5” diameter x .188” wall thickness fire tube, and a 5” x .135” wall thickness on return tube to a vertical exhaust stack. |  |  |
| The burner is completely self contained with automatic ignition and safety shut off circuitry to stop the fuel flow if the flame goes out. |  |  |
| The burner is designed to operate on 12 volt DC power without the need for additional adaptors or apparatus. |  |  |
| The heating system shall operate on #1 or #2 diesel fuel which shall be supplied from a 30 gallon fuel tank. |  |  |
| **OIL JACKET HEATING SYSTEM:**  Hopper shall be of oil jacketed design with a 5” internal “U” shaped flue, submerged in the bottom of the oil jacket. |  |  |
| Oil jacket shall heat the bottom and halfway up the sides. |  |  |
| The oil jacket shall be constructed of ten (10) gauge steel and have an internal fill with a cold seal expansion tank. |  |  |
| The oil jacket shall have a 1” bottom drain and a 1” cold fill plug. |  |  |
| **LIGHTS:**  Combination stop, turn, and clearance lights with license plate bracket wired in protective loom with 7 pin RV connector. Shall be a two (2) light incandescent or LED system. |  |  |
| **PAINT:**  Surfaces of the unit will be properly prepared and primed per standard industry practices. Shall have a two (2) part polyurethane paint. |  |  |
| **WARRANTY:**  Shall be one year on parts, materials, and workmanship. Product pumps and hoses that handle heated materials shall have a 12 month pro-rated warranty. Component parts such as engines, hydraulic components, tires, etc., shall be covered by the component manufacturer’s warranty. |  |  |
| **OPTIONAL FEATURES** |  |  |
| **TACK TANK** |  |  |
| **HEATED TACK TANK:**  To have a capacity of 40 gallons with a 6” fill cap. |  |  |
| To be of a diesel bottom fired configuration. |  |  |
| Shall have a 2” molasses gate valve for draining the tank. |  |  |
| To be insulated with 2” of 1-1/2# density, high temperature fiberglass insulation with 16 gauge outside cover. |  |  |
| **TACK TANK W/ PUMPING SYSTEM AND SPRAY WAND ATTACHMENT:**  Shall be powered by a Honda engine model GX390, air cooled OHV petrol engine, 25” inclined cylinder with horizontal shaft. |  |  |
| Engine shall be 11HP with transistorized igniter system and recoil electric start system. |  |  |
| Shall have an 18AMP charging circuit. |  |  |
| A 12 volt battery shall be included and located in a lockable battery box. |  |  |
| The engine shall power a hydraulic pump; the hydraulic pump shall power a hydraulic motor, which shall operate a Viking HL-32 material pump. |  |  |
| The pump shall be capable of forward and reverse positions and have variable flow control. |  |  |
| To include 15’ of yellow ortec hose and 5’ steel spray wand with an on/off valve. |  |  |
| A 3-way flushing valve shall be installed to allow for solvent flushing of pump and plumbing. |  |  |
| **DIESEL ENGINE W/ HYDRAULIC SYSTEM:**  Kubota water cooled diesel engine in lieu of Honda gasoline engine. |  |  |
| The engine shall be a 16HP, 2 cylinder, liquid cooled Kubota diesel engine with electric start. |  |  |
| **ALUMINUM WAND:**  Lighter weight wand in lieu of the steel wand. |  |  |
| **STROBE LIGHT:**  12 volt powered. Shall be controlled from operators control panel. Strobe shall be mounted on rear of unit. |  |  |
| **FIRE EXTINGUISHER:**  10 lb. ABC dry chemical fire extinguisher. |  |  |
| **TOOL BOX:**  Shall be constructed of 12 gauge steel with cover and locking hasp 10”x 10”x 24”. |  |  |
| **STAINLESS STEEL TOOL HOLDERS:**  Spring loaded clamps for holding rakes, lutes, brooms, and shovels. Mounted onto fender. |  |  |
| **SPARE TIRE:**  Spare tire with holder mounted onto frame of unit. |  |  |
| **COMPACTOR PLATE CARRIER:**  To have electric raise and lower for operator convenience. Shall have a spring lock and fold up out of the way when not in use. |  |  |
| **WATER TANK:**  15 gallon plastic water tank to be used with the compactor plate carrier option. |  |  |
| **SMV SIGN:**  DOT approved slow moving vehicle sign. |  |  |
| **BATTERY CHARGER:**  Marine grade charger to maintain battery. |  |  |
| **HAND TORCH:**  Hand held LP torch with 15’ hose and 20# LP bottle with rack. For heating hand tools and drying potholes. |  |  |
| **WASHDOWN SYSTEM:**  Consists of a 12 volt pump with hand spray wand and 15’ hose to wash tools and interior of hopper. |  |  |
| **HOSE REEL:**  Hose reels for tack hoses, washdown hose, and hand torch hose. |  |  |
| **SHOVEL CLEANING COMPARTMENT:**  Shall be constructed of 12 gauge material with splash guard compartment, drain plug, and rain tight cover. Shall hold four (4) shovels. |  |  |
| **TOP DOOR LIFT ASSIST:**  Shall take 60% of the weight of the doors off the operator and gives “slam” protection. Swing type handles shall lock into open and close positions provided. |  |  |
| **DIESEL BURNER ENCLOSURE:**  Lockable enclosure to protect burner from outside elements. |  |  |
| **ARROWBOARD:**  12 volt powered directional arrow. Shall be controlled from operators control panel. Mounted on rear of unit. |  |  |
| **ELECTRIC OVERNIGHT HEATERS:**  Available to reduce start up time and maintain heated material at temperature. Provides low density heat that will not scorch material. |  |  |
| **FRONT PLATFORM W/ RAILING AND STEPS:**  Shall add easy hopper access. To be constructed of grip strut grading. Shall be bolted to frame. |  |  |

**Exceptions & Deviations**

Bidder shall fully describe every variance, exception, and/or deviation. List the item number here and fully explain any items in non-compliance with specification. Additional sheets may be used if required.

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