

INVITATION FOR SEALED BIDS FOR THE PURCHASE OF THREE PIONEER CENTRIFUGAL PUMPS
PROJECT NO. OM-25-023

BID TO BE SUBMITTED

A. CENTRIFUGAL PUMPS	UNIT PRICE	EXTENDED PRICE
_____ Taxable Fees (DMV Doc)	\$ <u>63,179.32</u>	<u>189,537.96</u>
_____ Sales Tax (9.00%)	\$ <u>INCL.</u>	<u>INCL.</u>
_____ Subtotal	\$ <u>5686.14</u>	<u>17,058.42</u>
_____ Non-Taxable Fees (CA Tire)	\$ <u>68,865.46</u>	<u>206,596.38</u>
_____ GRAND TOTAL:	\$ <u>INCL.</u>	<u>INCL.</u>
	\$ <u>68,865.46</u>	<u>206,596.38</u>

COMPLETE SPEC "A" TOTAL: \$ 206,596.38

The Bidder warrants this equipment for a minimum period of 1 years.

The nearest factory authorized service representative is:

NAME: Rockwell Engineering
 LOCATION ADDRESS: 301 Danbury Cir.
Vacaville, Ca 95687
 PHONE NUMBER: 707-447-6300

Complete delivery will be made within 94 calendar days from award of bid.

Vendor must complete all DMV forms and processes to provide proper title, registration, and exempt license plates. The City reserves the right to reject any and/or all bids received in order to ensure the best price and quality for the City of Stockton.

Any questions regarding specifications should be directed to Jason McKenzie, City of Stockton Public Works Fleet Department, at telephone (209) 937-5642 or email at Jason.McKenzie@stocktonca.gov
 Information on bid process/clarification should be directed to Velvette Baker, City of Stockton, at telephone (209) 937-8453 or e-mail at Velvette.Baker@stocktonca.gov

Harrington Industrial Plastics
FIRM

14480 Yorba Ave. Chino, Ca 91710
ADDRESS

Frank Yang Frank Yang
SIGNED BY

Chief Financial Officer
TITLE OR AGENCY

09/25/2024
DATE

(909)296-4299
TELEPHONE

NOTE: Bidders are to mark their sealed bids to clearly indicate the content as:

- A) THREE PIONEER CENTRIFUGAL PUMPS
- B) BIDS DUE OCTOBER 3, 2024, by 2:00 P.M.
- C) PROJECT NO. OM-25-023



Pioneer Prime Sound Attenuated Diesel-Driven Centrifugal Pump Trailer Package

SAPP44S10L71-D2.9L4

44S10-PPI-02-D



PUMP SPECIFICATIONS

Size	4" x 4" (100 x 100 mm)
Impeller Diameter	10" (254 mm)
Max Flow	1,520 gpm (345 m ³ /h)
Max Head	155 feet (47 meters)
Solids Size	3" (76 mm)
Max. Operating Temp.	200 °F (93 °C)
Max. Operating Press.	260 psi (1,800 kPa)

ENGINE SPECIFICATIONS

FT4 Engine Type	Deutz D2.9L, 4-Cylinder Diesel
Displacement	177 cu. in. (2.9 l)
Fuel Consumption	2.07 gph (7.83 l/h) @ 1,800 rpm
Continuous HP	36 HP (27 kW) @ 1,800 rpm
Peak Intermittent HP Rating	49 HP (36.5 kW)
FT4 Specifics (Def or No Def, DOC, SCR, etc.)	DOC
Instrument Panel	Oil pressure gauge, voltmeter, hourmeter, tachometer

PIONEER PRIME PRIMING SYSTEM

Priming System	Mechanically driven diaphragm-style vacuum pump
Air Removal Cap.	50 cfm (.02 cms)
Priming Chamber	Positive sealing air separation w/stainless steel components
Discharge Check Valve	Swing style; ductile iron w/nitrile disc
Run Dry System	Oil-lubricated mech. seal allows pump to run completely dry without damage

FEATURES AND BENEFITS

- Indefinite run-dry capability
- Extreme flow technology
- Environmentally safe priming system: Pioneer Prime
- Auto-start controls

PARTS KITS

Mechanical Seal Kit: 372000109	Upper Vacuum Kit: 374000102
Bearing Frame Kit: 37300107	Lower Vacuum Kit: 374000103
Priming Chamber Assembly: 1060015894	

PACKAGE SPECIFICATIONS

Fuel Capacity	75 gal (284 L)
Control Panel	LOFA CP900
Operating Speed (Min. / Max.)	1,000 / 2,200 rpm
Weight (Dry / Wet)	3670 lbs / 4200 lbs
Instrument Compatibility	High/low level floats
Trailer Brakes	Electric
Enclosure dB(A) Rating	69 dB(A) @ 23 feet (7 meters)
Optional Adders	3-watt solar charger, 10-watt solar charger, corner jacks, float switch, hose racks, pressure gauges
Telemetry Ready	Options available

MATERIALS OF CONSTRUCTION

Impeller	CA6NM Stainless Steel
Shaft	17-4 PH Stainless Steel
Wear Ring	ASTM A48 Class 40 Gray Iron
Suction Cover	Ductile Iron ASTM A536 65-45-12
Volute	Ductile Iron ASTM A536 65-45-12
Brac-Plate/Bracket	Ductile Iron ASTM A536 65-45-12
Mechanical Seal	Silicon Carbide rotating and Tungsten Carbide stationary



PIONEER PUMP INC.

Specification Sheet for Pioneer Prime Pump Series

Pioneer Prime Pump Model: PP44S10L71-TD2.9 L4
DOT Enclosed Trailer Mounted Diesel Pump Package

The unit described by this specification is the manufacturer's latest production model for the year solicited and is equipped with all the standard equipment in accordance with the manufacturer's pertinent literature. A copy of the literature shall accompany the bid along with any applicable information necessary to verify the unit either meets or exceeds each of the following specifications.

Delivery

The unit will be delivered complete, assembled accordingly, serviced and ready for operation.

Terms and Conditions

Pioneer Pump's current terms and conditions, including limited warranty policy, can be found on our website <http://www.pioneerpump.com> from the homepage by selecting More > Resources > Terms and Conditions or by following this link:

http://pioneerpump.com/media/228840/m5132_pioneer_terms_and_conditions.pdf

Pioneer Prime DOT Enclosed Trailer Mounted Pump Package

Package model is a PP44S10L71-TD2.4 GL2, manufactured by Pioneer Pump Inc.

Design Requirements:

Maximum Operating Speed:	2200 RPM
Minimum Solids Handling Capability:	3.00 Inches
Suction Size:	4.00 Inches
Discharge Size:	4.00 Inches
Maximum Suction Lift:	28 Feet
Pump Maximum Flow @ Runout:	1700 GPM
Pump Maximum Head @ Shutoff:	150 Feet



Pioneer Prime DOT Enclosed Trailer Mounted Pump Specifications:

Pump Details:

Model: PP44S10L71-TD2.9L4

The heavy duty, high performance, end suction centrifugal pump shall be equal to the Model PP44S10L71 manufactured by Pioneer Pump Inc. It shall be of the solids handling type with a continually rising performance curve to shut-off. 3.0-inch minimum spherical solids handling capability. The pump casing is of back pull-out and suction cover design for ease of maintenance with heavy wall sections to provide long life under abrasive and corrosive conditions.

Suction Spool

The suction spool is constructed of heavy section ASTM A536 Grade 65-45-12 Ductile Iron. The suction spool flanges are ANSI Class 150 and is sealed to the suction cover with a Viton O-ring.

Suction Cover

The suction cover is constructed of heavy section ASTM A536 Grade 65-45-12 Ductile Iron. The suction cover flange is ANSI Class 150 and houses the pump suction wear ring. The suction cover is sealed to the volute with a Viton O-ring.

Volute

The volute is constructed of heavy section ASTM A536 Grade 65-45-12 Ductile Iron. The volute flange is ANSI Class 150. The volute contains a contoured cleanout cover and is sealed with a Viton O-ring. The volute is sealed to suction cover and back plate with Viton O-rings.

Impeller

The impeller is constructed of heavy section ASTM A744 CA6NM Stainless Steel. The impeller is to be fully enclosed, non-clog type with back vanes to reduce axial thrust and lower stuffing box pressure. Semi-open or open impellers will not be accepted as equal. The internal vane edges will be well rounded to present smooth flow. The impeller is to be balanced, with a straight, non-tapered bore and will be keyed to the shaft and secured with a Stainless-Steel impeller lock screw. The impeller is to handle a maximum 3.0 inch spherical solid.

Suction Wear Ring

A single suction wear ring located in the suction cover is of a peripheral type requiring no adjustment. The wear ring is to be press fit into position and replaceable in the field. The wear ring is to be constructed of ASTM-A48, Class 40 Gray Iron.

Back Plate



The back plate is constructed of heavy section ASTM A536 Grade 65-45-12 Ductile Iron. The back plate is dished style and houses the mechanical seal's stationary seat. The back plate is sealed to the volute and bracket with Buna-N O-rings.

Bracket

The bracket is constructed of heavy section ASTM A48 Class 30/35 Cast Iron. The bracket is of the enclosed design and contains oil for mechanical seal lubrication when pump is running dry. The oil bracket capacity is to be minimum of ½ gallon. The bracket is sealed to the back plate with Viton O-rings.

Seal Assembly

The mechanical seal is a single seal design incorporated with a dished style back plate. The mechanical seal is a run-dry design with an oil-filled enclosed style bracket for seal lubrication. The mechanical seal faces are Silicon Carbide rotating and Tungsten Carbide stationary. All seal elastomers are Viton. The seal retainer and spring are to be constructed of Stainless Steel.

Bearing Frame and Bearings

The bearing frame is to be constructed of an ASTM A48 Class 30/35 Gray Iron. The bearings are to be of sufficient size to withstand the radial and axial thrust loads incurred during service. Bearings have a minimum B-10 bearing life of 100,000 hours. The bearings are protected from infiltration of liquid and contaminants by use of a cassette seal located at each end of the bearing frame.

Shaft

The pump shaft shall be constructed of ASTM A747 17-4 Stainless Steel.

SAE Housing and Drive

The pump is to be coupled to engine with an S.A.E. #3 style direct mounted housing and a 11.5-inch rubber disc drive style coupling. The rubber disc drive coupling is to be self aligning and sized to handle full load driver horsepower and speed. The bracket is constructed of ASTM A48 Class 30/35 Gray Iron.

Discharge Check Valve

The pump is to have a full-opening, non-return discharge style check valve. The valve body is constructed of ASTM A126 Class B Cast Iron. The disc is constructed of Buna-N with Alloy Steel and Nylon reinforcement. The Cover Gasket is constructed of Buna-N or Compressed Non-Asbestos Fiber.

Priming System Specification

The vacuum pump is a mechanically driven, diaphragm style vacuum pump that requires no cooling liquid for operation of unit. The vacuum pump is capable of delivering up to 50 CFM of air handling



ability. The priming system incorporates a positive sealing float system to insure separation of air and liquid during the priming cycle. The vacuum pump body is constructed of corrosion resistant aluminum, as is the actuator. The crankcase body is constructed of ASTM A48 Class 30 Cast Iron. Elastomers are of Buna-N and Viton. The float/separator chamber is constructed of steel. The float rod assembly and strainer are constructed of Stainless Steel. The pumping unit is capable of fully dry-priming from a start-up mode. The system can handle large volumes of air and liquid, in addition to intermittent flow conditions. The unit is capable of automatic priming and re-priming throughout its operation.

Engine

The engine shall be a four-cylinder, four cycle, liquid cooled, turbocharged diesel engine equal to a Deutz Model TD2.9L4 with a continuous duty rating of 58 HP @ 1800 RPM. The package shall include all necessary hardware and accessories to include, but not limited to electronic governor, 12-volt electric start and heavy-duty air cleaner. The instrument panel includes temperature & oil pressure gauges, ammeter, hour meter & tachometer. The instrument panel also includes automatic turn-on and shutdown for high and low level pumpage. The engine is fitted with a muffler with rain cap and battery. The engine shall utilize a DOC (Diesel Oxidation Catalyst) to reduce the level of particulates and nitrogen oxides. Engines that utilize a DPF (Diesel Particulate Filter), which require the engine to shut down during a regeneration cycle shall not be accepted.

Engine Specifications:

Manufacturer: Deutz
 Model: TD2.9 L4
 Type: Water Cooled, Diesel, In-Line, 4 Cycle, Direct Injection
 Number of Cylinders: Four
 Aspiration: Turbocharged
 Bore and Stroke: 3.60" x 4.30"
 Displacement: 177 Cubic Inches (2.9 L)
 Governor: Electronic
 EPA Compliance: Final Tier 4

Engine Control Panel

The engine panel manufacturer is LOFA, model: CP750. The LOFA CP750 controller is an advanced engine control panel. It includes auto-start and manual operation capability to provide complete engine control, monitoring, and protection for both electronically and mechanically governed engines. It is compliant with tier 4F and Euro stage IV. The panel has multi-level PIN based menu access and an intuitive auto-start mode.

Panel Specifications:

- Housing: IP67 rated, powder coated Aluflex extruded aluminum with heavy-duty bracket and isolation mounts
- Display: 4.25" high resolution LCD with an LED variable backlight for viewing in direct sunlight or total darkness
- Keypad: 5 sealed push buttons



- Key switch: IP64 rated with booted key and mechanical lockout to prevent restart attempts while engine is running
- LEDs: (4) indicating auto standby, Preheat, Stop, and Warning
- Throttle control: Ramp throttle adjustment available via momentary rocker switch
- Connectors: Sealed dual auto-start float switch connector, Sealed M12 transducer connector, industry standard 21-pin sealed engine harness connector

Inputs and Outputs:

- SAE J1939 Bus (CANbus 2.0B)
- ECU/Solenoid Control Output (10 A continuous)
- Starter Solenoid Output (70A 1 second, 10 A continuous)
- Auxiliary Multipurpose Output (1 A continuous)
- Alarm Output (1 A continuous)
- 2 Auto-start Switch Inputs
- Transducer Auto-start Input (4-20 mA or optional 0-5VDC)
- 2 Auxiliary Shutdown Switch Inputs
- Fuel Sender Analog Input
- RS485 Serial Interface for Auxiliary Equipment

Frame, Trailer, and Enclosure

The package is our Greenline which includes a heavy-duty fabricated steel frame with a lower rail that allows the axle to be adjusted horizontally on the skid and mounting slots on the top rail that give adjustability to engine and pump location. Top rail includes cut-outs in the slots for carriage bolt or isolator installation. Includes an integral 75-gallon fuel tank with fuel gauge, leak proof fuel cap, and one 1" NPT clean-out/drain plug. Skid is designed to be fully modular. Pump, engine, axle, bail, and support brackets are all bolt-on and able to be removed/adjusted quickly and easily.

The trailer will feature a center-point lifting bail, pintle hitch/adjustable towing bar, safety chains, lights, plastic fenders, two rear jack mounts, and a 5200# single torsion-flex axle with heavy-duty tires/wheels.

The enclosure is manufactured from heavy duty sound deadening materials. It includes galvanneal panels that are lined with mass-loaded vinyl and rock-wool insulation. The lockable door panel can be quickly removed without tools for easy and direct access to the pump. This enclosure also includes dedicated Diesel Exhaust Fluid (DEF) tank access and a rubber grommet sealed door that can be used to quickly plumb in wires for transducers or floats.

Factory Painting

Pumps and exposed steel framework shall be cleaned prior to painting. Exposed surfaces to be coated with one coat gray W.R. non-lift primer and one coat Pioneer Green (RAL: OC-00D034). The finish coat shall be 1.0 to 1.5 MIL dry film thickness (minimum). The factory finish shall allow for over-coating and touch up after final installation.