State of Illinois

Department of Transportation

Bureau of Business Services

**Specifications & Questionnaire for a Trailer Mounted, Diesel Powered Rotary Air Compressor**

(Minimum 185 cfm Input Air)

August 2018

This specification and questionnaire covers a trailer mounted, diesel powered, rotary screw style air compressor to be used by the Department of Transportation Division of Highways Operations forces. To improve parts and service availability and increase tool life, the Department of Transportation is specifying units and accessories as outlined below.

Each bidder shall submit with his bid **two sets** of descriptive literature and specifications describing all the equipment and options proposed. This information shall be clearly marked to indicate the make, model, and accessories proposed to be furnished.

Bidders quoting on specified equipment must submit with their bid written proof of the following:

* The manufacturer of the equipment proposed has been actively involved in the manufacture of the equipment called for in the Proposal for a period of not less than 5 years.
* Parts and service for the equipment proposed are readily available within the State of Illinois.

**Unless otherwise specified, the proposed equipment shall be complete in all parts and ready for immediate use upon delivery.**

**Bidders are advised to carefully read these specifications as changes have been made since the last solicitation issue.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Proposed with this Bid:** | | | | | | | | |
| Make: | |  | | | | | | |
| Model: | | |  | | | | | |
| Manufactured By: | | | | | | |  | |
| Vendor: | | | |  | | | | |
|  | | | |  | | | | |
|  | | | |  | | | | |
| Telephone: | | | | |  | | |
| Contact Name: | | | | | |  | |
| Email: |  | | | | | | |

**All units shall include the following standard or optional accessories and equipment:**

The complete unit shall consist of a rotary screw style air compressor, coupled to a diesel engine with a receiver tank, operator controls, and safety shut down device. It shall be arranged to provide a compact assembly on a rigid frame, mounted on a single axle with two (2) wheels, designed to be towed behind trucks. The compressor may be skid mounted if called for by the proposal.

**Compressor:**

The compressor shall be rotary screw style with direct drive by the engine thru a flexible mechanical coupler at the compressor.

Complies: Yes  No

|  |  |
| --- | --- |
| If NO, describe: |  |

|  |
| --- |
|  |
|  |

***Note:*** This compressor must be capable, and will be used to operate a single hammer, rated at 90 lbs. and the intermittent simultaneous use of a smaller pneumatic device each for prolonged periods of time.

The compressor shall have a minimum free-air or input air delivery of 185 cfm.

|  |  |  |
| --- | --- | --- |
| Delivery CFM: |  | CFM |

The rated operating pressure of the compressor shall be 100 PSI.

|  |  |  |
| --- | --- | --- |
| Rated Operating PSI: |  | PSI |

The compressor shall have an approximate adjustable range of operating pressure from 70 PSI to 120 PSI.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Operating Range PSI: |  | PSI: | To |  | PSI: |

The compressor shall supply two (2) 3/4 “ NPT outlet ports. One shall provide connection to the specified hose reel. The other shall be capped or plugged for future use.

Complies: Yes  No

The compressor shall have a radiator style oil cooler, dry style air filter, and spin-on type oil filter.

Complies: Yes  No

The air receiver and oil separator shall conform to A.S.M.E. Code for working pressures required.

Complies: Yes  No

The compressor oil and engine oil cooling systems shall be adequate for working in 115 degree F conditions continuously.

Complies: Yes  No

Safety shut-downs shall be provided for low engine oil pressure and if above normal discharge air temperature occurs during operation.

Complies: Yes  No

A Site style tool lubricator with a minimum one-quart capacity shall be provided.

Complies: Yes  No

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Make: |  | | | | |
| Model: | |  | | | |
| Capacity: | | |  | Quart |

|  |  |
| --- | --- |
| Describe tool oiler(s) |  |

|  |
| --- |
|  |
|  |

***Note:*** The tool oiler may be integral with the hose reel. It must be provided with sight a gauge so the level of lubricant is readily available to the operator.

The unit shall include a single hose reel with separate shut off valve.

Complies: Yes  No

|  |  |
| --- | --- |
| Describe hose reel |  |

|  |
| --- |
|  |

Engine:

The compressor shall be powered by a current production liquid cooled diesel engine with a minimum of three cylinders meeting the following:

* Present emissions standards compliant
* An approximate gross engine HP of 49.
* Dry style air cleaner
* Fuel filter water separator
* 12-volt electrical system
* Alternator/regulator
* Maintenance free battery shall be provided if available
* Cold weather starting aid
* Oil filtration system with cooler

Complies:  Yes  No

|  |  |
| --- | --- |
| If no, describe: |  |
|  | |

Component provided:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Make: |  | | | | | | | | |
| Model: |  | | | | | | | | |
| Number of cylinders: | | |  | |
| Horsepower @ governed RPM: | | | |  | | | RPM | |
| Rated H.P. (Gross) | |  | | | | RPM | |

The compressor shall include a fuel tank of approximately 25-gallon capacity to operate the compressor for seven (7) hours under load at full throttle. The fuel cap or tank shall be clearly marked “Diesel Fuel Only”.

Complies:  Yes  No

|  |  |  |  |
| --- | --- | --- | --- |
| Capacity: |  | | Gallons |
| Rated Hours of Operation: | |  | | | Gallons |

**Cooling System:**

Manufacturer’s standard cooling system with extended life antifreeze rated to -30°F.

Complies: Yes  No

**Operator station:**

The following operations and monitoring systems shall be provided:

1. Hour meter.
2. Air pressure gauge
3. Fuel gauge.
4. High coolant temperature.
5. Low engine oil pressure.
6. Start/stop switch (This feature must be secured in a locked compartment.)
7. Throttle
8. Alternator output or warning light
9. High compressor temperature

Complies: Yes  No

|  |  |
| --- | --- |
| If no, describe: |  |

|  |
| --- |
|  |
|  |

**Chassis:**

The chassis/trailer shall be designed to support the full weight of unit at highway speeds.

Complies: Yes  No

The running gear shall consist of a torsion suspension type axle with automotive style wheel assemblies.

Complies: Yes  No

The axle shall have grease zerks at each hub for wheel bearing maintenance.

Complies: Yes  No

The drawbar/tongue shall have a pintle hitch that is adjustable from approximately 28” to 32”. Safety chains shall be included with hitch.

Complies: Yes  No

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Make: |  | | | | | |
| Model: | |  | | | | |
| Manufactured By: | | | |  | | |
| Hitch rating: | | |  | | Pounds |

A tongue jack rated for proper gross vehicle weight (G.V.W.) of unit shall be included. A “sand pad” foot shall be provided.

Complies: Yes  No

Tires and wheels: Shall be steel automotive style wheel and tires rated for G.V.W. of unit and able to operate at highway speeds, but capable of "OFF ROAD" use.

Complies: Yes  No

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Tire size: |  | | | |
| Ply rating: | |  | | |
| Manufactured By: | | | |  |
| Wheel size: | | |  | |

**Body:**

The body enclosure shall be constructed from Galvanneal sheet metal or equal (plastic enclosures will not be considered equal). The upper canopy shall be hinged to allow access to internal components.

Complies: Yes  No

|  |  |
| --- | --- |
| Describe enclosure: |  |

|  |
| --- |
|  |
|  |

The body shall include the following:

Rear bumper

Toolbox

Single point lifting eye

Recessed towing lights

Operators control panel

Lockable storage doors on both sides (right & left) must be capable of storing two (2) 90 lb. hammers.

Complies:  Yes  No

**Lighting:**

The unit shall be equipped with LED lighting for towing. The lights shall function as running, turn, and brake when plugged into tow vehicle. A 7-way SAE approved plug shall be installed on trailer lead.

Complies: Yes  No

**Paint/Finish:**

All exterior surfaces normally painted shall be cleaned, prepped, painted or powder coated manufacturer’s standard color.

Complies: Yes  No

**General:**

Three copies of all operators’ manuals, parts lists and warranty information shall be provided at the time of delivery.

Complies: Yes  No

One copy of the Service Manual for each machine shall be provided upon delivery.

Complies: Yes  No

***Note:*** The manuals, parts lists, and service or shop manuals listed above may be furnished on DVD in lieu of paper.

**Training:**

A qualified factory representative and/or dealer personnel shall provide instruction and training covering operation and maintenance of the machine at the time of delivery for a minimum of two (2) IDOT representatives. Training not meeting this requirement will be cause for a “Complaint to Vendor”.

Complies: Yes  No

A training video or PowerPoint presentation covering the operation of this equipment shall be provided with the training.

Complies: Yes  No

**Requirements Covering Items Detailed Above:**

All equipment cataloged as standard or safety shall be furnished and in place and shall be included in the purchase price of the unit. Any parts, tools, and/or accessories not specifically called for but required for proper operation shall be provided.

Complies: Yes  No

The component parts of the unit shall be of proper size and design to safely withstand maximum stresses imposed by a capacity load, and the manufacturer's rated loads for all component parts shall **not** be exceeded when the unit is so loaded.

Complies: Yes  No

Full coverage warranty for a minimum 12 months shall be provided for all components and their installation. The bidder shall attach a copy of warranty with the bid.

|  |  |
| --- | --- |
| Describe warranty: |  |
|  |  |

**Delivery:**

This machine is to be delivered in first-class operating condition with acceptance subject to Department of Transportation approval.

Complies: Yes  No

|  |  |
| --- | --- |
| If NO to any portion, explain: |  |
|  | |
|  | |
|  | |
|  | |

**Bid Package:**

Bidders will need to send two copies of each of the following with their bid response.

1. Specification Questionnaire
2. Descriptive Literature