

**SALINE VALLEY FIRE PROTECTION DISTRICT
OF JEFFERSON COUNTY, MISSOURI
REQUESTS FOR PROPOSALS
BATTERY POWERED RESCUE TOOLS**

The Board of Directors of the SALINE VALLEY FIRE PROTECTION DISTRICT is soliciting sealed bids for the purchase of three sets of Battery Powered Rescue Tools per written specifications attached to this RFP.

Sealed bids should be delivered to the SALINE VALLEY FIRE PROTECTION DISTRICT Administrative Office; 1771 Springdale Blvd.; Fenton, Missouri 63026 not later than 1600 on October 26, 2018. The sealed bids will be opened by the Fire Chief and will be presented at the regular meeting of the SALINE VALLEY FIRE PROTECTION DISTRICT Board of Directors at 1830 on November 8, 2018.

The Board of Directors of the SALINE VALLEY FIRE PROTECTION DISTRICT reserves the right to reject any and all bids, to waive variations and to negotiate changes or additions.

The Board of Directors of the SALINE VALLEY FIRE PROTECTION DISTRICT also reserves the right to select any, or no bid, regardless of the price, based on the needs and operations of the District and to extend the time to submit bids and open bids.

Any and all questions pertaining to this bid shall be submitted to Fire Chief Bob Dunn, in writing.

By Order of the Board of Directors

SALINE VALLEY FIRE PROTECTION DISTRICT

ELECTRO-HYDRAULIC CUTTER

1. The tool is designed to be a hydraulically operated piston activating mechanical joints symmetrically to open or close a set of two opposite blade arms whereby cutting surfaces go on top of each other without making contact thus enabling objects to be cut.
2. Electro-hydraulic devices do not need to be connected to an external hydraulic source, generation of the required hydraulic pressure takes place within the body of the device by either a quick exchange lithium/ion battery or an external power supply.
3. The electro-hydraulic tool is equipped with light-emitting diodes attached on the operating side to facilitate work under poor lighting conditions. For simplicity, the lights must be powered by the same Lithium-Ion battery that powers the electro-hydraulic tool and not a secondary battery
4. The cylinder of the tool shall be made of anti-corrosive light aluminium alloy for its lightweight, strength and long life. The body of the tool shall have a high impact, non-metallic housing. The housing shall have ventilation holes on both sides of the unit for cooling the motor.
5. The maximum cutter opening at the tips will be approximately 8 in
6. The cutter will be of slightly curved blade geometry for pulling the debris away and to the center with intelligent cutter geometry reducing tool movement and providing maximum cutting performance.
7. The blades shall be made of dropped-forged steel which has a glass-pearl blasted finish and are regrindable. The blades of the tool should be attached to the piston rod via removable links for ease of repair, efficient power transmission and smooth operation. The pivot points of the blades shall have a rubber booted hand guard for safety purposes.
8. The engineered curved blades with sophisticated geometry close at the tips and then pull the object to be cut towards the point where the maximum cutting force is applied to the relevant working range providing superior cutting performance and significantly reducing cutter wear.
9. The cutting performance of the tool shall be able to cut up to 1.5 in diameter round stock steel.
10. The tool shall have a dual pilot check valve to prevent accidental movement of the blades in the event of power loss.
11. The control mechanism shall feature a control actuator for ease of operation by allowing 360 ° operations in any position. The mechanism shall be separate and independent from the handle to provide added control in close-quarter operation.
12. The tool must provide a non-interflow shear seal “dead man” actuator, whereby the unit stops functioning when control valve is released.
13. The opening and closing positions are clearly marked.
14. The tool shall be protected by a pressure relief valve that prevents it from being over pressurized.
15. The tool dimensions without the battery shall be approximately 40 in long, 10.5 in wide or higher than 11.5 in
16. The operating pressure to the tool will be 10,000 psi (70 MPa) .
17. The nominal electrical voltage (with power supply) is 24 V. The nominal electrical voltage (with lithium/ion battery) is 25.2 V.
18. The current consumption should be 12 amp in idle mode and 40 amp at maximum load.
19. The tool shall be able to tolerate an ambient temperature range of -4°F (-20°C) up to +131°F (+55°C).
20. The tool must be NFPA 1936; 2015 Edition certified and shall be labelled as such bearing the mark of the testing agency.

21. Cutting classification should no less than A8 / B9 / C8 / D9 / E9 as defined in NFPA 1936; 2015 and certified by a 3rd party testing agency.
22. The tool will not weigh more than 55 lbs excluding the power supply.

ELECTRO-HYDRAULIC SPREADER

1. The tool is a designed hydraulically activated piston with two equal, opposite light metal alloy spreader arms that are symmetrically opened by mechanical joints, thereby spreading objects. Closing the spreader arms is also carried out hydraulically and mechanically by reverse order of the piston.
2. Electro-hydraulic devices do not need to be connected to an external hydraulic source. Generation of the required hydraulic pressure takes place within the body of the device by either a quick exchange lithium/ion battery or an external power supply.
3. The electro-hydraulic tool is equipped with lights to facilitate work under poor lighting conditions. For simplicity, the lights must be powered by the same Lithium-Ion battery that powers the electro-hydraulic tool and not a secondary battery.
4. The cylinder of the tool shall be a one piece design made of anti-corrosive light aluminium alloy for its lightweight, strength and long life. The body of the tool shall have a high impact, non-metallic housing. The housing shall have ventilation holes on both sides of the unit for cooling the motor.
5. The spreader can produce a maximum spreading force of approximately 147,924 lbf.
6. The tool shall produce a maximum spreading distance of approximately 28.7 in
7. According to NFPA testing standards the HSF test point produced 16,186 lbf (72 kN), the LSF test point produced 11,016 lbf (49 kN).
8. To maximize the capability of the spreader the unit should include an optional chain and shackle package for pulling operations. This should not require the removal of the tips for attachment. According to NFPA testing standards the HPF test point produced 10,341 lbf (46 kN), the LPF test point produced 6,295lbf (28 kN).
9. The tool shall produce a pulling distance of approximately 22.5 in.
10. The tips are to be removable, multifunctional tips that can be used for spreading, squeezing and pulling without the need to be changed.
11. The removable tips shall have machined “Sharks Tooth” aggressive 4 row design for maximum performance and gripping capability.
12. The tips shall be easily removed by depressing spring loaded “button” style detent pins.
13. The arms of the tool should be made of aluminium alloy and attach via removable links for ease of repair, efficient power transmission and smooth operation. The arms shall include a metal protective and gripping squeezing plate on both the inside and the outside of each arm.
14. The control mechanism shall feature a control actuator for ease of operation by allowing 360° operations in any position. The tool must provide a non-interflow shear seal “dead man” actuator, whereby the unit stops functioning when thumb pressure is released. The star grip automatically returns to the central position, guaranteeing the full load-holding.
15. The tool shall have two handles. One located at the center of the tool and the other located below the control mechanism. The center crossbar handle allows easy ergonomic manipulation from the center or either side.
16. The tool will be equipped with a dual pilot check valve. This is to prevent accidental movement of the arms in the event of power loss.
17. The tool shall be protected by a pressure relief valve that prevents it from being over pressurized.
18. The tool dimensions without the battery shall not be any longer than 40 in, wider than 11 in or higher than 12 in.

19. The nominal electrical voltage (with power supply) is 24 V. The nominal electrical voltage (with lithium/ion battery) is 25.2 V.
20. The tool shall be able to tolerate an ambient temperature range of -4°F (-20°C) up to +131°F (+55°C).
21. The tool must be NFPA 1936; 2015 Edition certified and shall be labelled as such bearing the mark of the testing agency.
22. The tool shall have an IP protection class rating of IP54.
23. The tool will not weigh more than 46 lbs excluding the power supply.

RESCUE RAM

1. The rescue ram is a double-acting hydraulic cylinder. Extension and retraction is carried out hydraulically.
2. The rescue ram is a multi-stage cylinder for applying pressure with varying pressure forces depending on the piston stage. The pressure force remains constant within one piston stage.
3. The ram shall extend to a distance of approximately 53 in. The retracted length is to be approximately 23.5 in
4. The ram shall feature a two stage stroke. The maximum stroke for piston 1 shall be approximately 15.2 in producing up to 28,600 lbf force. The maximum stroke for piston 2 shall be approximately 14.3 in producing up to 13,500 lbf force. The piston stroke overall shall be approximately 29.5 in.
5. The tool shall include heat-treated, investment-cast steel ram claw feet on the piston side and on the cylinder side for durable gripping and minimizing slippage.
6. The tool shall have a dual pilot check valve to prevent accidental movement of the piston rod in the event of power loss.
7. The control mechanism shall feature a control for ease of operation by allowing 360° operation in any position. The mechanism shall be separate and independent from the handle to provide added control in close-quarter operation.
8. The tool must provide a “dead man” actuator whereby the unit stops functioning when hand pressure is released.
9. The extend piston and retract piston are clearly marked.
10. The tool must be NFPA 1936; 2015 Edition certified and shall be labelled as such bearing the mark of the testing agency.
11. The tool will not weigh more than 44 lbs excluding the power supply.
12. Electro-hydraulic devices do not need to be connected to an external hydraulic source, generation of the required hydraulic pressure takes place within the body of the device by either a quick exchange lithium/ion battery or an external power supply.
13. The electro-hydraulic tool is equipped with lights to facilitate work under poor lighting conditions.
14. The cylinder of the tool shall be made of anti-corrosive light aluminium alloy for its lightweight, strength and long life. The body of the tool shall have a high impact, non-metallic housing. The housing shall have ventilation holes on both sides of the unit for cooling the motor.
15. The tool shall be able to tolerate an ambient temperature range of -4°F (-20°C) up to +131°F (+55°C).

Additional Needed Information

- What is the Warranty period of the tools including batteries?
- What are the Warranty requirements?
- What is the recommended annual maintenance and cost of annual maintenance?
- How long has the present battery style been used and what happens when/if the battery style changes?
- Delivery time once order is placed?
- In-Service Training for all three shifts shall be included in package price.
- Where is the local service Center in the event of a broken or malfunctioning tool, who will provide the repair and or maintenance?
- What is the recommended in-service time for the batteries?