

**CITY OF WALKER
KENT COUNTY, MI
Advertisement for Bids of Extrication Tool Package**

Fire Department Bid Opening

The City of Walker Fire Department is seeking bids for the following Edraulic Extrication Tools:

- 1 – Edraulic Cutter Package / with 2 EXL batteries and charger.
- 1 – Edraulic Spreader Package / with 2 EXL batteries and charger.
- 1 – Edraulic Ram Package / with 2 EXL batteries and charger.

Must be N.F.P.A. compliant 1936 and offer training on above tool packages including both daytime and evening trainings.

A complete list of specifications can be found on the City of Walker website at www.walker.city

Please submit two complete copies of bids in sealed envelope to the City Clerk's office by January 17, 2018 at 9:30 am, at which time all bids received will be opening in the City Clerk's office at 9:30 am.

Sarah Bydalek, Walker City Clerk, 616-791-6865

Specifications

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 7.6 in (192 mm).
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 investment cast dropped-forged steel which has a glass-pearl blasted finish and are regrind able. 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 booting 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 1.57 in (40 mm) 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 star-grip 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 thumb pressure 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 not be any longer than 36.2 (920 mm), wider than 11.7 in (296 mm) or higher than 10.3 in (262 mm).
16. The maximum operating pressure to the tool will be 11,603 psi (80 MPa) (800 bar).
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 45 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; 2010 Edition certified and shall be labelled as such bearing the mark of the testing agency.
21. Cutting classification A8 / B9 / C8 / D9 / E9.
22. The tool will not weigh more than 48.1 lbs (21.8 kg) without the battery or cable plug.

Specifications

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 up to 134,900 lbf. (600 kN).
6. The tool shall produce a maximum spreading distance of 32 in. (813 mm).
7. According to NFPA testing standards the HSF test point produced 19,110 lbf (85 kN), the LSF test point produced 13,260 lbf (59 kN).
8. To maximize the capability of the spreader the unit should include an optional chain and shackle package for pulling operations, use only HURST chain set KSV 11. This should not require the removal of the tips for attachment. According to NFPA testing standards the HPF test point produced 11,016 lbf (49 kN), the LPF test point produced 6,744lbf (30 kN).
9. The tool shall produce a pulling distance of 25.8 in (655 mm).
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 star-grip 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 42.5 in (1,080 mm), wider than 12.2 in (309 mm) or higher than 11.2 in (285 mm).
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 52 lbs (23.6 kg) excluding the power supply.

Specifications

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 up to 53 in (1347 mm). The retracted length is to be no less than 23.5 in. (313 mm).
4. The ram shall feature a two-stage stroke. The maximum stroke for piston 1 shall be 15.2 in (387 mm) producing up to 28,600 lbf (127 kN) force. The maximum stroke for piston 2 shall be 14.3 in (363 mm) producing up to 13,500 lbf (60 kN) force. The piston stroke overall shall be 29.5 in (750 mm).
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 star-grip 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 41.9 lbs (19 kg) 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).