# AMKUS ION iTR500 Battery Ram

Technical Specifications

The vendor shall be responsible for all labor, materials, training, coordination, shipping, transportation and inessentials necessary to deliver battery powered hydraulic cutters, rams, and spreaders, on an as needed basis, to be used in rescue extrication in accordance with the specifications listed below for each tool.

Battery Powered Hydraulic Ram Specifications

The tool consists of multi-stage piston and cylinder arrangement that is hydraulically operated. Hydraulic pressure is applied to piston rods to push or spread objects. Hydraulic power for the tool is generated internal to the tool via a 4- stage hydraulic pump that is operated by a brushless 2200-watt, 60-volt electric DC motor. The DC motor is powered by a 60-volt (maximum initial voltage) DEWALT® lithium ion battery. Batteries shall be interchangeable between rescue tool and over 200 DEWALT FLEXVOLT™ and 20V Max cordless tools.

- The cylinder, body and housing of the tool shall be made of aluminum alloy for its lightweight, strength, and durability.
- The housing that encloses the motor and pump shall not be constructed of plastic or other non-metallic materials due to the inferior durability and heat dissipation properties of these materials.
- The tool electric motor shall be a minimum of 2hp to maximize durability during extended use/rescues.
- The ram shall automatically turn off after no less than 20 minutes of inactivity.
- The battery shall be located on the top of the tool forward of the "dead man" actuator for easy installation/removal and to protect the battery during operation. Batteries mounted at rear of tool are unacceptable.
- The tool shall include the following safety features:
    - A pilot check valve to prevent accidental movement of the piston/shaft in the event of power loss.
    - A "dead man" actuator, whereby the unit stops functioning when the operator releases hand or thumb pressure from the actuator.
    - A pressure relief valve preventing over pressurization.
    - A pressure port that allows a technician to check the output pressure of the pump during routine maintenance.
- The telescopic ram shall have a length of no greater than 22 inches (559 mm) when retracted.

- The telescopic ram shall have a length of no less than 50 inches (127 cm) when extended (without accessory extensions).

- The telescopic ram shall have a Stroke, Piston 1: 15 inches (381 mm).
- The telescopic ram shall have a Stroke, Piston 2: 13.5 inches (346 mm).
- The telescopic ram shall have a Highest Spreading Force (HSF) Piston 1: 46,500 lbs. (206.0 kN).
- The telescopic ram shall have a Lowest Spreading Force (LSF) Piston 2: 21,750 lbs. (96.0 kN).
- The maximum nominal operating pressure of the tool shall be 10,500 psi (725 bar).
- The preferred independent third party for certifying the tools as compliant to NFPA 1936 is Underwriters Laboratory "UL".
- Weight on the tool shall not exceed 55 lbs. (25 kg) excluding battery.

Battery and Charger Specifications

- The battery shall be a Lithium Ion type battery.
- Due to availability and versatility over a wide range of tools such as, but not limited to, saws, drills, air compressors, etc. Only non-proprietary battery platforms shall be accepted.
- The battery shall be readily available at retail stores within 50 miles (80 km) of Fire Department.
- The nominal electrical voltage supplied by the lithium ion battery shall not be less than 60.0 volt (maximum initial voltage).
- Though a 12 Ah battery is desired, each of the tools shall be capable of utilizing a DEWALT FLEXVOLT 60 volt 6, 9- or 12-amp hour battery.
- Using an adapter to enable connection of a DEWALT FLEXVOLT battery to another battery manufacturer's mounting platform is unacceptable.
- The battery shall have a display to illustrate the level of charge.
- Combined, the battery and charger shall recharge the battery without causing harm from excess charging.
- The battery shall have a warranty of no less than 3 years from date of purchase.