

Firepower

Lightweight 155mm Howitzer (LW-155)

Description

The LW-155 is a joint USMC/Army 155mm towed artillery system that will meet or exceed all the requirements of the current M198 system while reducing the weight from 16,000 to 9,000 pounds. The lower weight of the LW-155 allows for much faster emplacement and displacement and also allows for tactical lift by the CH-53D heavy lift helicopter and MV-22, and its smaller size footprint reduces the strategic lift required. While the crew size has not changed from the M-198, the actual operation of the howitzer requires fewer personnel, allowing for local security and dispersed battery operations. The lighter XM777 makes for a highly mobile fire support system for EMW. The LW-155 also offers significant advantages in the areas of automatic breech opening, automatic primer feed, crew ergonomics, stability, and safety. The weapon is compatible with all U.S. and NATO standard and developmental 155mm munitions and propelling charges. The maximum rate of fire is five rounds per minute. Maximum range using unassisted projectiles is 24 kilometers (15 miles), and with assisted projectiles it is 30 kilometers (18 miles). LW-155 can traverse 400 mils left and right of center. The lightweight design of the 155 also allows for quick, easy shifting to fire missions outside primary traverse limits.

The development of a pre-planned product improvement which digitizes the weapon is being funded by the U.S. Army. This upgrade known as Towed Artillery Digitization (TAD) will add an aiming and pointing system, on board GPS location, on board fire control computations, and radio communications. The fire control computer will integrate data from a muzzle velocity system as well as stored data from previous missions and shell fuze combinations. These enhancements will greatly increase response time as well as accuracy. The battery will no longer need to wait for survey, but can emplace in any suitable location quicker and with better accuracy than available today even with survey. These capabilities allow for coordinated massed fires from dispersed firing locations. TAD will also provide an automated direct fire sight that integrates a laser range finder with a ballistic computer to deliver probability of kills not achievable with conventional systems. The TAD upgrades can be retrofitted onto the early USMC howitzers by 2nd echelon mechanics.

Operational Impact

The LW-155 will provide significant increases in performance over the current M198 system. Compared to the M198 survivability is increased by 70%, lethality is improved, providing 25% more kills, and the weapon can traverse 20% more terrain than the system it is replacing.

Program Status

The program is in the Engineering and Manufacturing Development (EMD) phase with EMD scheduled for completion in late FY01. Production is scheduled to begin in FY02 with IOC (first two Battalions) scheduled for FY04. TAD development began in late 1999 and will continue through FY03. Production will begin in late FY03.

Procurement Profile: FY01 FY02

Quantity: 0 0

Developer/Manufacturer

Developed by Vickers Shipbuilding & Engineering Limited, in the United Kingdom. Plans are to manufacture up to 70% of the weapon in the United States by a contractor who is still to be determined.

