Mortar Systems

Enhances mission effectiveness of the maneuver unit commander by providing organic indirect fire support.

DESCRIPTION AND SPECIFICATIONS

The 120mm Mortar System is a conventional, smoothbore, muzzle-loaded system used in mechanized infantry, motorized, armored, and cavalry units. It is employed in towed (M120) and tracked carrier versions (M121) and in the Stryker Brigade Combat Team wheeled mortar carrier.

The M252 81mm Mortar System is a smoothbore, muzzle-loaded weapon that replaced the M29A1 mortar in the mid-1980s. It features a high rate of fire, extended range, and improved overall system characteristics.

The M224 60mm Mortar System is a lightweight, smoothbore, man-portable, muzzle-loaded mortar with improved rate-of-fire capabilities. The M224 can be drop-fired from the standard baseplate or handheld and trigger-fired.

The M95/M96 Mortar Fire Control System (MFCS) provides Paladin-like (M109A6) fire control capability that greatly improves mortar lethality, responsiveness, and crew survivability. MFCS links mortar fires with the digital battlefield. It integrates a fire control computer with an inertial navigation and pointing system, allowing crews to fire in less than one minute.

The 120mm Breech Cap Program provides for the replacement of breech caps on all M298 cannons with a new design breech cap featuring a removable firing pin to enhance soldier safety. The new firing pin configuration is similar to that used on the 81mm mortar and provides a positive safe for the soldier during misfire procedures.

The Lightweight 81mm Mortar Program's goal is to develop an 81mm mortar system that is 40 percent lighter than the currently fielded M252 81mm system. Alternate materials and lean design principles will be used to optimize design while meeting the current operational requirements.

XM32 Lightweight Handheld Mortar Ballistic Computer (LHMBC) consists of MFCS software hosted on the Army Common Hardware Rugged PDA. The Rugged PDA (R-PDA) includes a tactical modem and embedded GPS. The system allows mortar crews to send and receive digital calls for fire messages and calculate ballistic solutions and navigate. The LHMBC can be fielded to 60mm, 81mm, and 120mm towed units as an M23 replacement.

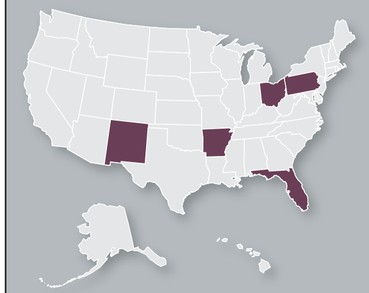
PROGRAM STATUS

- 120mm Mortar system production and fielding completed. Funds for Army Modularity initiative to restart production and fielding to meet the demand for additional systems.
- **FY04** M95/M96 completed fielding to 1st Cav Div and 3ID, will continue fielding through FY08; continuing incremental development of software
- **1QFY05-07** 120mm Breech Cap Program first article test; production in FY06; fielding complete in FY07
- Lightweight 81mm Mortar prototype fabrication and ballistic testing
- XM32 LHMBC complete initial operational test

PROJECTED ACTIVITIES

- **2QFY05** 120mm Breech Cap Program fielding activities begin
- **FY06** M95/M96 MFCS software full material release
- **3QFY05** XM32 LHMBC type classify and material release; first unit equipped
- **FY08** M95/M96 MFCS fielding complete

Mortar	Range (meters)	Weight (pounds)	Rate of Fire (rounds per minute)	Crew	Ammunition
120mm	7240	319	16 for the first minute 4 sustained	4 M121 carrier-mounted 5 M120 towed	High explosive (HE) (M934A1), WP smoke (M929), illumination (visible light, M930 and infrared (IR), M983), and full-range practice (FRP) (M931)
M252 81mm	5935	90	30 first two minutes 15 sustained	3	HE (M821A2), RP smoke (M819), illumination (visible light, M853A1 and IR, M816), and FRP (M879)
M224 60mm	3489	46.5 (conven-tional), 18.0 (handheld)	30 first four minutes 20 sustained	3	HE (M720A1), WP smoke (M722A1), illumination (visible light, M721 and IR, M767), and FRP (M769)



CONTRACTORS

M734A1 Multi-Option Fuze and M783 PD Fuze: L-3 Communications (Cincinnati, OH)
120mm Shell Bodies:
Chamberlain Mfg. (Scranton, PA)
Load Assemble Package (LAP) of Smoke and Illumination:
Pine Bluff Arsenal (Pine Bluff, AR)
MFCS Hardware Integration:
Honeywell (Albuquerque, NM)
XM-32 LHMBC (R-PDA):
Talla-Tech (Tallahassee, FL)

INVESTMENT COMPONENT

Modernization

ACQUISITION PHASE

- Production and Deployment