SPEAR LR (Long Range)

120mm autonomous soft recoil mortar system with long-range capabilities - up to 10km, suitable for high mobility tactical platforms



Elbit Systems' SPEAR LR is a fully autonomous, vehicle-mounted 120mm soft recoil mortar system for high-mobility platforms. SPEAR LR delivers effective fire support by combining the flexibility and effectiveness of accurate mortar firepower with exceptional tactical mobility. The mortar is a derivative of the CARDOM battle-proven mortar system - more than 1,000 systems extensively used by the US Army, NATO, Israeli Defense Forces (IDF) and others. SPEAR LR is the long-range version of the SPEAR mortar which allows firing ranges of up to 10km with extended range "conventional" ammunition.



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Improved Area Coverage and Survivability – Equipped with recoil reduction system that reduces the mortar's firing loads, SPEAR LR can be mounted on a variety of high-mobility light tactical vehicles (4x4 or more) and other rapid deployment wheeled platforms, as well as larger wheeled or tracked platforms.

Advanced Barrel - Advanced Capabilities - The Advanced Barrel of the SPEAR LR allow firing conventional unassisted ammunition to ranges of 8km to +10km (extended range ammunition). The advanced barrel is designed to support future types of advanced ammunition.

Command and Control – SPEAR is equipped with computerized aiming and navigation devices, enabling the mortar system to be operated autonomously and aimed without the need for external reference points. SPEAR can be easily integrated with a variety of C⁴I or Battle Management Systems (BMS).

Flexible Configuration – The system can operate independently with forward observers and/or deployed forces. The system can also be deployed as a standalone or as part of the battery/platoon configuration.

Improved Accuracy – Targeting information is relayed to the Fire Control System (FCS), which computes the ballistic data and orders the mortar's automatic laying system to position the mortar barrel to the exact azimuth and elevation. The system is embedded with an Inertial Navigation System (INS) to provide maximum accuracy.

Semi-Automatic Loading System – In order to increase survivability and functionality, the system is fitted with a Semi-Automatic Loading System. The loader places the mortar round on the loading tray and automatically loads it to the mortar's muzzle.

Key Benefits

- Adaptable to a wide range of high-mobility light vehicles due to a unique soft recoil mechanism
- Rapid deployment, improved area coverage and survivability
- Operated as a standalone mortar or as part of the battery/platoon configuration
- Automated and accurate mortar barrel laying
- Easily operated by a 2–3 person crew
- Increased fire power and efficient use of ammunition
- Independent long-range capabilities to tactical forces

Key Features

- Modern generation of the combat-proven vehicle-mounted mortar – the CARDOM
- Easily integrated with C⁴I or BMS and with target acquisition systems.
- For use with all types of qualified 120mm smooth bore ammunition
- Includes a 2m barrel and a semi-automatic loading system
- Rapid deployment; in and out of action within 60 seconds
- High level of accuracy
- Rate of fire: burst up to 10-12 Rounds Per Minute
- Full manual backup for laying and aiming (suitable for GFE optical sights).



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