120 mm COBRA Mortar System

RUAG

100 % reliable. 100 % ready for the mission. 100 % COBRA.
Intuitive. Fast. And precise.

Security matters.

Maximum performance and intuitive handling

↗ Conflicts and threats across the globe have changed significantly over time. They are now more complex and interdisciplinary. Missions to ensure security are becoming more varied and demanding, which drive RUAG's solutions.

Modern mortar systems offer the best balance between firepower and flexibility. The ability to use and operate such weapon systems easily and quickly when exposed to any conditions can make the difference in combat situations. The highly advanced 120 mm COBRA mortar system from RUAG delivers a convincing performance with maximum firepower and intuitive operation and is suitable for integration into highly mobile platforms.

A design based on shoot & scoot with semi-automatic loading allows for rapid mission successes and reliable protection against enemy fire. The integrated ballistics computer, coupled with a fire control system, guarantees that the right amount of firepower is used at the right time and right place. This allows the mortar system to be used flexibly for different missions.

OPTIMAL FIRING PERFORMANCE

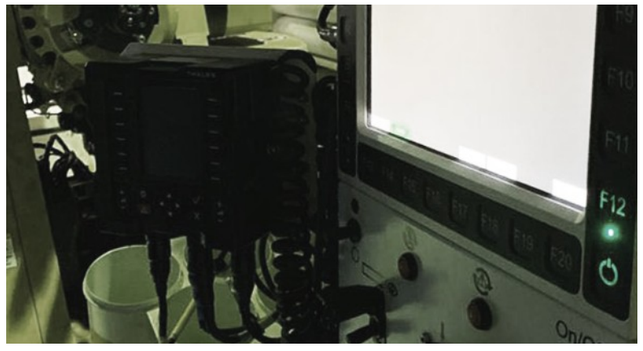
- High directional accuracy thanks to an electrically controlled drive guarantees the highest possible precision when firing
- High firing rate thanks to the semi-automatic loading system, even in extreme weather conditions
- Unloading and protection of the crew under sustained fire
- Ready to fire in 30 seconds

EASY INTEGRATION

- Efficient recoil damping allows for easy integration in different vehicle types
- Thanks to its compact design, it is also suitable for the smallest of vehicles (V-shape)
- Interfaces for a wide range of command and communication systems

INTUITIVE, QUICK AND SECURE

- Operating the mortar system is intuitive, fast and precise
- The control system provides protection against operating errors (e.g. double loading) and allows operation night and day and in extreme weather conditions
- Flexible operating configuration depending on customer requirements



FURTHER ADVANTAGES

- Maximum reliability, operational safety and availability thanks to Swiss quality
- Suitable for highly mobile platforms
- Can be used as a stand-alone solution or as part of a train/battery
- Can be used with few personnel (3-4 crew per platform)
- Precise navigation, even without a GPS signal
- Low life-cycle costs
- Customer-specific solutions

Technical Data

Characteristics		
Calibre	120 mm smooth-bore	
Barrel length	2 m	
Ammunition	Standard 120 mm smooth-bore mortar grenades	
Max. recoil path	300 mm	
Max. mortar weight	max. 1500 kg	
Aiming or shooting range azimuth	± 190°	
Recommended shooting range azimuth	± 45°	
Aiming speed azimuth and elevation	17°/sec	
Smallest aiming step azimuth and elevation	0.1 mil	
Aiming or shooting range elevation	40° – 83° (Minimum elevation of 40° depends on vehicle integration)	
Max. permissible inclined position of mortar	± 5°	
Travel lock position	Elevation Azimuth	0° 0° (direction of travel of carrier vehicle)
Maximum allowable barrel temperature	≤ 150°C	
Maximum allowable gas pressure	PMP = 2,125 bar	

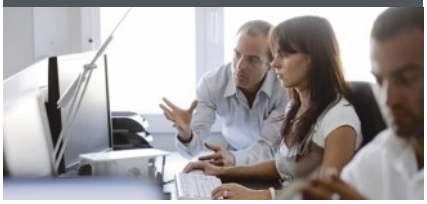
Performance		
Range of mortar	500 m to 9,000 m, depending on grenade and charge (with optimal environment)	
Burst	4 shots in 20s	
Intense	10 shots/min	
Sustained rate of fire	64 shots with 6 – 8 shots/min	
Max. permissible sustained rate of fire	150 shots at max. 4 shots/min	
EFC (Equivalent Full Charge)	≥1500	
Navigation accuracy with all aiding (INU / VMS / GPS PPS) and military GPS code	X-Y coordinates < 10m CEP50 Z coordinates (height)	< 10 m CEP_{50} < 10 m PE
Spatial accuracy of barrel position	Horizontal axis (azimuth): Vertical axis (elevation):	+/- 1.4 mils RMS +/- 0.8 mils RMS
Spatial accuracy of INU (RMS)	Elevation Azimuth	< 0.5 mil < 1.0 mil

Electrical characteristics	
Power supply from carrier vehicle	24 VDC according to MIL-STD-1275E (2 networks according to MIL1275E with restrictions)
Electrical power consumption	< 4,000 VA buffered with batteries
Continuous current of mortar (without movement)	< 25 A
Peak power requirement of mortar	< 400 A/5ms
Peak return flow current of mortar	approx. 60 A/800ms

Further services and products

↗ Our supplementary services make us a competent partner for you. Our high-quality services are impressive, we have advanced infrastructure, and we provide customer-oriented consultations.

ENGINEERING SERVICES



- Consulting
- FEM calculations
- Prototyping
- Subassembly development
- Vehicle integration

LIVE FIRING

- Ammunition qualification
- Demonstration and tests for customers

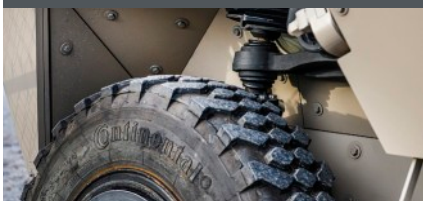
AFTER SALES SERVICES

- Integrated ILS logistics services
- Worldwide service
- Integrated Management System (IMS)
- ISO 9001: 2000 / AQAP 2110

TESTING

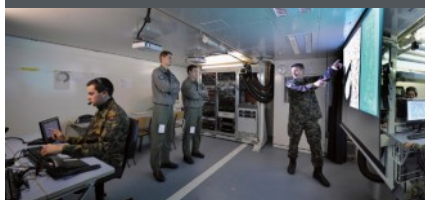
- Consulting
- Electromagnetic compatibility
- Environmental simulation

BALLISTIC PROTECTION



- Mine protection for mortars and vehicles
- Passive protection solutions for vehicles and mortar platforms

MOBILE CONTAINER SYSTEMS



- Command and control
- Support container systems
- Medical container systems
- Field camp solutions

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