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# IFV PROTECTION

**PASSIVE, ACTIVE AND HYBRID PROTECTION CONCEPTS**

**COMPREHENSIVE PROTECTION AGAINST NEW THREAT SCENARIOS**

**PASSIVE, ACTIVE AND HYBRID PROTECTION CONCEPT**

The new threat scenarios require a spherical protection shield built up by passive Add-on-Armour against ballistic and mine/IED threats, active hardkill system against anti-tank rockets and softkill technologies to interrupt the line of sight between the vehicle and the threat.

Infantry Fighting Vehicles (IFV) attract heavy threats and therefore need high level protection against medium calibre KE and Anti-Tank-Rockets/ATGMs as well as drone threats.

The Rheinmetall Hybrid Protection Concept integrates all technologies into a compact and lightweight solution, tailored to the customer needs. Especially the new top attack scenario can be considered in the protection concept. StrikeShield and ROSY are connected to the Battle Management System of the vehicles to provide additional information (StrikeShield) for the initiation of counter attacks respectively receive trigger commands (ROSY) from sensor suits to launch the smoke system.

**COMPLEMENTARY TECHNOLOGIES FOR SPHERICAL VEHICLE PROTECTION**

Due to the complexity of the threat scenario in the field a protection suite tailored to the customer needs requires a thorough combination of the available technologies using their synergistic effects.

**Passive Protection**

The passive protection consists of a spall liner inside the crew compartment and the add-on-armour on the outside of the vehicle. The technologies for the ballistic protection developed by Rheinmetall cover the complete range of STANAG 4569 Vol. 1 as well as solutions for the protection against large calibre threats.

**Mine/IED Protection**

Mine and IED protection technologies are designed to absorb the effects from heavy blast and fragmentation threats hitting the vehicle from underbelly and the lower sides. Rheinmetall has technologies and solutions available covering the entire range of threats specified in the latest edition of STANAG 4569 Vol. 2 and Vol. 3.

**Active Protection**

Advanced anti-tank rockets (ATR) and ATGMs have penetration capabilities that cannot be defeated with passive armour only. Rheinmetall's active protection system Strike Shield is a close-in protection suite capable of destroying the warheads of the ATR and ATGM so that the remaining kinetic energy of the fragments can be absorbed by the passive armour.

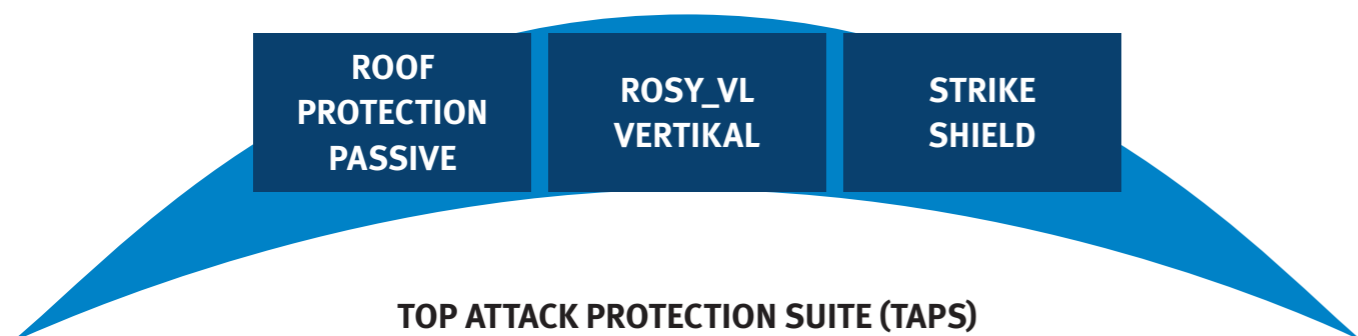
With the possibility of the integration of the components of StrikeShield into the passive armour modules, the system is protected against small arms fire. Additionally with the integrated setup a significant weight saving can be achieved.

**Softkill Protection**

Rheinmetall's softkill system ROSY uses bi-spectral smoke such interrupting the Line-of-Sight between the vehicle and the threat in the visible and infrared spectrum. Anti-tank rockets and drones with their seeker heads and cameras can no more track the vehicle. With the capability of firing several salvos, the crew can drive the vehicle away from the attack while keeping up a long lasting smoke coverage. I.e. the vehicle can even be protected on the move.

**Top Attack Protection Suite (TAPS)**

The recent development of the top attack scenario by dive attack ATRs, bombs and drones requires a comprehensive protection concept combining passive, active and softkill technologies to protect the top of the vehicle. Equally it is necessary to connect the active and softkill system with the sensors installed on the vehicle (e.g. Laser Warning Sensors, Acoustic Sensors) to trigger the countermeasures.

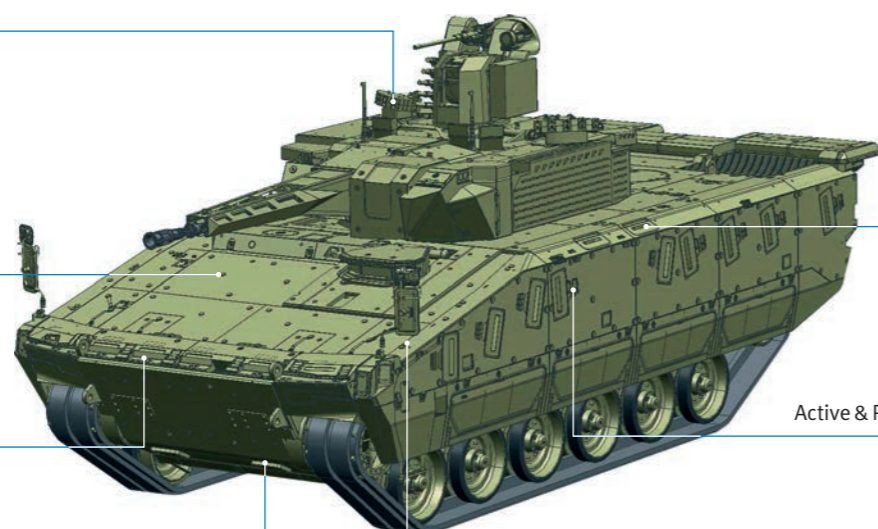


**ROSY**  
Softkill System

**Overmatch Liner**  
Hull

**Strike Shield**  
Active Protection Front

**Mine/IED**  
Protection



**Strike Shield**  
Active Protection Top

**Hybrid**  
Active & Passive Protection Side

**Add-on-Armour**  
Passive Protection Hull Side & Front

**REALIZED PROJECTS**



IFV Lynx



Boxer 8x8