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Booth 6.15

RHEINMETALL DEFENCE  
FORCE PROTECTION IS OUR MISSION





Favourable military outcomes require well-equipped armed forces. In an age when international peace-enforcement operations have become the order of the day, soldiers deployed around the world put their lives on the line to restore security and uphold freedom. Maintaining the edge in conflict and post-conflict situations often depends on technical superiority: having the right equipment is a vital form of life insurance for troops deployed in harm's way. Providing friendly forces with the best-possible protection is the core mission of Rheinmetall Defence.

Day in, day out, Rheinmetall's highly qualified engineers and technicians do their utmost to meet and anticipate the complex requirements of the modern military, enabling soldiers to operate successfully even under the harshest conditions. Rheinmetall Defence products set the global standard for excellence in a wide array of disciplines: from vehicle, force protection and weapon systems to infantry equipment and air defence, and from network-enabled warfare capabilities to simulation and training systems. Today, the Group supplies more than 700 different products, primarily systems and equipment for ground forces, but also naval, air force and tactical law enforcement applications.

As Europe's foremost supplier of army technology, Rheinmetall Defence is a long-standing partner of the armed forces of Germany, its NATO allies and other like-minded nations, progressively turning the Group into a major global player. And driving this growth – more than anything else – is Rheinmetall's unrivalled technical expertise in the field of force protection.



# ARMY



# NAVY



# AIR FORCE



## COMPETENCE IN LAND, AIR AND NAVAL SYSTEMS

Well over a century ago, when Heinrich Ehrhardt created a global sensation with his new recoiling cannon, he wrote the first chapter in a success story that continues to this day: army technology still makes up more than 70 % of Rheinmetall's product range. Having expanded significantly over the past decade and now reinforced by fresh international know-how, today Rheinmetall is one of the world's largest suppliers of systems and equipment for ground forces. Based on this expertise and an often-unique portfolio of products, the company also offers excellent air force and naval solutions, especially weapons systems, passive protection, reconnaissance systems and simulation technology. No matter whether the requirements are service-specific or oriented to combined operations, or whether the mission is external or internal security – our unique ability to integrate components into complete solutions makes Rheinmetall a powerful partner of the armed forces and security agencies of Germany, its allies and other likeminded nations.

**ARMY TECHNOLOGY:** *Vehicle systems · Weapons and ammunition · Turret systems and weapon stations · Air defence systems · Protection systems  
Reconnaissance and fire control systems · Simulation and training systems*

**NAVAL TECHNOLOGY:** *Naval guns and ammunition · Air defence systems  
Reconnaissance systems · Protection systems · Simulation and training systems*

**AIR FORCE TECHNOLOGY:** *Aircraft armament and ammunition · Protection systems · Air defence systems · Air start units · Simulation and training systems*



## VEHICLE SYSTEMS

*Military trucks · Reconnaissance, command, functional and combat vehicles*

*Main battle tanks · Armoured infantry fighting vehicles*

*Self-propelled howitzers · Mortar systems*

*Support vehicles · NBC reconnaissance systems*

*Service · Maintenance · Logistics*

COMMAND  
SUPPORT  
COMBAT



Wheeled or tracked? For Rheinmetall Defence, this is not an either/or question. Few makers of military vehicles can match the wide spectrum of vehicles supplied by Rheinmetall Defence. In terms of weight class, protection category and mission-specific equipment, Rheinmetall covers every conceivable operational scenario. Systems such as the Fuchs/Fox armoured transport vehicle and Marder IFV have been in service for decades and – thanks to permanent improvements – remain a mainstay of modern armed forces to this day. For the world’s best main battle tank, the Leopard 2, Rheinmetall not only offers a cutting-edge upgrade package, but also a complete fleet of combat support vehicles.



In cooperation with leading partners, Rheinmetall continues to set the future standard of excellence with vehicles like the multipurpose Boxer, the Puma IFV and the multi-mission AMPV. In a decisive move, the Group’s position in the market grew substantially in 2010 with the creation of Rheinmetall MAN Military Vehicles GmbH (RMMV) – a unique company supplying the full spectrum of wheeled military systems. The competitive advantages are plain to see. RMMV brings together MAN’s tremendous experience in truck engineering and Rheinmetall’s unsurpassed expertise in defence technology.

But Rheinmetall can do more than just build vehicles. The company also offers systems logistics packages tailored to the needs of individual customers, including comprehensive spare parts management, training and instruction, vital for all types of vehicles. For operators of tracked and wheeled vehicles alike, this assures optimum levels of mobility and operational readiness.



# WEAPONS SYSTEMS



*Large- and medium-calibre weapons and ammunition*

*Turret systems · Weapon stations · Mortar systems*

*Pyrotechnics and signal ammunition*

*Propellants · Fuzes*

AIMING  
FIRING  
EFFECTIVENESS



Rheinmetall Defence has led the way in large-calibre weapon systems for decades. It is hardly a coincidence that its acclaimed 120 mm smooth-bore gun furnishes the firepower not only of the Leopard 2, but also of America's M1 Abrams main battle tank. The company's battle-tested PzH 2000 self-propelled howitzer is the world's most advanced artillery system, capable of attaining a maximum range of 56 kilometres. But Rheinmetall Defence's expertise is by no means limited to large-calibre weapons: the Group is an acknowledged leader in medium-calibre automatic cannon and ammunition, with numerous units in service with ground, air and naval forces around the globe. Medium-calibre turret systems and weapon stations round out the product range perfectly.

Moreover, Rheinmetall also supplies innovative mortar systems and a complete portfolio of 40 mm low- medium- and high-velocity ammunition, together with a large selection of pyrotechnical illumination and signalling devices.

The company's enormous capacity for innovation is based on our mastery of complete systems. Only an optimum combination of gun, ammunition, propelling charge and fuze technology ensures the level of precision and lethality that set our products apart worldwide. But Rheinmetall is also spearheading the development of entirely new technologies: the successful demonstration of a high-energy laser weapon in 2011 will keep Rheinmetall on the cutting edge for years to come.

# PROTECTION SYSTEMS

*Ballistic protection • Anti-mine protection • IED protection • Fighting compartment protection*

*Transparent armour • Signature suppression • Protection against shaped charges • Blast protection*

*Spall liners • Standalone armour • Add-on armour • Deception and concealment systems*

*Decoys • Smoke/obscurant systems • ADS-Active Defence System*

ARMOUR  
CONCEALMENT  
DECEPTION

For many years, Rheinmetall has specialized in the development and production of components and systems for protecting vehicles, aircraft, ships and other assets. Rheinmetall's all-encompassing protection concept involves a multi-layered approach. Here, its active protection systems – the first line of defence – present a particularly effective and innovative solution, neutralizing incoming projectiles before they reach their intended target. Yet passive solutions, serving as the second line of defence, remain indispensable. These include armour plates made of specific materials that deliver maximum protection with minimum added weight, an area in which Rheinmetall is pioneering the development of new next-generation products. A range of high-performance smoke/obscurant systems for ground vehicles, fixed-wing aircraft, helicopters and ships rounds out the company's protection concept. Longstanding experience and special knowledge, combined with extensive research, development and testing, have made this capability a reality – one that will continue to be effective against future threats. By steadily adding to its expertise in this forward-looking field, Rheinmetall makes a material contribution to protecting the people who protect us.





## AIR DEFENCE

Command and control systems · C-RAM-capable air defence guns

Stationary and mobile air defence systems · Missile launchers

Naval air defence systems · 3D search and acquisition radars



### DETECTION IDENTIFICATION ENGAGEMENT

Air defence today is a highly demanding, high-tech discipline: after all, aerial threats

have to be detected, identified and engaged in the space of a few seconds. This requires powerful computers and excellent ballistic accuracy. Optimized to meet aerial threats of every kind, Rheinmetall Air Defence offers an extensive array of products ranging from conventional military air defence applications to systems specially designed for protecting high-value civilian assets – both on land and at sea.

Rheinmetall is a major player in the global market for cannon-based short-range air defence systems, i.e. those designed for engagement ranges of less than five kilometres. Rheinmetall is the undisputed market leader in this field. The best example of the company's unrivalled competence in the short-range domain: the fully automated MANTIS air defence system. It is capable of bringing down fixed-wing and rotary aircraft and guided missiles as well as

rockets, mortar and artillery rounds – the so-called RAM threat. Here, the company's

globally unique Ahead ammunition plays a vital role. In addition, Rheinmetall supplies high-performance, integrated guided missile launchers for autonomous and networked operations, perfectly augmenting its cannon-based systems.

A system capable of neutralizing highly lethal military threats can of course also be used in certain civilian contexts. For example, air defence technology from Rheinmetall can be deployed to protect major sporting events and international conferences from potential aerial attack. The same applies to critical infrastructure such as power plants and offshore oilrigs. It thus comes as no surprise that the armed forces and security services of over forty nations place their trust in a variety of Rheinmetall air defence systems.

# ELECTRO-OPTICAL PRODUCTS AND C4I SYSTEMS

*Reconnaissance and sensor systems · Observation systems*

*Fire control · Command and control systems · Satellite monitoring · Laser aiming devices*

*Target acquisition and tracking devices · Friend or foe recognition systems*

*Day and night observation systems · Thermal imagers*

## RECONNAISSANCE COMMAND ENGAGEMENT

Knowing more can make a decisive difference, and this is particularly true in military operations. But in-

formation superiority turns into operational superiority only if a complete “sensor-to-shooter” network exists, extending from reconnaissance optics to weapon systems. Rheinmetall Defence meets this requirement with a wide array of advanced electro-optical and C4I capabilities, including the compact Gladius soldier system and state-of-the-art turret systems for the Leopard 2 tank. Standing for “Command, Control, Computers, Communications and Information”, C4I involves a networked sequence encompassing command, reconnaissance, situation assessment and engagement assets. The aim is to create optimum situational awareness – as much

for the individual soldier on the ground as for entire military formations. Yet information superiority is

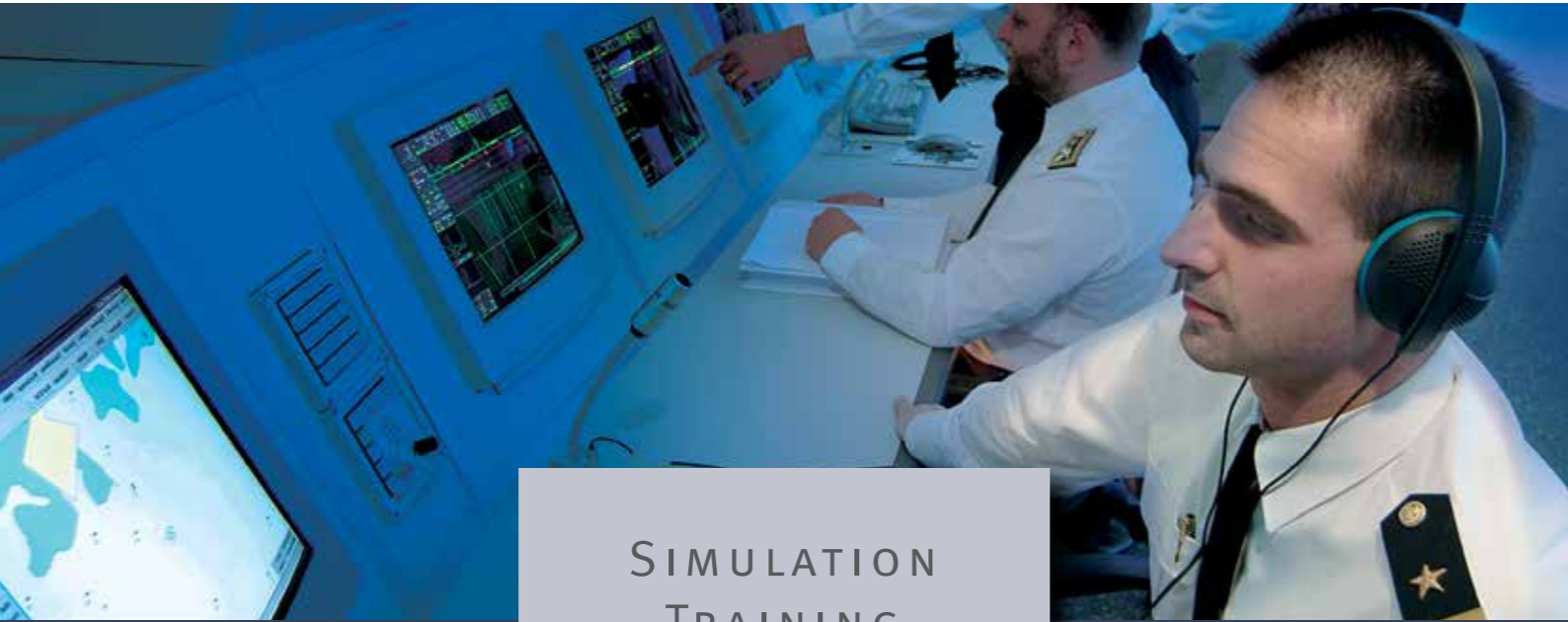
only half the battle: successful outcomes require effective use of weapon systems. Fire control technology from Rheinmetall Defence forms a key link in the operational chain, enabling extremely precise control of weapons, including automatic slewing.

Longstanding experience and tremendous innovative drive have made Rheinmetall Defence a global player in the field of network-enabled operations. Besides conventional military applications, high-tech operational networks play an increasingly important role in combatting global organized crime and international terrorism.





# SIMULATION AND TRAINING



SIMULATION  
TRAINING  
IMPLEMENTATION

- Combat training centres • Gunnery and combat simulation*
- Tactical simulation • Driving simulation*
- Flight simulation • Maritime and nautical simulators*
- Power plant and process simulation*



Rheinmetall Defence is employing ultramodern technology to revolutionize military training. From individual simulators to complete training facilities and large-scale combat training centres for holding major exercises, Rheinmetall replicates highly realistic operating environments for army, navy and air force personnel.

In one of Rheinmetall's combat training centres up to 30,000 participants per year can be readied for every conceivable combat situation. Relying on lasers to indicate hits, duel simulators form the technological heart of a huge system of systems in which live fire never plays a role. Digital networking enables the perfect interplay of simulation technology,

vehicles and dismounted troops. Vast amounts of data generated during simulated combat operations flow into the combat training centre's control cell in real time for precise, instantaneous analysis. An especially attractive option for customers is the operator model. Here, acting in a service provider capacity, Rheinmetall Defence remains responsible for the technical facilities even after commissioning. In the process, Rheinmetall assures high quality standards and cost efficiency. Far more importantly, however, our cutting-edge simulation technology provides soldiers with the best-possible preparation for the hard reality of the battlefield, the most fundamental element of force protection.

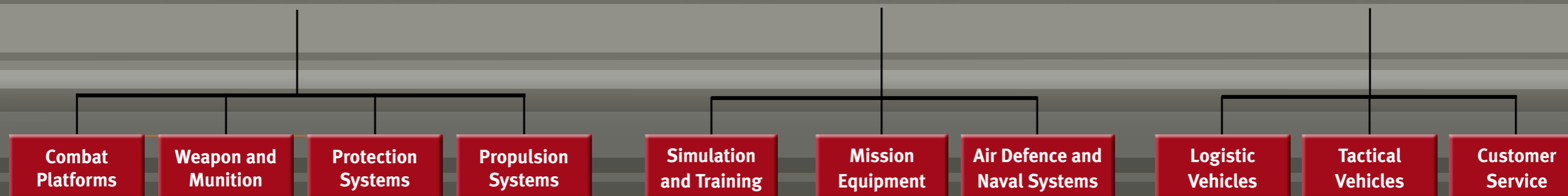


# RHEINMETALL DEFENCE – GLOBAL REACH WITH THREE DIVISIONS

## COMBAT SYSTEMS

## ELECTRONIC SOLUTIONS

## WHEELED VEHICLES



**GERMANY**  
 Duesseldorf (Headquarters)  
 Aschau  
 Berlin  
 Bonn  
 Bremen  
 Gera  
 Gersthofen  
 Hallbergmoos  
 Hamburg  
 Heilbronn  
 Ismaning  
 Jena  
 Kassel  
 Kiel  
 Koblenz  
 Krefeld  
 Lohmar

Letzlingen  
 Munich  
 Neuenburg  
 Nuremberg  
 Oberndorf  
 Röthenbach  
 Rostock  
 Schneizlreuth  
 Silberhütte  
 Stockach  
 Trittau  
 Unterlöss

**AUSTRALIA**  
 Adelaide  
 Alphington  
 Deakin West

Manuka  
 Melbourne  
 Turner

**AUSTRIA**  
 Schwanenstadt  
 Vienna

**CANADA**  
 Ottawa  
 Saint-Jean-sur-Richelieu

**GREAT BRITAIN**  
 Blackpool  
 Bristol  
 Newport

**INDIA**  
 New Delhi

**ITALY**  
 Domusnovas  
 Ghedi  
 Rome

**MALAYSIA**  
 Kuala Lumpur  
 Malacca

**NORWAY**  
 Nøtterøy  
 Oslo

**RUSSIA**  
 Moscow

**SAUDI ARABIA**  
 Riyadh

**SINGAPORE**  
 Singapore

**SOUTH AFRICA**  
 Boksburg  
 Centurion  
 Maitland  
 Potchefstroom  
 Somerset West  
 Wellington

**SWEDEN**  
 Stockholm

**SWITZERLAND**  
 Altdorf  
 Bern  
 Lohn-Ammansegg

Studen  
 Thun  
 Urdorf  
 Wimmis  
 Zurich

**THE NETHERLANDS**  
 Amsterdam  
 Ede  
 Rijswijk

**USA**  
 Biddeford  
 Camden  
 Stafford

**UAE**  
 Abu Dhabi