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MEET THE RADICALLY NEW  
**PANTHER KF51.**

**TAKING RESPONSIBILITY** IN A CHANGING WORLD



# THE RADICALLY NEW MAKES A POWERFUL ENTRANCE: MEET THE PANTHER.

The Panther is the first of its kind: a radically new MBT concept not constrained by yesterday's technology. Drawing on some of the latest technologies, the Panther was designed from the ground up to deliver the

- highest lethality on the battlefield, combined with an
- integrated survivability concept and connected by a
- fully digitised NGVA data backbone to enable
- next-generation operational capabilities and automation.

This enables a reduction in crew size, which paves the way for uncrewed turret options and Human-Machine Teaming.



## Highly lethal

Unrivalled lethality overmatch with the 130 mm Future Gun System (FGS) and optimised sensor-to-shooter links.

## Fully digitised

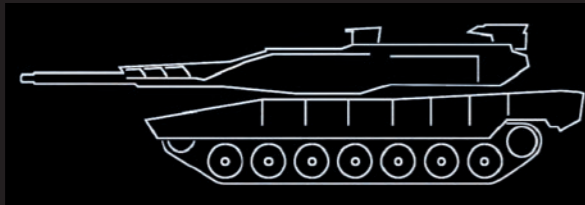
The first for an MBT: The Panther is designed around a digital architecture complying with the NGVA standard. This is the key enabler for future decision support and automation systems.

## Highly protected

The first MBT adopting an integrated survivability concept of on and off-platform sensors coupled with active, reactive and passive protection and a dedicated top attack protection system.

## Automation

Fully integrated and automated ammunition handling and target engagement systems pave the way for reduced crew sizes and uncrewed turret options.



LETHALITY

# SIMPLY MORE LETHAL.



The Panther fulfils the core capability of “dominate and destroy”. With the Rheinmetall Future Gun System consisting of a 130mm cannon, a fully automated ammunition handling system and the additional armament options of the HERO 120 loitering ammunition, the Panther has concentrated firepower for long-range strikes in multi-target engagements.

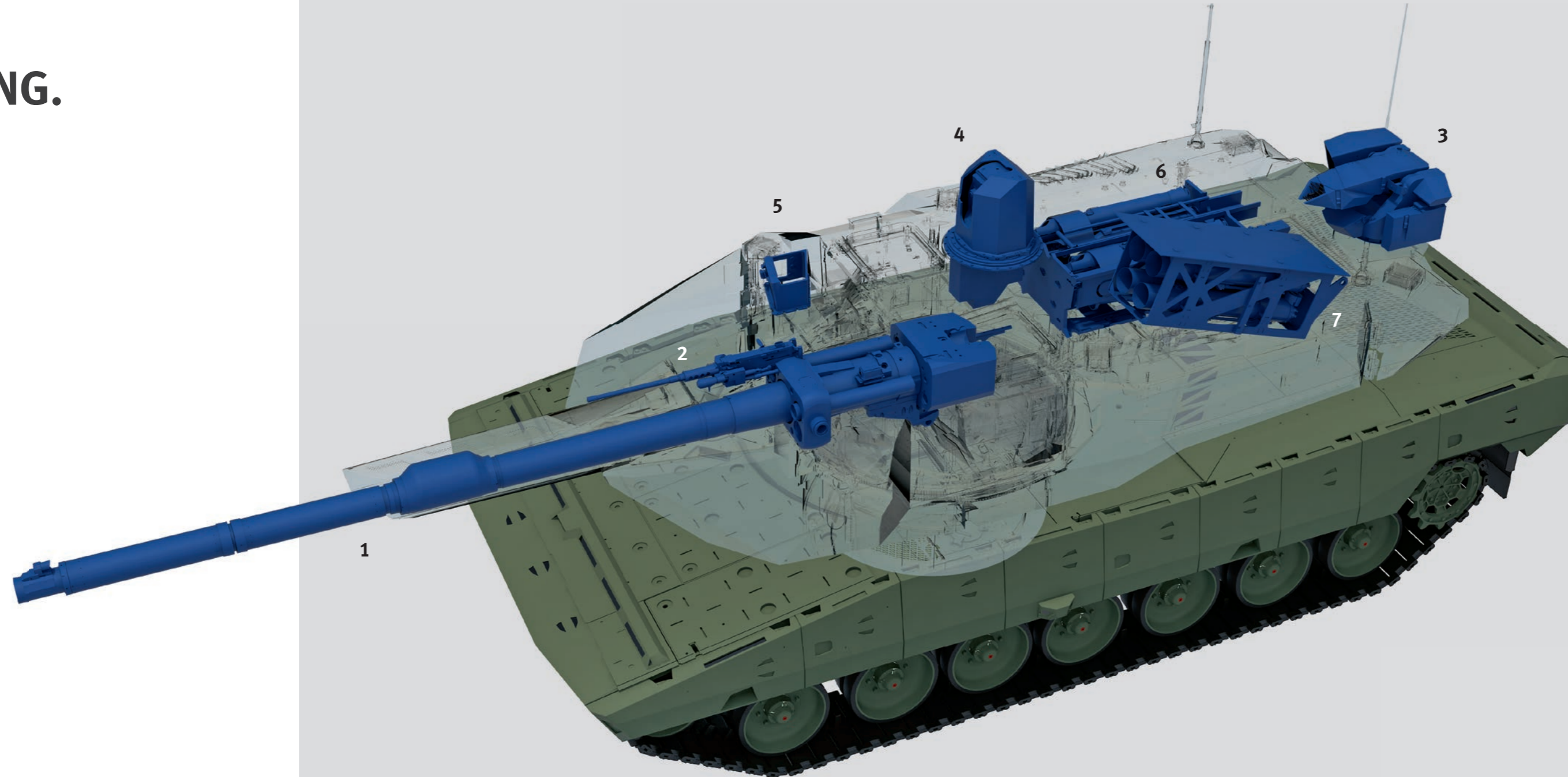
## LETHALITY

# DEADLY CONVINCING. THE 130 MM GUN.

Rarely has the sheer power of an MBT gun been more impressive. The Future Gun System, developed by Rheinmetall, enables a 50 per cent longer kill range to be achieved (than 120 mm) with an unrivalled rate of fire due to the autoloader performance. A 12.7 mm co-axial machine gun complements the main gun. Multiple Remote Controlled Weapon Station (RCWS) integration options give flexibility in proximity and drone defence.

The optional HERO 120 loitering ammunition capability expands the Panther's strike capability to non-line-of-sight targets and can be mounted depending on role and mission requirements.

All weapons are connected with targeting sights and the fire control computer through the fully digitised architecture, allowing for hunter-killer and killer-killer operation, seamless target engagements and future AI decision support.



### 1 Main armament

- 130 mm L52 smoothbore gun
- -9 to 20° elevation
- Fully digital, high-accuracy turret drive and stabilisation system
- Next-generation KE munition
- Programmable multi-purpose HE munition

### 2 12.7 mm coaxial machine gun

- Mid-range support and defence
- 250 ready rounds
- Easy external access

### 3 Natter RCWS

- Drone defence and proximity protection
- Fully automated 7.62 mm RMG
- 2,500 ready rounds
- -15° to 85° elevation for full hemispheric coverage

### 4 SEOSS2 commander's sight

- State-of-the-art, multi-featured commander sight
- Multi-spectral camera system
- Laser range finder

### 5 EMES gunner sight

### 6 Autoloader

- Up to 20 ready rounds
- High firing rate
- Unloading and re-stocking capability

### 7 HERO 120 starter

- 4 HERO 120 loitering munitions
- Provides NLOS strike capability
- Modular mission option

## SURVIVABILITY

# IT TAKES INSTINCT TO SURVIVE.

The Panther employs a ground-breaking, fully integrated, comprehensive, weight-optimised survivability concept. In addition to classic measures, the Panther's digital architecture enables on and off-board survivability, with active, reactive and passive protection technologies.

The Panther is configured with a pre-shot detection capability, enabling it to strike first. Threats from above are defeated by the Rheinmetall TAPS (Top Attack Protection System). The ROSY smoke obscurance system is provided as part of the survivability system, which fully integrates with the digitised architecture to allow additional defence measures. The standout survivability feature is undoubtedly the active KE protection, which increases protection levels without affecting the system weight.

As a system designed to operate in a contested electromagnetic spectrum, the Panther is fully cyber hardened.



### Reactive and passive protection

- Sensor-based reactive system
- Passive protection

### Active protection

- Protection against large-calibre KE
- Protection against ATGM

### ROSY smoke obscurance system

### Top attack protection system (TAPS)

### Mine protection

### Rheinmetall drones

### Pre-shot detection capability

MOBILITY

# WHERE SUPERIOR AGILITY AND BREACHING POWER BECOME ONE.

The combat weight of just 59 tonnes provides far greater mobility than current systems. This puts it in a battle-winning weight category and it also fits the tunnel profile AMovP-4L without preparation: a requirement that no current MBT upgrade fulfils. Consequently, the Panther excels in tactical and strategic mobility.



Combat weight: <59t



Range: >500 km



Fits tunnel profile AMovP-4L



## THE CONCEPT

# THE PANTHER CONTAINS THE POWER OF MANY FOR MULTI-DOMAIN COLLABORATIVE COMBAT.

The Panther is a truly software-defined tank fully enabled to collect and disseminate information on the multi-domain battlefield. Deep integration of modern BMS and software-defined communication systems enables forces to operate in collaborative combat environments such as cross-platform sensor-to-shooter links.

The Panther is designed to control assigned uncrewed aerial systems such as on-board or off-board drones, loitering ammunition and a range of uncrewed ground vehicles.

The fully digitised system and common crew stations are the enablers for true Human-Machine Teaming and control of wingman UGVs that cover capabilities such as platoon-level air and drone defence.

## COMMANDABILITY

# EVERYTHING IS POSSIBLE FROM EVERY SEAT.

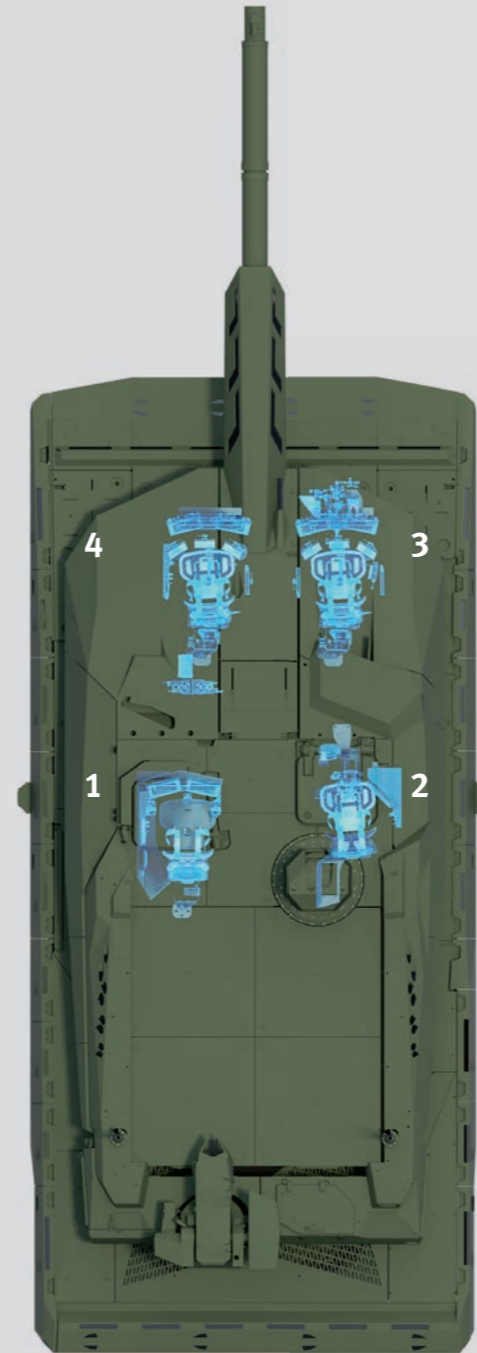
Based on the needs of the crew, we have developed workstations that are unmatched in their integration. The Panther is designed for a crew of three, supporting future force structures with reduced numbers of soldiers. Two crew stations are located in the chassis, with one dedicated to the driver and an optional station dedicated to a company commander, a drone operator or a wingman pilot.

The fully digitised NGVA architecture allows for seamless sensor and effector integration both within the platform and cross-platform.

Sensor and weapon control assignments can be passed between crew members instantly.

Each workstation can hand over and take over tasks and roles from others with no reduction of functionality. As the turret and weapons control are also provided to the chassis based work stations, future upgrades being planned include uncreeped turrets and remotely operated Panthers.

- 1 **Commander's Crew Station**
- 2 **Gunner's Crew Station**
- 3 **Driver's Crew Station**
- 4 **Specialist Crew Station (optional)**





PARTNERSHIP POTENTIAL

# STRONGER TOGETHER WITH PANTHER LEAP.

Join the Panther Leap and help jointly shape the system. By engaging with Rheinmetall's innovative development approach, operators, maintainers, logisticians and procurement professionals of all current and future user nations can enable the future – together shaping the Panther habitat. Rheinmetall has pedigree in creating global product supply chains and engaging with user nations in order to provide substantial national industrial content and sovereign capability.



## SUSTAINABILITY

# FUTURE-PROOF CAPABILITIES BASED ON SUSTAINABILITY.

With the Panther, a completely new MBT concept is being brought to life: one that is not limited by considerations of current MBTs. It is designed from the ground up so that it can be easily updated and equipped with the latest capabilities and features. The NGVA modular open-system architecture enables spiral development that can be regularly updated in line with innovation cycles.

The Panther is the first of a new MBT family. In the near future, there will be further innovations that support environmentally friendly peacetime operations and further optimisation in terms of automation and effectiveness.

