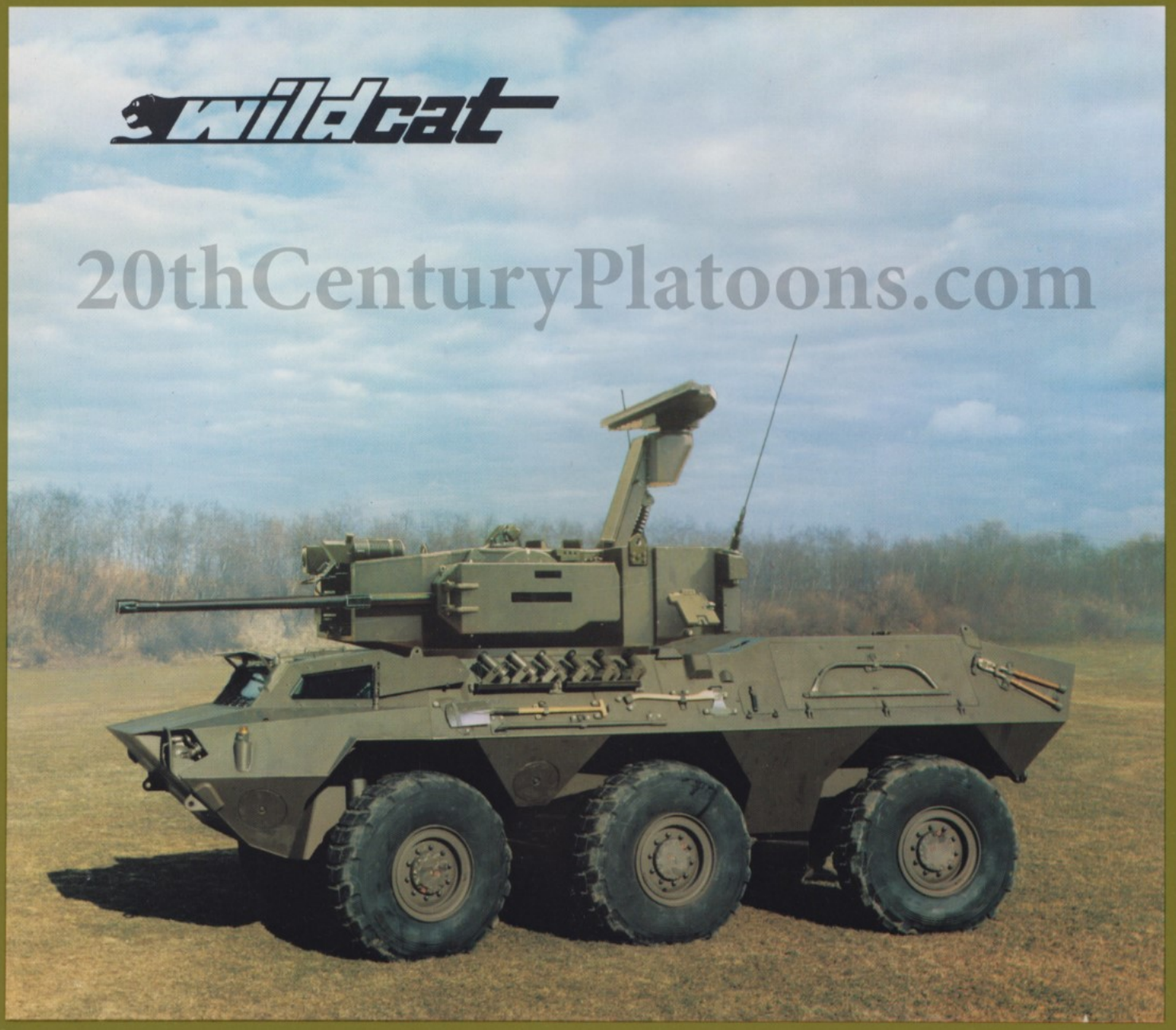
KRAUSS MAFFEI

in co-operation with:
Hollandse Signaalapparaten B.V.
Siemens AG
Daimler-Benz AG
Mauser-Werke Oberndorf GmbH

Anti-Aircraft Armored Truck (AAAT)



Concept

The Wildcat Air Defence System is the result of extensive conceptual studies undertaken by several of the world's leading companies in air defence and vehicle technology. These companies are:

- Krauss-Maffei AG
- Hollandse Signaalapparaten B.V.
- Siemens AG
- Daimler-Benz AG
- Mauser-Werke Oberndorf GmbH

Specific tactical requirements have been met by the Wildcat weapon system, these being:
- complete autonomy
- excellent mobility
- maximum effectiveness
- high reliability
- economy of operation

The system is air transportable and amphibious (optional).

The complete system is easy to operate and requires a crew of 3, a commander in tactical control of the system, a radar operator/gunner who conducts the engagement and a driver.

Either the commander or the radar operator/gunner can operate the weapon system single-handed, if necessary.

The system reaction time is 6 seconds from moment of detection to moment of firing.

Radar/Optronic Fire Control System

This system comprises:
- search radar
- TV-tracker/laser combination
- digital fire control computer
- periscope

The search radar permits continuous air surveillance under all-weather conditions over a radius of 18 km, even when the vehicle is on the move and subjected to heavy ECM interference. Due to its high sub-clutter-visibility, the search radar can detect very low flying aircraft and helicopters even under adverse conditions.

After a target has been selected on the PPI by means of the radar operator's/gunner's joystick, the periscope is automatically directed to the designated azimuth angle. The target elevation is then determined by the commander with the aid of the periscope, or by the gunner by means of the TV-tracker. The TV-tracker then automatically "locks-on" to the target and tracks it continuously. Target range is thereafter determined by means of the laser range finder. Tracking performance may be monitored by either the TV-monitor or the periscope, which is slaved to the TV-tracker/laser.

The digital fire control computer continuously computes the lead-angle for the cannon taking into account metereological influences, together with vehicle cant angle and muzzle velocity variations.

The commander can uncouple the periscope from the TV-tracker for terrain surveillance and ground engagement.

Fire Power

Twin highly effective 30 mm cannon suitable for aerial or ground engagements are mounted on the turret. These cannon are characterised by:
- high rate of fire of 800 rounds/min.
- very low dispersion rate
- long combat range

The mechanical simplicity of the cannon ensures minimum maintenance, high reliability and continuous operability even under the most adverse environmental conditions.

The cannon can be fired in pre-programmed bursts when engaging aerial targets or, after a simple switch-over operation, to single fire for ground target engagement.

The following types of standardised GAU 8/A 30 mm ammunition are available with or without tracer:
- HEI for aerial targets
- API for ground targets
- TP for training and practice

All types of ammunition use plastic rotation bands thereby increasing the barrel life by about 40% over other 30 mm ammunition.

Protection

The best possible protection for both vehicle and crew is ensured by the Wildcat's:
- armored construction
- high speed and mobility
- smoke grenade launcher
- NBC protection system (optional)

The vehicle hull is a monocoque construction shaped to provide optimal protection against small arms fire and shrapnel.

Mobility

Utilisation of the TPZ-1 running gear ensures outstanding mobility. Its well proven characteristics are:
- high speed on the road of 100 km/h
- excellent cross-country mobility
- extensive operational radius

Crew fatigue is minimized by the excellent ride characteristics and a low interior noise level.

The vehicle is powered by a Daimler-Benz 8 cylinder exhaust turbo-charged diesel engine having an output of 235 kW (320 HP). The entire power plant is self-contained and can be removed easily and quickly. To facilitate maintenance and service, the engine can be bench-tested.

Cost-Effectiveness

Cost-effective operation is an essential element of the Wildcat weapon system philosophy and was considered during all stages of design, development and manufacture.

Maintenance

Due to careful design, maintenance and service of the vehicle is kept to a minimum and can be performed by the crew using on-board equipment. Maintenance, repair and spares manuals are provided.

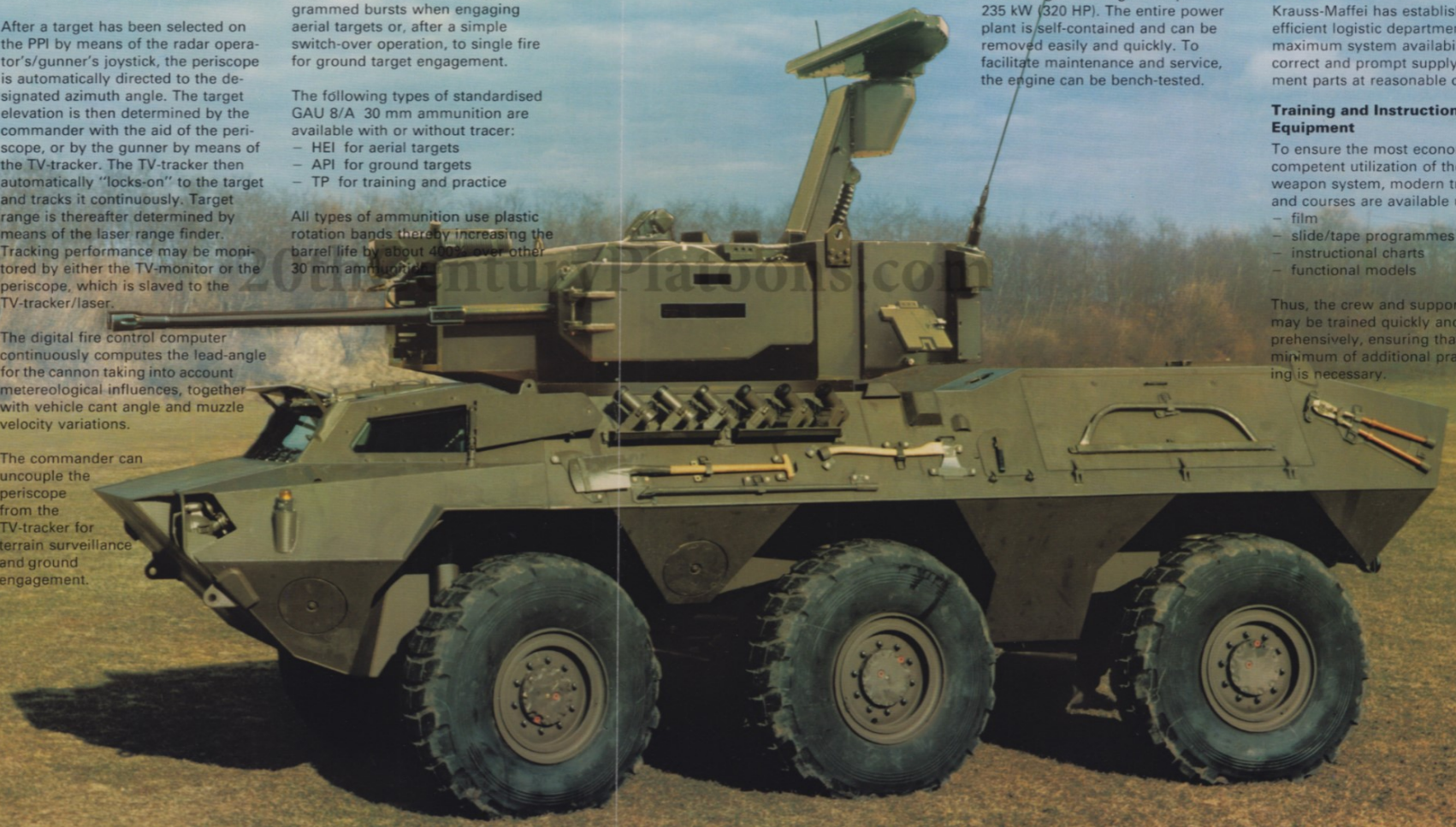
Logistics

Krauss-Maffei has established an efficient logistic department to ensure maximum system availability by the correct and prompt supply of replacement parts at reasonable conditions.

Training and Instructional Equipment

To ensure the most economic and competent utilization of the Wildcat weapon system, modern training-aids and courses are available using:
- film
- slide/tape programmes
- instructional charts
- functional models

Thus, the crew and support personnel may be trained quickly and comprehensively, ensuring that only a minimum of additional practical training is necessary.



Technical Data

General

Combat weight	17.5 t (approx.)
Length	6.88 m
Width	2.98 m
Overall height (search radar in lowered position)	2.74 m
Ground clearance	0.40 m
Engine output	235 kW (320 HP)
Max. speed	100 km/h
Operating range	800 km (approx.)
Turning circle	17 m

Search Radar

- 360° scan with simultaneous target tracking
- Outstanding clutter suppression through MTI
- Search on the move
- Search ability under ECM conditions
- Built-In-Test-Equipment (BITE)
- Compact, rugged and modular design

Optronic Tracker

- Militarised, daylight television camera
- Clear, grey, vertical polarised filters
- Video controlled automatic aperture range
- Solid state Neodymium-Yag laser transmitter

Fire Control Equipment

Search Radar

Type	Digital MTI
Frequency band	X-band
Peak Power	≧200 kW
Range	18 km
Data rate	1 Hz (60 r.p.m.)
IFF unit	Integrated

Optronic Tracker

TV-tracker	Video format to CCIR standard (625 lines, 25 frames/s, 2:1 interlace)
Tracking system	Field-of-view: 2.4° Azimuth 1.8° Elevation
Laser range finder	1.06 µm wavelength, max. Repetition frequency 10 Hz, Beam divergency 1.2 to 1.5 mil
Computer	Military, micro programmed, general purpose, micro computer, word length 24 bit.

Periscope

Fixed binocular eyepiece		
Magnification	2 x	8 x
Field-of-view	30°	8°
Azimuth coverage	n x 360°	
Elevation coverage	−10° to 85°	
Optical Target Indicator	Mountable on the periscope for optical acquisition	

Radar and TV-Displays

PPI	25 cm diameter, virtually clutter free picture
TV-monitor	18 cm for presentation of TV-picture and for display of alphanumeric data.
System Reaction Time	6 s (typical) from moment of detection to moment of firing

Gun Aiming Drives

Gun laying:	Azimuth n x 360°
	Elevation − 5° to 85°
Slewing speeds:	Azimuth 2000 mil/s
	Elevation 1600 mil/s

Armament and Ammunition

Cannon

Type	Mauser MK 30-F, Automatic belt fed
Calibre	30 mm
Rate of fire	800 rounds/min.
Effective range	3 km

Ammunition

Type	GAU 8/A
Muzzle velocity	1050 m/s (1150 m/s)
AA-ammunition	250 rounds per gun (approx.)
AP-ammunition	10 rounds per gun (approx.)

Power Supply

Generators

Voltage	3 x 115 V/200 V
Frequency	380/400 Hz
Power	20/5 kVA
Battery	24 V DC

Chassis

Hull	armor-steel plates, welded, monocoque construction.
Engine	235 kW (320 HP), exhaust turbo-charged diesel
Gearbox	6 speed automatic with torque converter
Tyres	14.00 x 20 "run-flat" or radial ply
Steering	power assisted, re-circulating-ball. Front and centre axles steered.
Optional Equipment	NBC-Protection unit, vehicle navigation system

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