

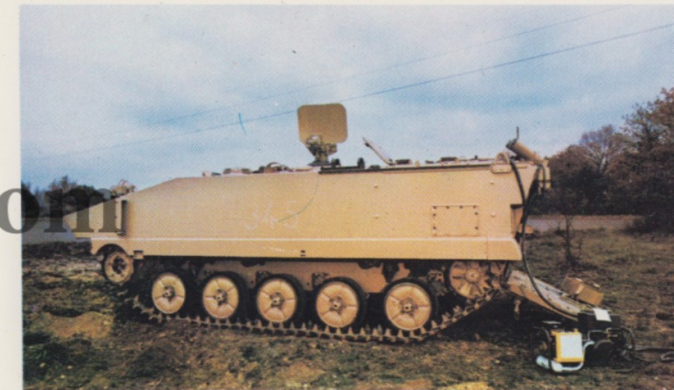
AMX 10

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AMX 10 P

armoured infantry carrier



AMX 10 RATAC

battlefield surveillance



AMX 10 TM

artillery support



AMX 10 HOT

tank destroyer



AMX 10 PC

command post

Edition 1979

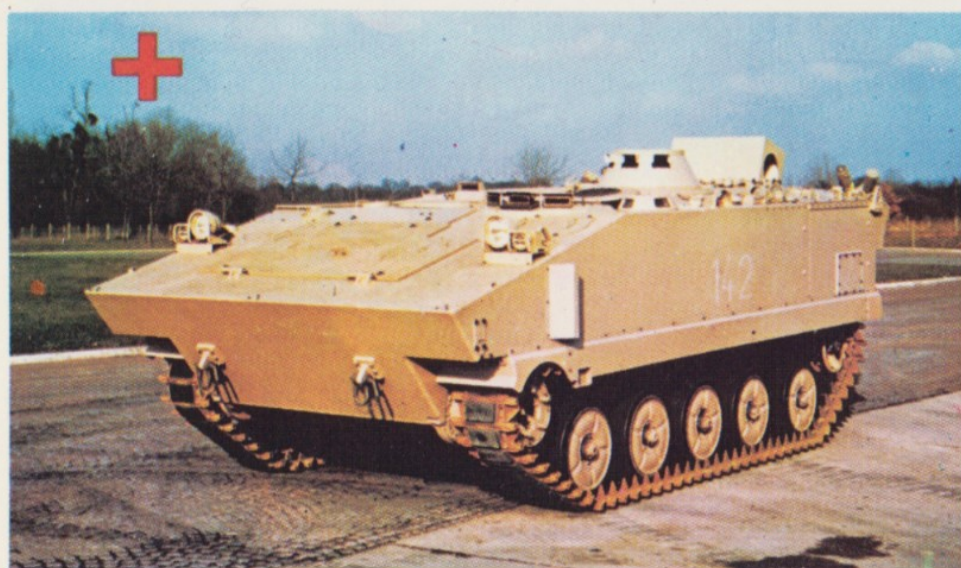
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GIAT



AMX 10 ECH

battlefield recovery



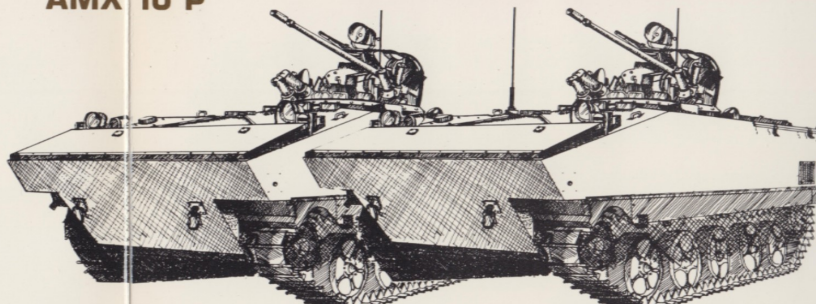
AMX 10 AMB

casualty evacuation

AMX 10 PAC 90



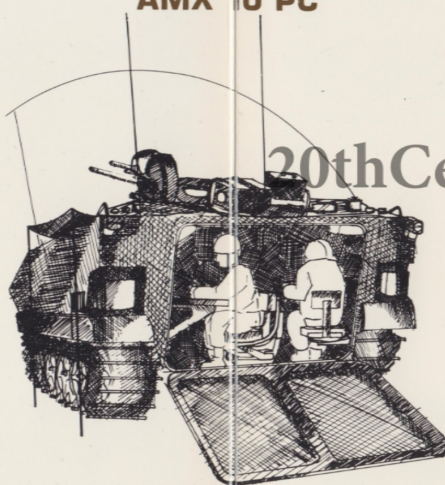
AMX 10 P



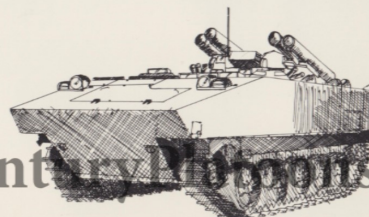
AMX 10 TM



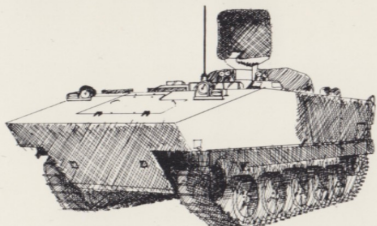
AMX 10 PC



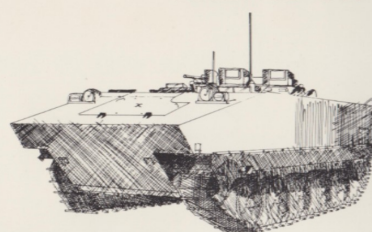
AMX 10 HOT



AMX 10 RATAc



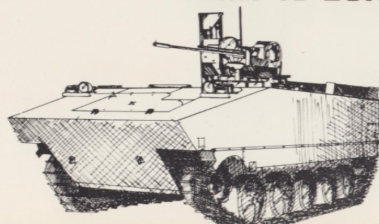
AMX 10 OA



AMX 10 AMB



AMX 10 ECH



THE AMX 10 MULTIPLES

MECHANISED INFANTRY UNIT

the infantry battle

SUPPORT

artillery

anti-tank

OBSERVATION

battlefield

surveillance

command post

artillery

observation

2nd ECHELON

medical

maintenance

AMX 10 P



DESIGN CRITERIA

During the Second World War it became apparent that infantry would need both mobility and armoured protection if they were to contribute effectively to a war of movement. Several combatant nations experimented with infantry carriers improvised from tanks or light armoured vehicles, most of them open-topped and relatively lightly armed.

In the post-war era, France was one of the first nations to develop a completely enclosed armoured vehicle, capable of providing effective fire support to the troops it carried. The VTT AMX 13 Model 56 was issued to French armed forces and lot of foreign units in 1958, and its success led in 1965 to a new development programme for an offensive-oriented troop carrier able to transport an infantry section. The result of this programme is the AMX 10 P, a GIAT product designed and developed in the AMX establishment at Satory and manufactured in series by the Roanne ARE establishment. The AMX 10 P has been in service with mechanised and armoured units of the French Army since 1973 it equips also some foreign armies.

A support and tactical movement vehicle, the AMX 10 P has optimum mobility, firepower and armoured protection. This gives it an offensive combat capability that delivers the modern infantry man into the closing stages of the fire-fight. The final assault on foot is supported by a powerful on-board armament.

Able to operate in NBC conditions, the AMX 10 P is the ideal equipment for the modern mechanised infantry units responsible for preparing and covering operations by the battle tank battalion that is the brigade's main striking force.

By its structural design, the AMX 10 P is an amphibious vehicle with excellent manoeuvrability. This allows AMX 10 P units to undertake major rivercrossing movements without dependence on engineer bridging or ferrying operations. Such autonomy confers outstanding effectiveness and independence of action to advanced units on reconnaissance or exploitation missions.

The AMX 10 P can also be fitted with additional optional equipment, most of it already adopted by French armoured units.

GENERAL CHARACTERISTICS

The hull is weld-constructed from light rolled alloy plates. The armament is superimposed on the cast steel one-piece turret.

WEIGHT

Ready to move: 11.7 tons

Combat-loaded: 14.2 tons

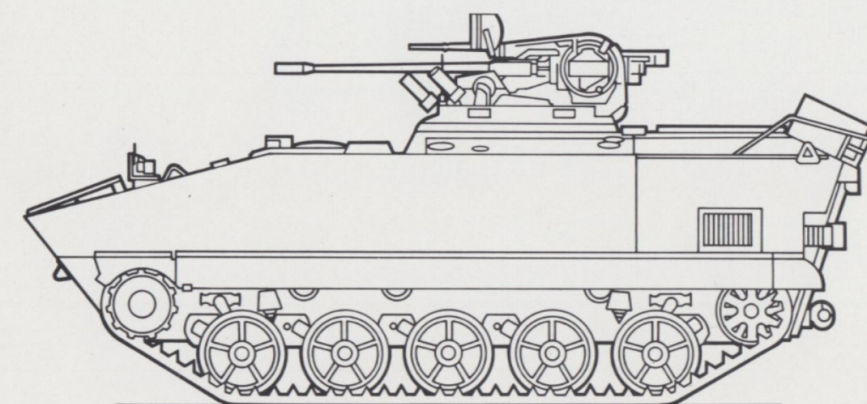
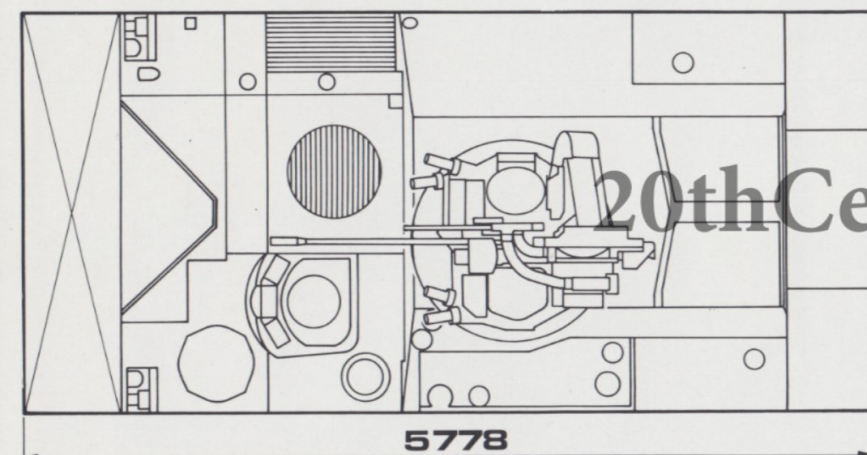
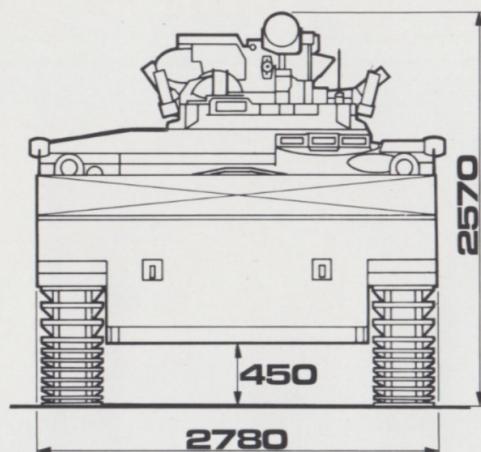
DIMENSIONS

Length overall:
5.778 mètres

Width overall:
2.780 mètres

Height overall:
2.570 mètres

Ground clearance:
0.450 mètres



ARMAMENT

MAIN ARMAMENT

20 mm automatic cannon. (C).
This cannon has a burst limiter and double feed system to allow an option between armour piercing or high explosive ammunition, by means of a simple and rapid remote control selector. The gunner and commander can switch **instantly** from engagement of armoured ground targets to personnel in the open or aircraft (1).
Rate of fire: approximately 700 rounds per minute.
Effective range: approximately: 1500 metres.
Ammunition supply: 800 rounds including 350 in turret.

FIRE CONTROL SYSTEM

For **vehicle commander**:

M 371 double magnification (X1 and X6) (E) telescope with built-in forward periscope, and direct reading goniometer for anti-aircraft fire.
an external sight for direct fire in the open or under a transparent dome (NBC conditions).

GUN-LAYING

Fast laying using electric controls (H) available to both gunner and vehicle Commander, with Commander over-ride.
Emergency manual controls (G) available to gunner.

Lines of sight

- Maximum elevation: -8° to $+50^{\circ}$
- Maximum traverse: $n \times 360^{\circ}$.
- Anti-Aircraft mode: $+3^{\circ}$ to $+50^{\circ}$.

OPTIONAL EQUIPMENT

Fire control system: To meet special requirements, the OB 40 day and night telescopic sight can be replaced by less sophisticated equipment for the gunner, consisting of:
a double magnification (X2 and X6) day telescopic sight (M 406), with or without,
a light-intensification telescopic sight for night firing (OB 37), interchangeable with the day telescopic sight.

MILAN Weapon System: The AMX 10P can be fitted with the MILAN antitank system, to provide two firing positions and an ammunition supply of ten missiles.

SECONDARY ARMAMENT

Coaxial AA 7.62 NATO (B), machine gun, coupled to 20 mm cannon for local defense.
Calibre: 7.62.
Rate of fire: 900 rounds per minute.
Effective range: approximately 1000 metres.
Ammunition supply: 2000 rounds including 900 in turret.
Four smoke pot launchers on turret. (D).

(1) To meet special requirements, the AMX 10P can be fitted with a lighter, one-man turret TOUCAN 1 or lighter armament: single feed 20 mm automatic cannon.

For **gunner**:

OB 40 day and night telescope.

Magnification	Field of view
Day: X6	Day: 10°
Night: X5	Night: 7°

long range PH 9 A searchlight. (A).
 360° observation through 7 peripheral turret periscopes.

Rates of traverse and elevation

- Elevation: automatic from 0 to 30° per second
manual from 0 to 26° per second
- Traverse: automatic from 0 to 50° per second
manual from 0 to 10° per second.

Mounted above the TOUTCAN II (1) two-man turret, the armament of the AMX 10 P is entirely controlled and served by the vehicle commander and gunner inside. It permits effective action against light armour up to ranges of 1000 meters, and against aircraft.



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MOBILITY

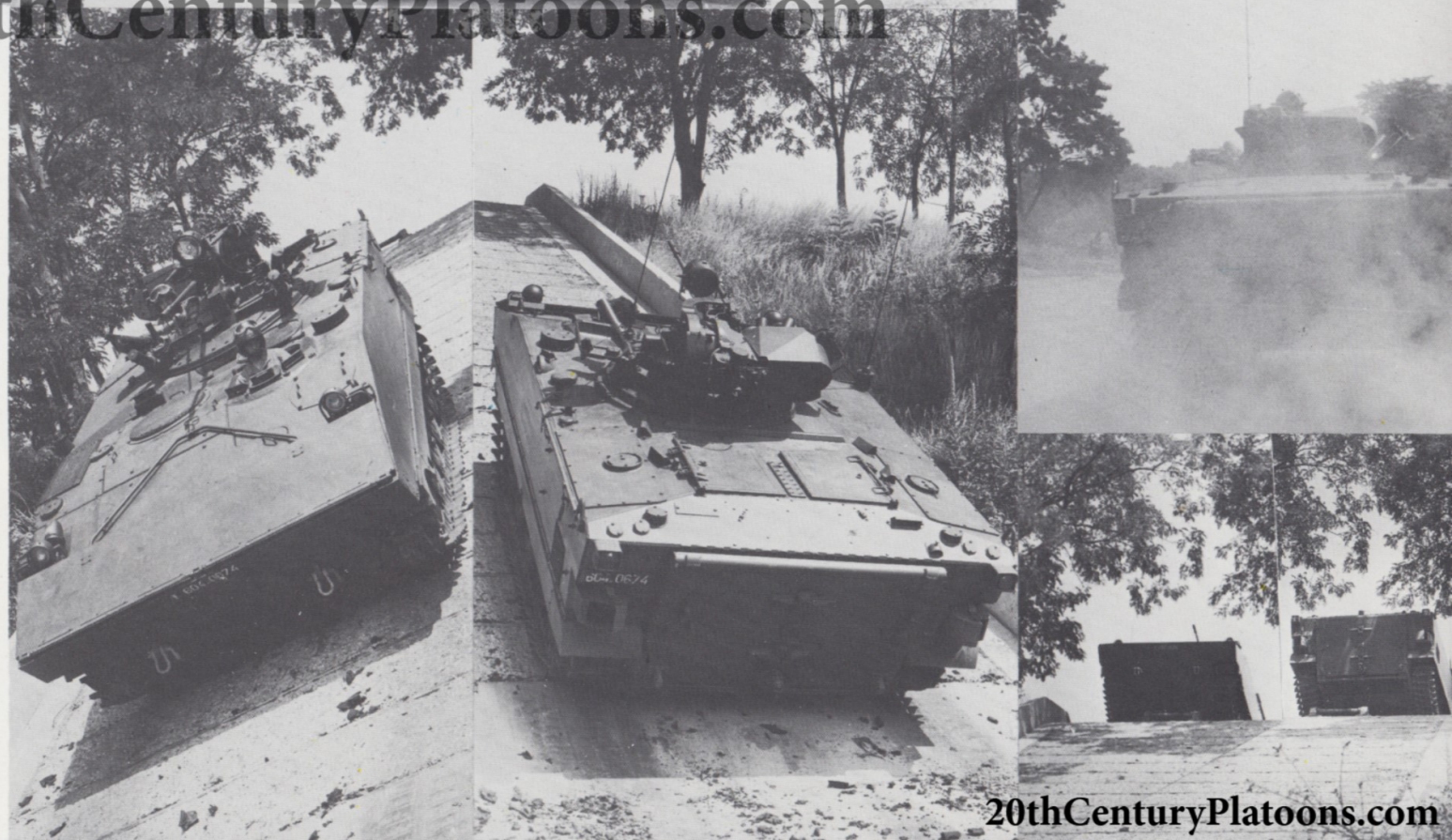
Special development studies provide the AMX 10 P with the mobility essential for combat in NBC conditions rapid dispersion and fast regrouping. In design, capability and performance, the AMX 10 P meets all requirements of modern warfare, with the same cross-country mobility as the AMX 30 tank.

ENDURANCE AND SPEED

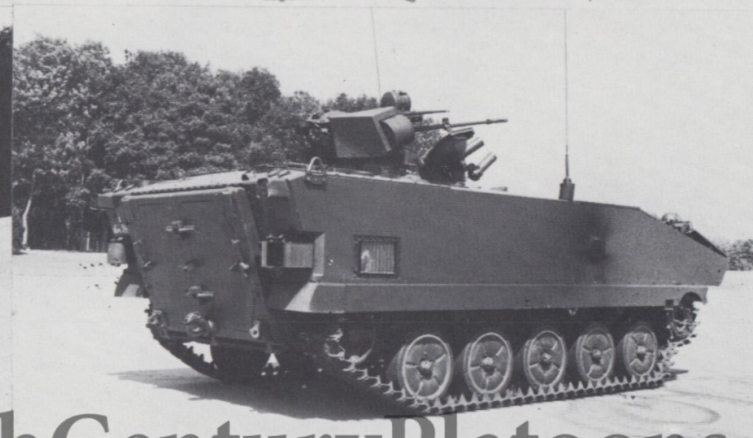
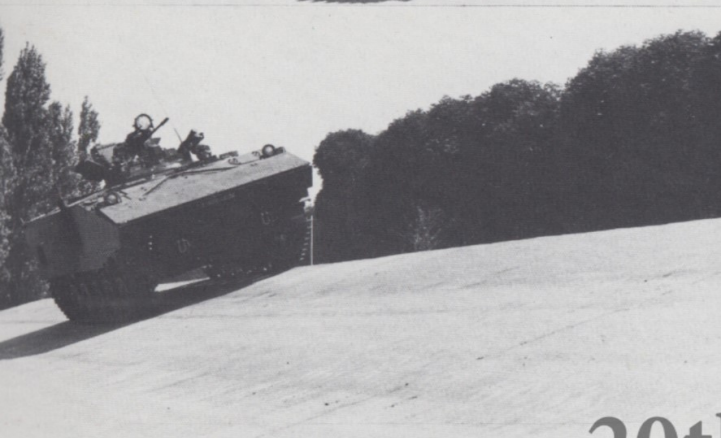
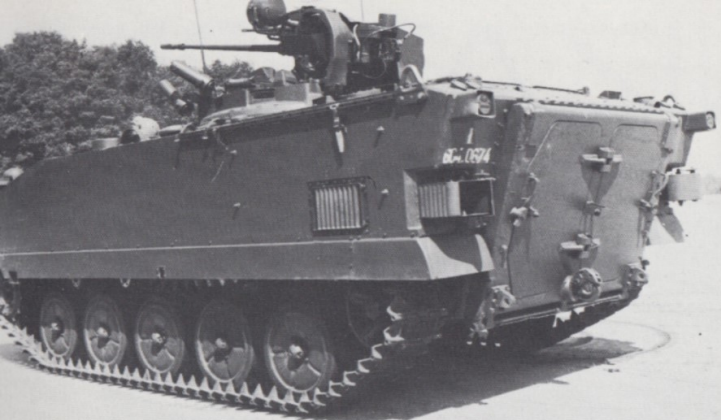
Top road speed:	65 km/h
Cruising road speed:	50 km/h
Average cross-country speed:	30/40 km/h
Water speed: without hydrojet	1.80 m/sec
with hydrojets	2.2 m/s
Road range:	600 km
Combat d'endurance (NATO type «war» mission):	24 hours

OBSTACLE PERFORMANCE:

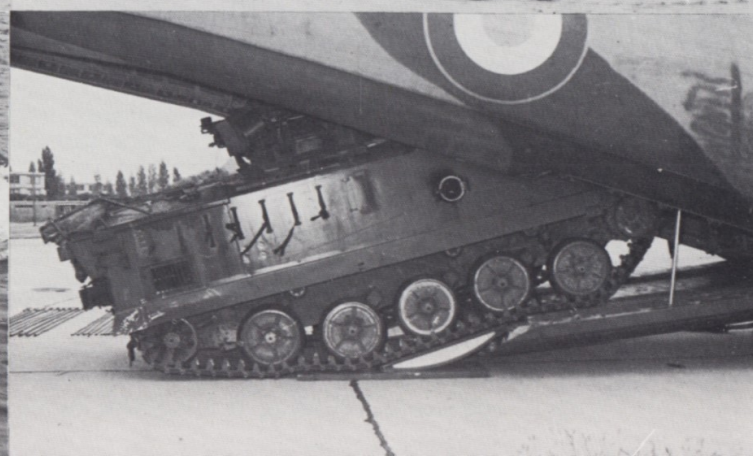
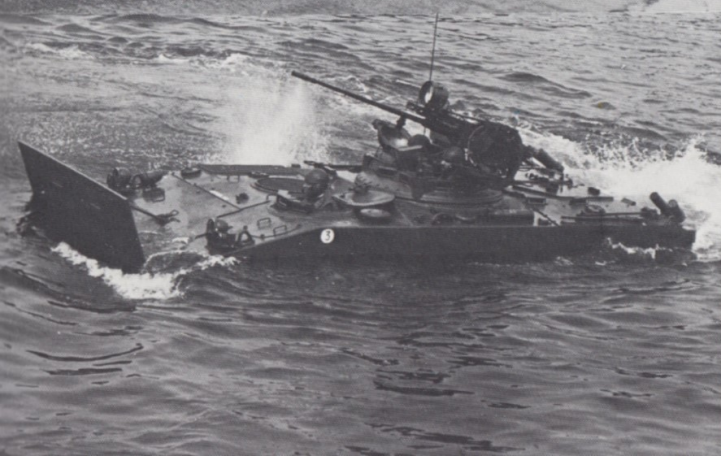
Gradients:	60 %
Tilt:	30°
Straight-sided gap:	1.60 m
Vertical obstacle:	0.70 m
Water: track propulsion (hydrojets optional).	



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POWER UNIT

Supercharged Hispano Suiza HS 115 diesel developing 280 metric hp at 3000 rev/min. Power-weight ratio 20 hp/tonne (superior to most other infantry combat vehicles in service). Power unit replacement is a simple operation undertaken in two hours.

TRANSMISSION

The AMX 10 P transmission makes driving simple and smooth. It includes a torque converter and a single mechanical unit that combines both gear box and steering functions. The steering system includes epicyclic output gearing and hydraulically-operated disc brakes for on-the-spot skid turns. The preselector gear box with 4 forward and reverse gears (three with synchromes h) includes a hydrojet drive output.

Gear change is instantaneous due to the preselector system and the electro-hydraulic action of the clutch lever. The torque converter enables the vehicle to move off in any gear. As gear-change errors cannot stall the engine, driving is facilitated both on roads and cross-country.

SUSPENSION

Gentle torsion bar suspension includes hydraulic shock absorbers on the outer track sprockets.

TRACKS

With low ground pressure (530 g/cm²) and track-bite augmented by lateral vanes, the AMX 10 P is exceptionally manoeuvrable on swampy ground, sand and snow.

OPTIONAL EQUIPMENT

Hydrojets: The addition of hydrojets to the AMX 10 P increases water speed to 2.20 m/sec with instant changes of direction. The steepest banks can be negotiated with special self-winchng gear.

Night-Driving System: This consists of a light-intensification night-driving periscope of mixed design (one light intensifier and one visible path) to replace the driver's forward day periscope.

The AMX 10 vehicles can be air transported in TRANSALL C 160 aircraft.

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VEHICLE ORGANIZATION

RADIO

Several radio systems are available, ranging from the basic unit configuration to various arrangements for command vehicles. Typical communication lay-outs are as follows:

For Command Vehicle

- 1 medium range TRVP 213 set
- 1 short range TRVP 13 set
- 1 intercom system for crew.

For Basic Vehicle

- 1 short range TRVP 13 set
- 1 intercom system for crew.

PROTECTION

The inherent qualities of the AMX 10 P mobility, minimal dimensions and a low and compact profile — contribute to the overall protection provided. The hull is rolled and welded plate, and the one-piece cast steel turret, together with the careful correlation between armour thicknesses and potential impact angles, add up to first class protection against shell bursts and enemy infantry weapons.

This environment can be enhanced by the optional NBC protection system.

Four smoke-pot launchers on the turret can provide an adequate smoke-screen for the vehicle within eight seconds, as additional protection during critical engagements.

OPTIONAL NBC PROTECTION

The entire crew compartment is sealed and pressurised. Incoming air is filtered and purified of all radioactive dust and biological or chemical substances. Access to filters for replacement purposes, is done from inside vehicle without risk of contaminating the inside of the crew compartment. The vehicle is also fitted with a nuclear radiation meter, and various decontamination devices.

This equipment offers complete protection to the crew while operating in, or crossing, contaminated ground.

INTERNAL LAYOUT PERSONNEL CAPACITY

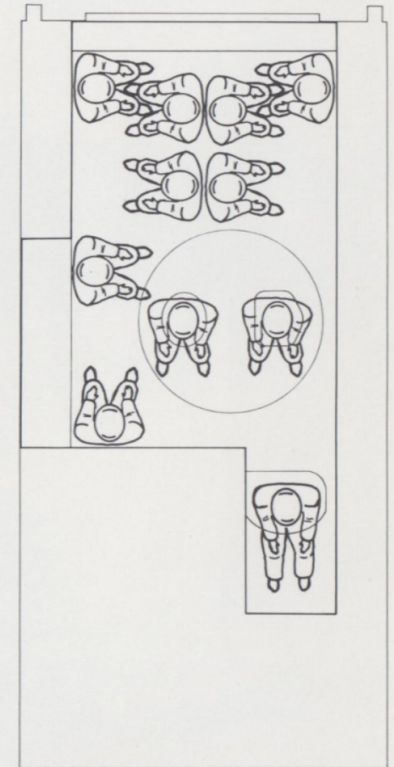
The crew consists of:

- driver seated front left
- gunner and vehicle commander in turret
- eight men seated in the crew compartment.

Each man has a folding bucket seat (seat belts optional). They can observe both in the vicinity of the vehicle and at distance, using the periscopes provided: 3 for the driver; 7 in the turret; and 7 more in the rear compartment.

The vehicle load includes:

- the individual and other weapons of the infantry section
- ammunition
- antitank, anti-personnel mines, explosive and other devices
- pack rations and water
- on board vehicle kit and accessories.



MOUNTING - DISMOUNTING

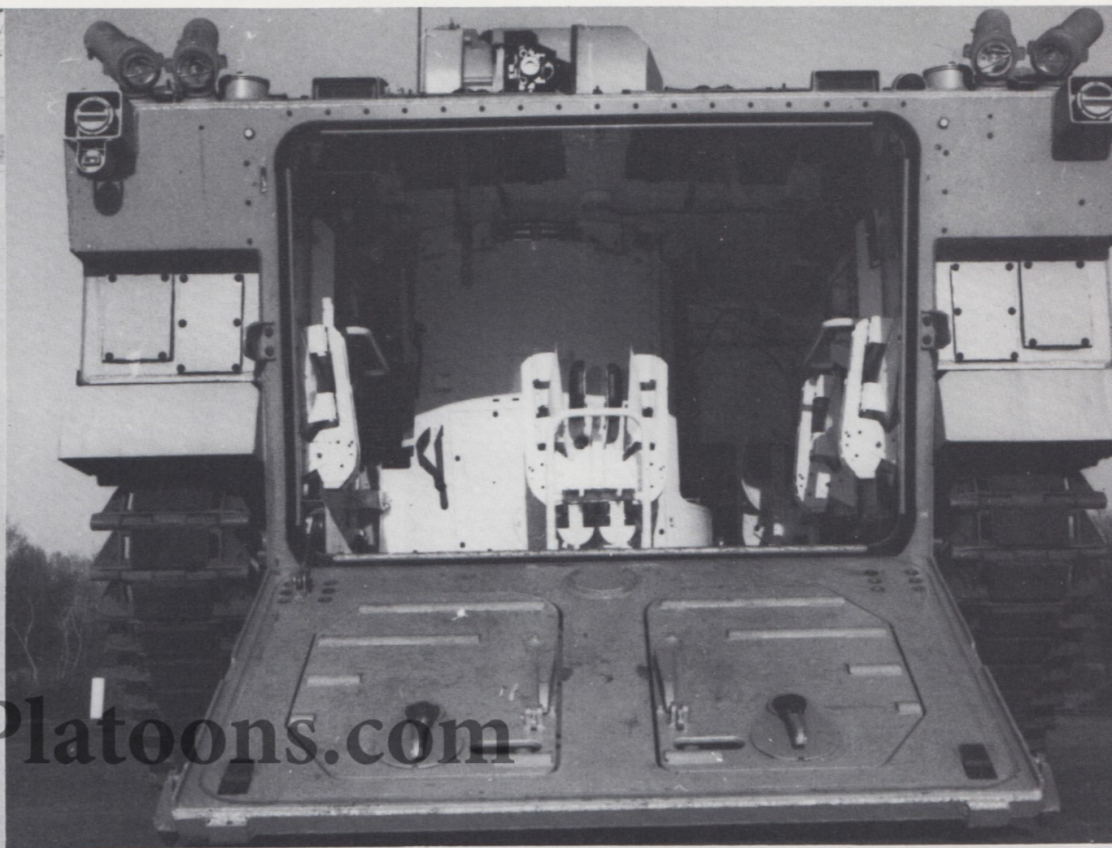
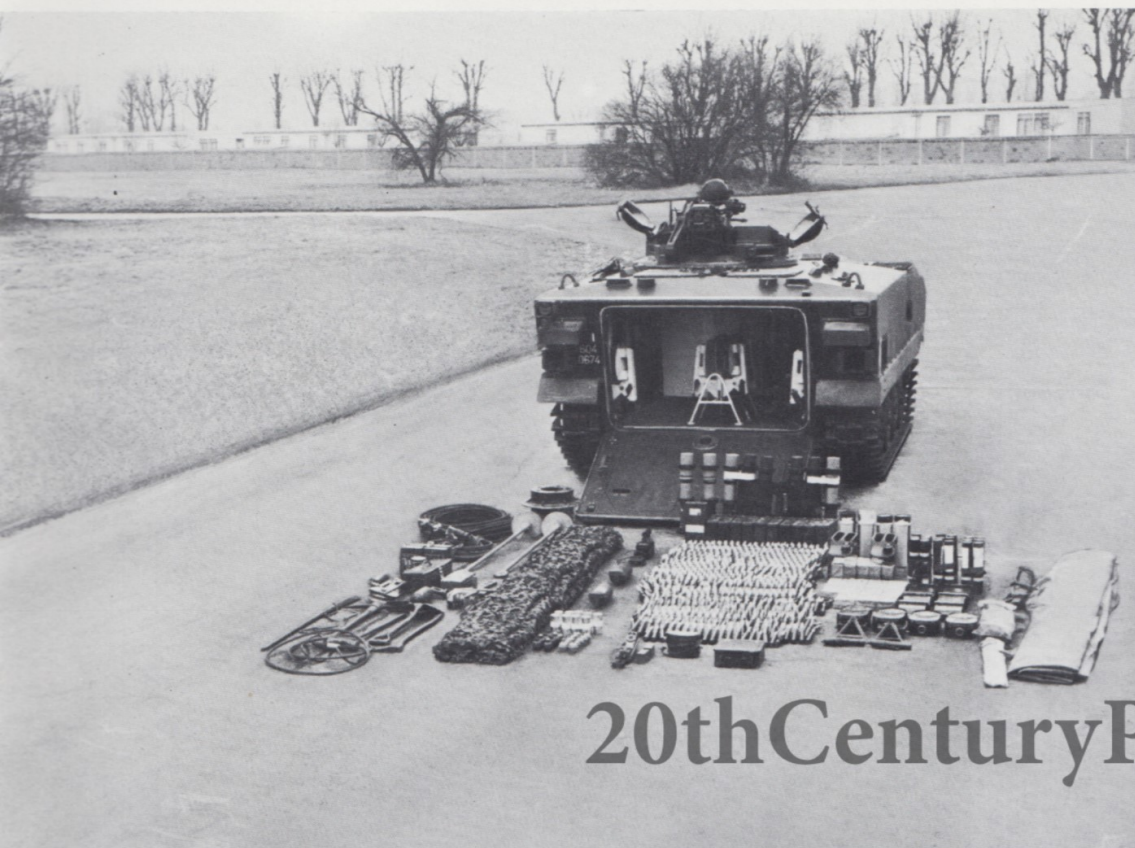
The wide electrically-operated rear door opens downwards to form a ramp. This permits a rapid evacuation of the combat group and facilitates loading and off-loading of cargo.

Two hatches in the main door allow maximum protection to be maintained during individual movement in and out of the vehicle.

USE OF INFANTRY WEAPONS

Roof hatches and individual gun parts in the rear door enable the unit on-board to use personal arms and antitank rocket launchers from inside the vehicle.

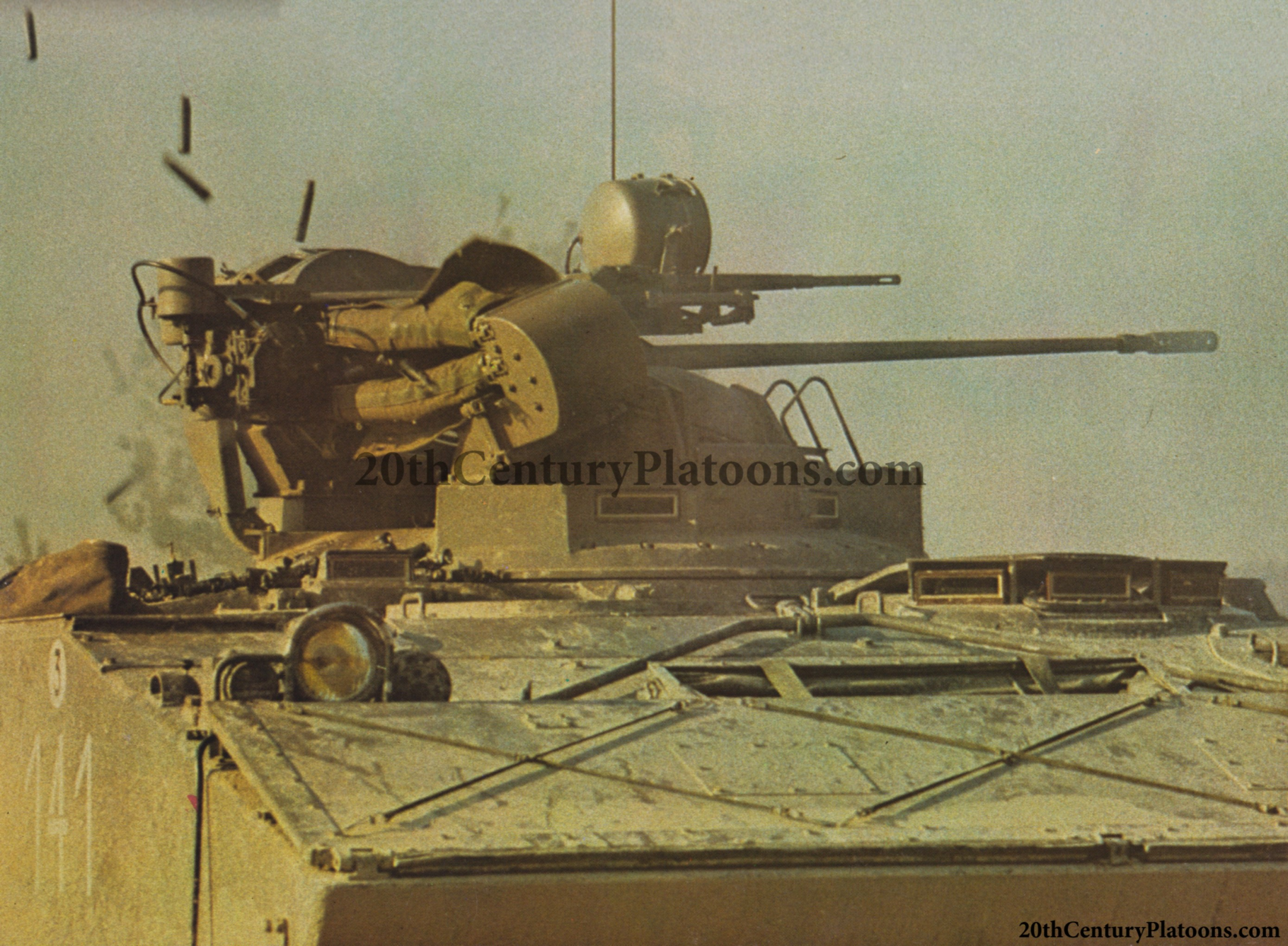
Within a low profile and reduced dimensions, the AMX 10 P offers remarkable carrying capacity. Space is provided for 11 fully equipped men, including the nine-man infantry section that can dismount with combat equipment.



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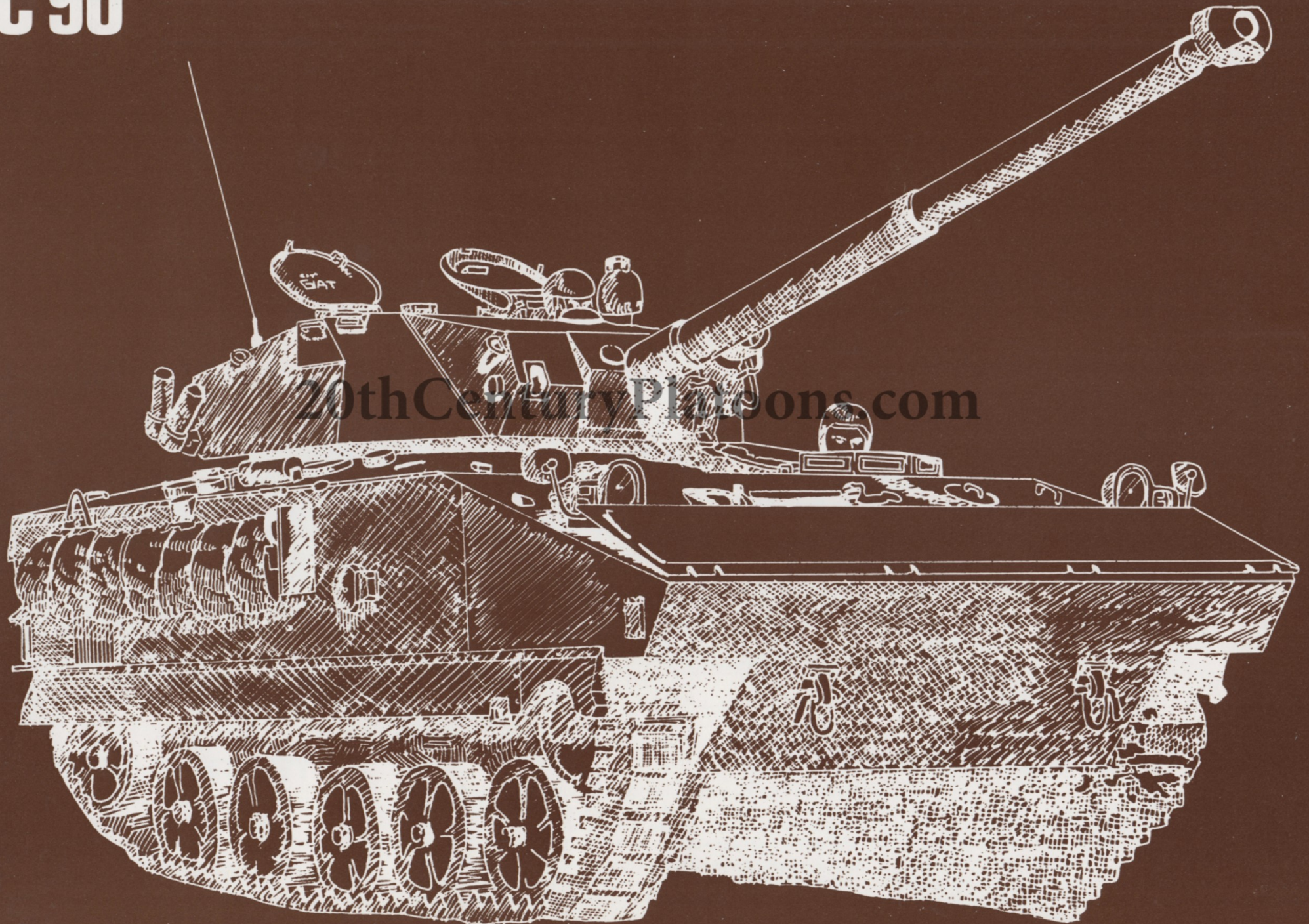
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AMX

PAC 90

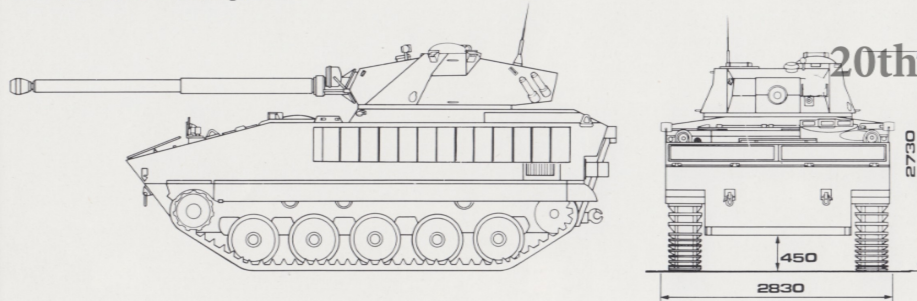


AMX PAC 90

PURPOSE

The AMX 10 PAC 90 is: an antitank combat vehicle owing to its armament and the effectiveness of its hollow charge ammunition, a support vehicle, and a reconnaissance vehicle owing to its mobility characteristics and its ability to neutralize obstacles and deal with light enemy attacks by the intervention of the protection group on board.

Owing to the original design of the AMX 10 PAC 90, it is capable of fulfilling all missions which could be asked of a light tank.

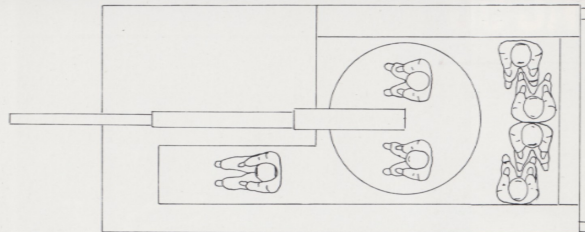


GENERAL CHARACTERISTICS

The AMX 10 PAC 90 armoured vehicle is derived from the AMX 10 P. Compared with the basic version, the hull is different only as regards the opening in the roof and the internal arrangement. Its mobility on land and in water, its air transport possibilities and its excellent autonomy invest it with a considerable intervention capability.

The TS 90 turret, with which it is equipped, has benefited from the technical breakthroughs which have been made in the armaments field in the past few years.

Its high-performing 90-mm gun has an effective combat range of 1,200 m with a very high degree of accuracy. It fires 90-mm F2 hollow-charge and high-explosive ammunition.



CREW AND ORGANIZATION OF VEHICLE

The 7-man crew includes:

- 1 driver
- 1 protection group of 4 men
- 1 tank commander
- 1 gunner

Its on-board ammunition capacity of means excellent autonomy for this vehicle:

30/90-mm rounds (of which 20 are in the turret), and 3,200/7.62-mm rounds or 1,000/12.7-mm rounds.

The combat area can, if required, be used for carrying various equipment items (available space: 2.5 m³).

AMMUNITION

The main weapon fires 90-mm ammunition:

OCC 90 F2 fin-stabilized hollow charge shells:
 Weight of cartridge 8,950 kg
 Muzzle velocity 950 m/s
 Weight of projectile 3,650 kg
 OE 90 F1 high-explosive shells:
 Weight of cartridge 10,420 kg
 Muzzle velocity 750 m/s
 Weight of projectile 5,280 kg
 90-mm APFSDS ammunition is at present in the design phase.



THE TS 90 TURRET

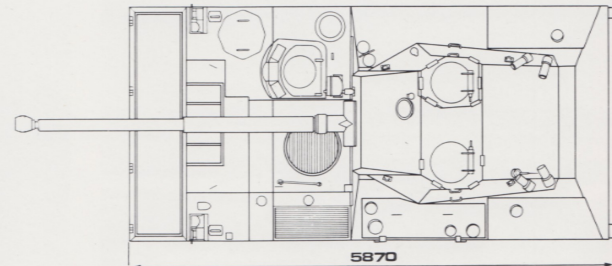
The armament of the TS 90 turret comprises:

- 1 90-mm gun with high muzzle velocity,
- 1 secondary weapon: a 7.62-mm machine gun or a 12.7-mm machine gun,
- 4 smoke dischargers.

The 90-mm gun is a semi-automatic weapon with a 35° LH slanted-wedge breechblock.

Effective combat range 1,200 m
 Accuracy H + L = 1.7 mils
 Weight 590 kg
 of which recoiling assembly 412 kg

The TS 90 turret is equipped with a mechanical aiming device for elevation and traverse (with electrical assistance for homing) operated by the gunner.



AIMING

Traverse	High speed	Low speed
Amplitude	360°	360°
Speed	20°/s	7°/s
Elevation	- 8° to + 15°	
Amplitude	2°/s	
Speed		

OPTICAL EQUIPMENT

The optical equipment installed in the hull includes:

For day vision:

Three M223 periscopes at driver's station

Four periscopes in combat area.

For night vision:

One OB 31 light-intensification driving periscope mounted in place of the driver's front periscope.

The optical equipment installed in the turret includes:

Four periscopes arranged around the gunner's station providing him with a

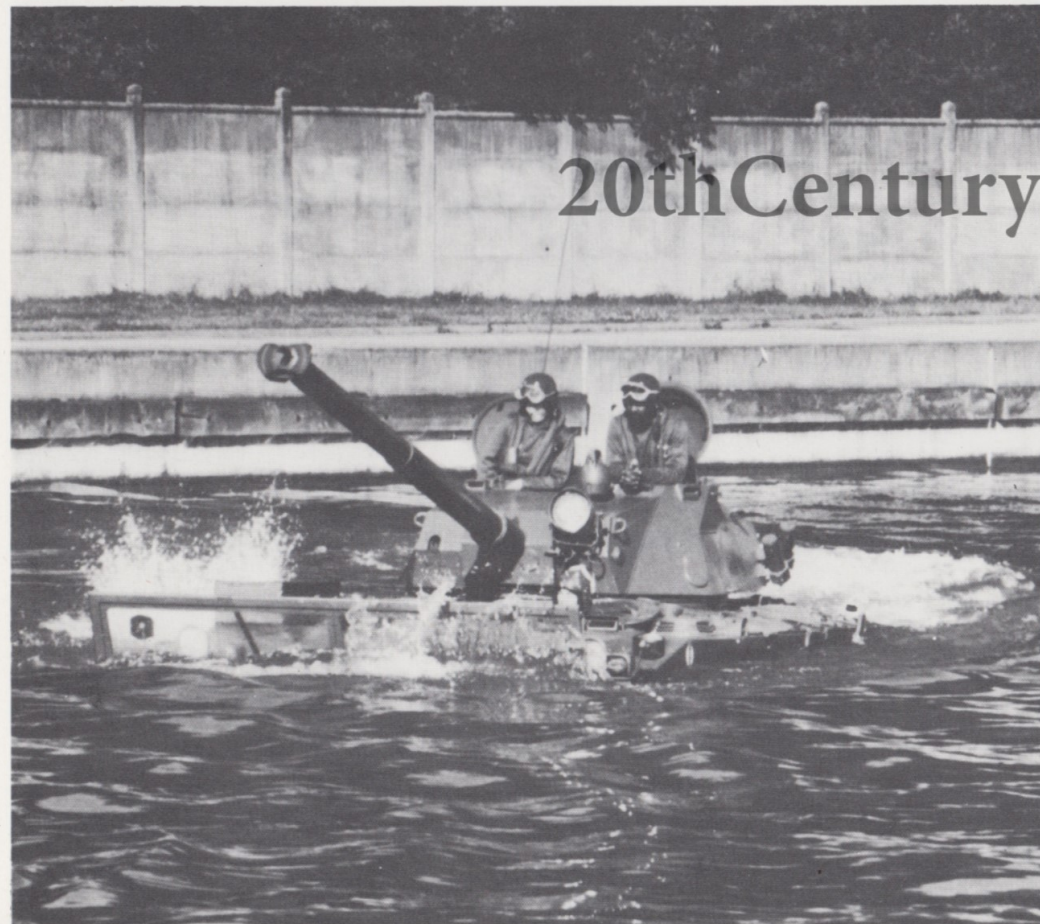
vision sector of 235° .

Six periscopes arranged around the tank commander's station providing him with panoramic vision. The front periscope can be replaced by a light-intensification night vision periscope.

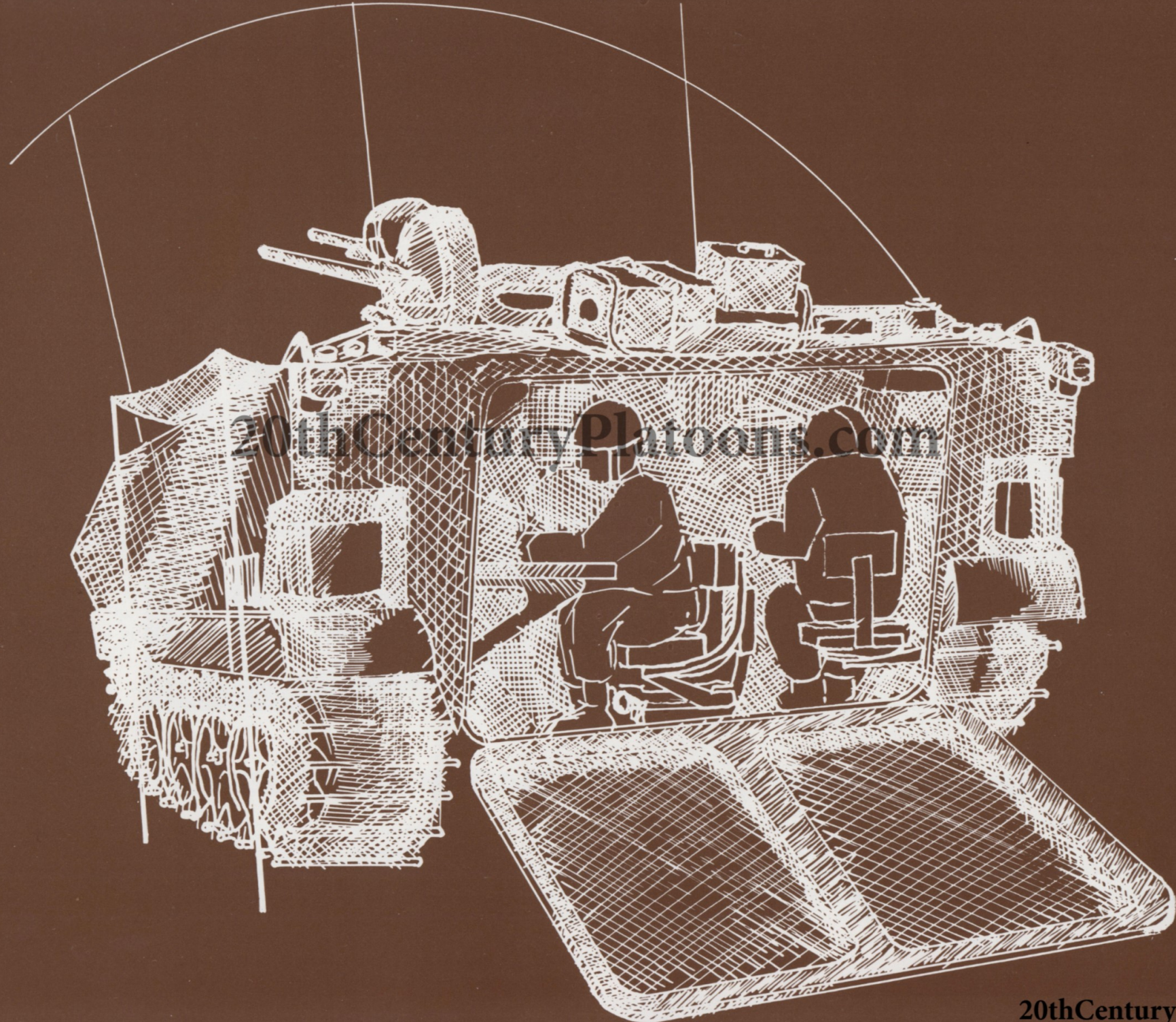
One M563 firing telescope for the gunner designed for use in conjunction with the main gun and machine gun.

A PH-9A searchlight of 120 W with visible light makes firing at night possible up to 600 m.

An 80 W searchlight, which can be manually swivelled by the tank commander, may also be used for scanning up to a distance of 400 m.



AMX 10 PC



AMX 10 PC

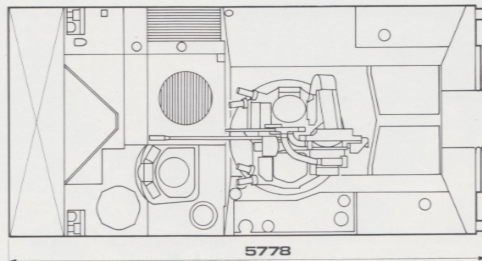
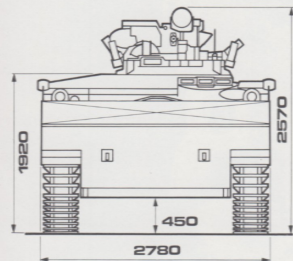
PURPOSE

The AMX 10 PC is a COMMAND VEHICLE intended

for field officers commanding armoured or mechanized regiments and brigades, junior officers commanding subordinate units.

Whether stationary or on the move, the vehicle is designed to allow uninterrupted command functions including:

- communication with superior or subordinate units
- ground observation
- map plotting

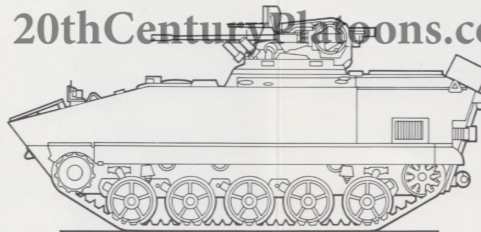


GENERAL CHARACTERISTICS

Derived directly from the AMX 10 P combat vehicle, the AMX 10 PC is varied only by internal arrangement, crewing and communications equipment.

Otherwise, the two vehicle types share the same mobility, protection and weapons and the performances of the AMX 10 PC are substantially those of the AMX 10 P.

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CREW POSITIONS AND VEHICLE LAYOUT

The six-man crew is composed of:

the officer commanding the unit

his second-in-command

a warrant officer-gunner (tank commander in the absence of officers)

two radio operators

the driver

Four work stations are provided in the crew compartment of the hull:

two officer stations at a command work table (for maps and radio traffic)

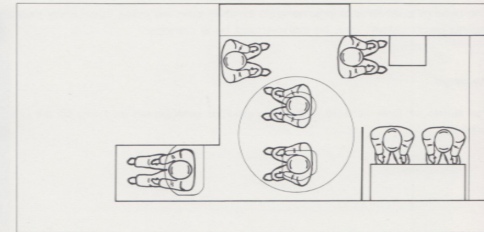
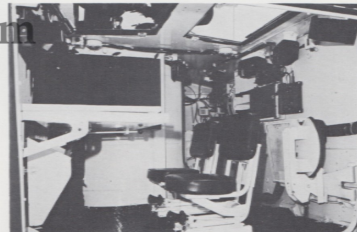
The two officers are seated at the work table with maps and clipboards to hand.

The commanding officer can move freely to an observation position at the right of the turret.

The driver is seated front left in the driver's compartment opening on to the crew compartment.

two radio operator stations
The two radio operators are seated to the right of the crew compartment.

The warrant officer occupies the gunner's position at the left of the turret with access to both radio networks when acting as relief operator.



COMMUNICATIONS EQUIPMENT

Communications equipment for the AMX 10 PC varies according to designated vehicle function, and is consequently selected to satisfy specific client requirements.

As an indication only, and given the four installation assemblies with which the AMX 10 PC can be provided while bearing in mind that only three sets can be installed simultaneously, three radio configurations are proposed:

one AM set, SSB of TRVM 134 or TRC 310 type
two FM sets, type TRVP 213 or
three FM sets type TRVP 213 or
two FM sets, type TRVP 213
one FM set, type TRVP 13

A warning signal receiver can also be incorporated.

EQUIPMENT SPECIFIC TO AMX 10 PC

The AMX 10 PC includes a certain number of specific equipment allowing it to carry out its assignments to the best while offering its crew optimum working conditions in an improved environment.

Power unit

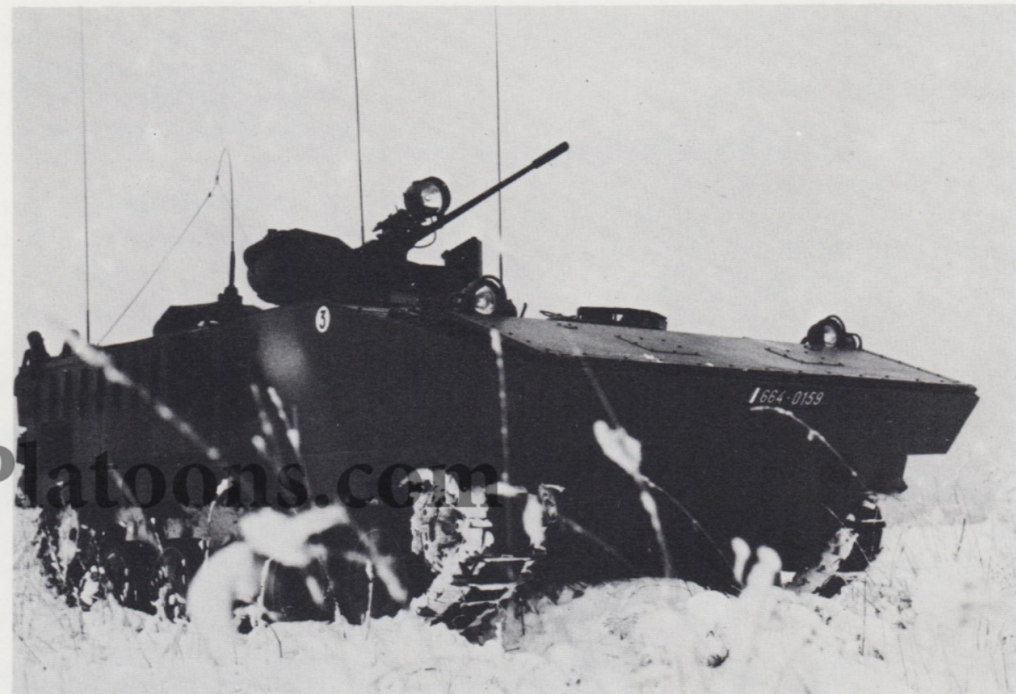
An 1800-W power unit carried on the tank makes it possible to use the radio equipment for longer periods without having to rely on the tank engine.

Canopy for linking up two AMX 10 PC vehicles

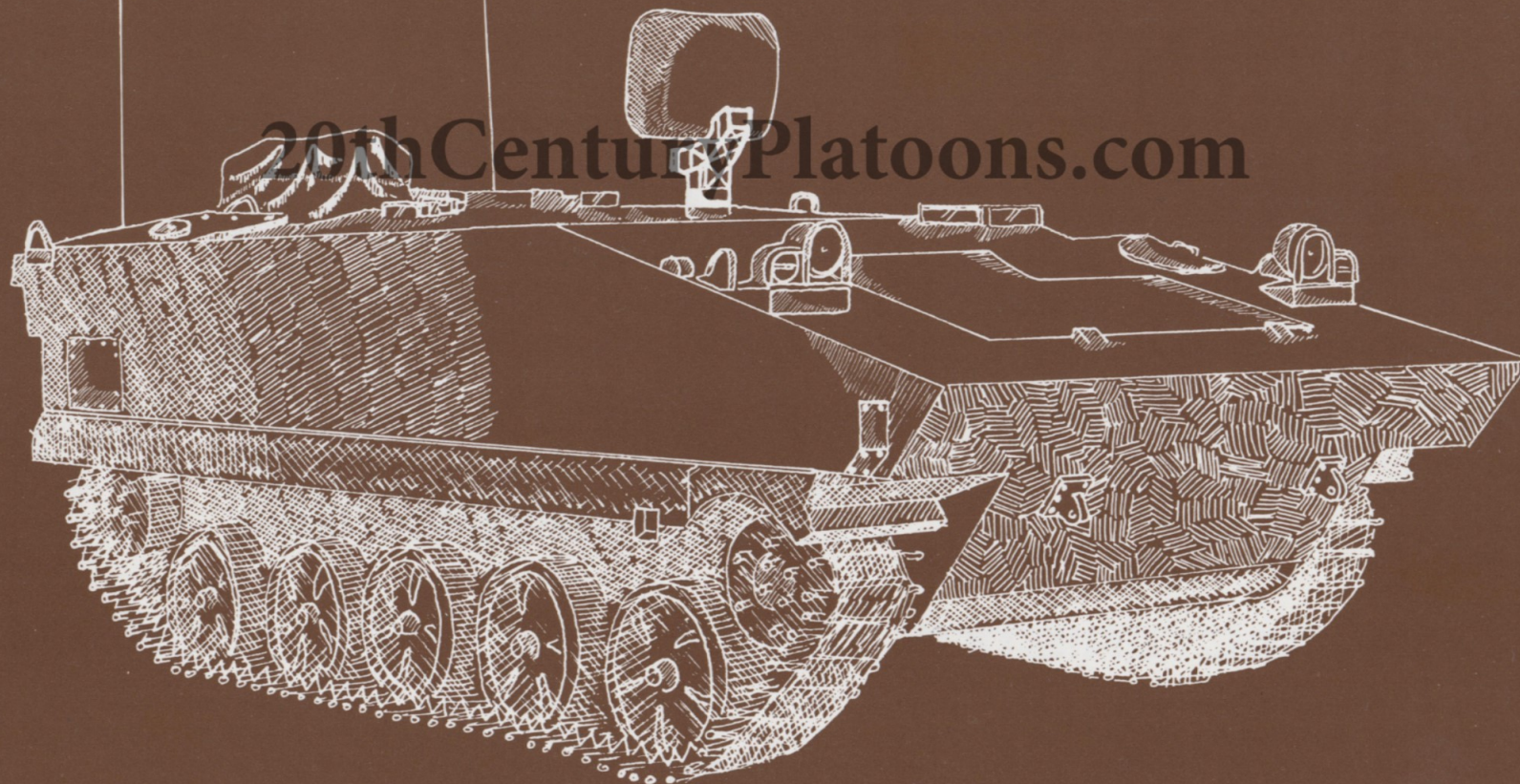
The rear of the vehicle is arranged so that two vehicles, with their rear doors facing each other, can be connected by a canopy.

Awnings

The sides of the vehicle are arranged to enable an awning to be unfolded quickly.



AMX 10 RATAc

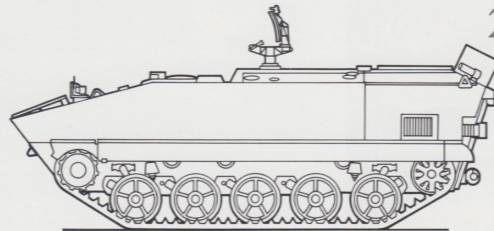
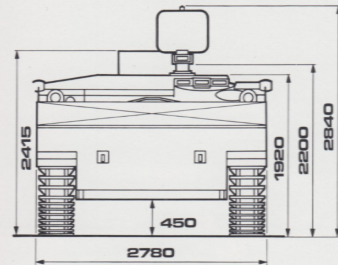


AMX 10 RATAc

PURPOSE

The AMX 10 RATAc is designed for battlefield **surveillance** and **radar tracking** of enemy targets by mechanized field artillery units (for example 155 GCT gun batteries).

It is designed to work closely with the AMX 10 PC vehicle with which command echelons of such units, are equipped.



GENERAL CHARACTERISTICS

Derived directly from the AMX 10 PC command vehicle, the AMX 10 RATAc benefits from the same optional hull equipment (electric generating set, awnings, seats) and radio configuration.

Like the AMX 10 PC, the AMX 10 RATAc is developed from the AMX 10 P combat vehicle with identical mobility and protection characteristics.

It differs from both the AMX 10 P and the AMX 10 PC by internal layout, crewing and elimination of the turret.

The RATAc radar occupies the place of the TOUCAN II turret, leaving the crew compartment completely free for operators with easy access to different components.

CREW POSITIONS AND VEHICLE LAYOUT

The **five-man crew** is composed of:

an officer

the radar operator

the assistant radar operator

the radio operator

the driver

To the right rear of the vehicle an **officer and the assistant radar operator** are seated at the plotting table; the assistant radar operator can relieve the radar operator or assist the officer on the plotting table.

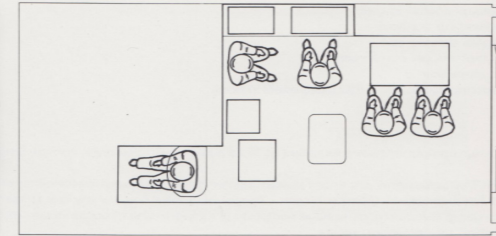
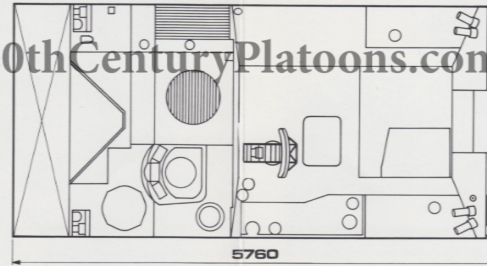
The plotting table, interlocked with the radar, allows the movements of detected vehicles to be followed on a map.

The driver is seated front left as in the AMX 10 P.

The radar operator is seated behind the radio operator, facing the operating console and the digital display box located over the tracks.

The radio operator is seated forward right in the crew compartment, facing the radio set located over the tracks.

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RATAc RADAR

Capability

detection

identification

The RATAc (radar for field artillery fire) is assigned, within its medium range battlefield surveillance role to the following tasks:

accurate pin-pointing

automatic tracking

of all mobile targets on or near the ground, such as tanks, ground troops or isolated personnel, helicopters or light aircraft.

In addition to this surveillance function, RATAc radar also fulfils the following assignments:

correction of artillery fire against fixed targets at known coordinates
permanent control, for associated artillery units **of fire effectiveness** against fixed or moving targets, by measuring divergence between impact and point of aim.

RATAC radar capability also allows the following functions
guidance of small land or air strike units
assistance to helicopters, especially when homing.

Equipment

RATAC radar comprises the following equipment:

aerial (antenna)
transmitter-receiver (HF head)
stabilized local oscillator
data processing unit
operating console
digital display box
power supply converter
loudspeaker
plotting table (for 1/50,000 scale maps)

Other components are installed at fixed positions in the crew compartment.

RATAC uses coherent short-pulse Doppler radar, with a device for elimination of fixed echoes by Doppler filters. Target acquisition accuracy is augmented by using the dual crossedlobe radiation principle in the simultaneous "mono-pulse" transmission mode.

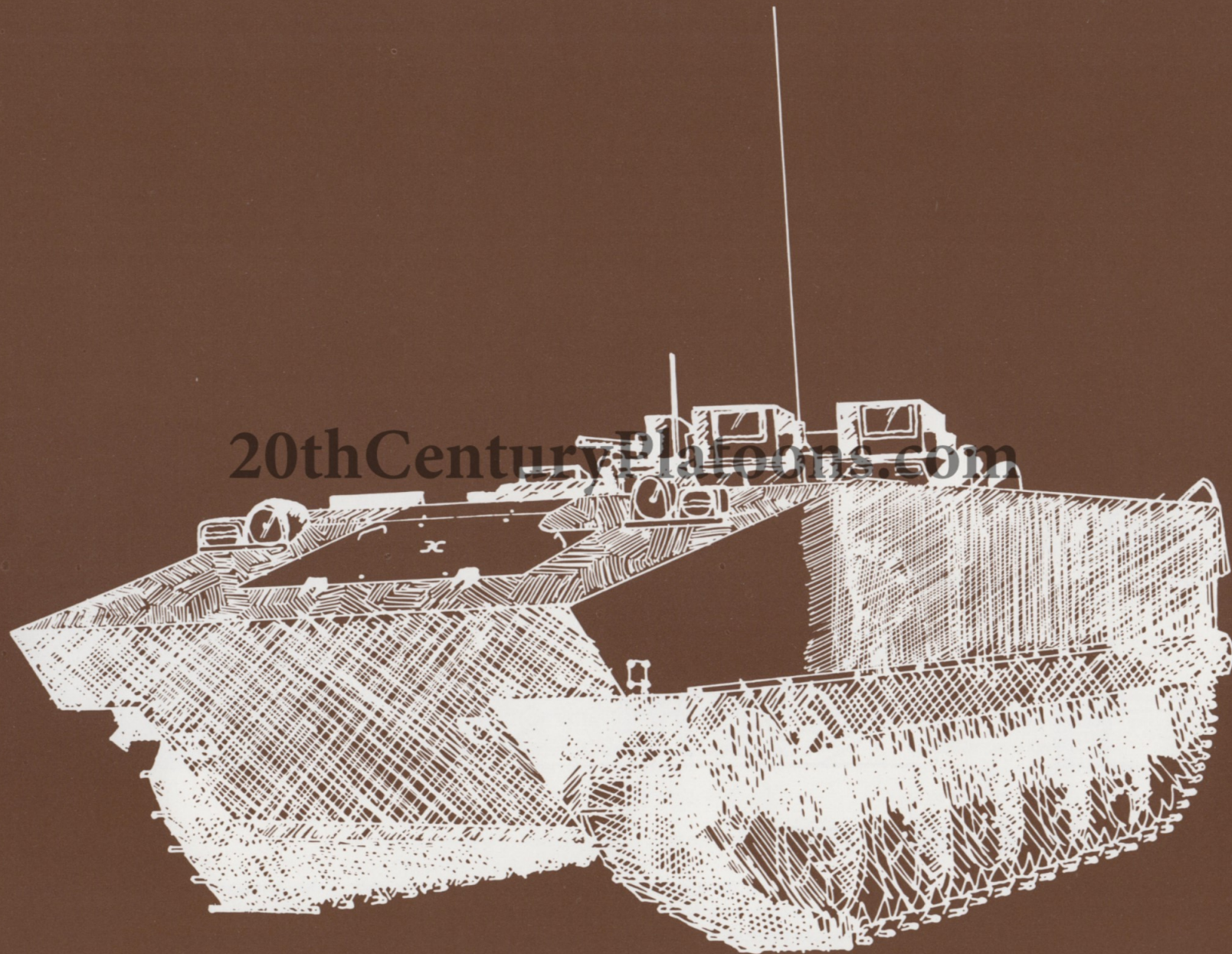
RATAC radar is employed in four operating modes:

Ground surveillance
Acquisition, identification
Angular deviation measurement
Automatic tracking



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AMX 10 SAO



AMX 10 SAO

PURPOSE

The AMX 10 SAO is the tracked AMX 10 vehicle fitted with an **artillery observation turret** for :

battlefield observation
artillery fire control

Artillery observers assigned to a armoured units are thus assured :

the same mobility as the troops they support, an on-board capability for :
battlefield observation

rapide and accurate pin-pointing of targets

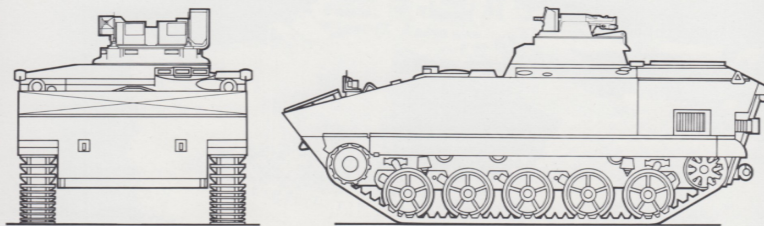
fire correction

transmission of information

a local defence capability.

Moreover the vehicle must present a silhouette similar to others in the unit with which it operates.

These requirements are satisfied by mounting the artillery observer in an AMX 10 vehicle sufficiently spacious to enclose all necessary equipment. The special SAO turret silhouette is not easily distinguished by the enemy.



GENERAL CHARACTERISTICS

Technical resources specific to artillery observation are integrated into the vehicle for immediate use when halted.

A binocular telescope with dual magnification and double field allows detection and identification of targets.

A laser rangefinder provides the measuring capability

in azimuth, elevation and range, both against targets (pin-pointing) and for own projectile bursts (fire correction).

This rangefinder has a double day or night optical path. The night path functions with a light-intensification night path.

An integrated system of calculator-linked sensors eliminates measurement errors which could result from vehicle tilt in relation to the horizontal plane.

CREW POSITIONS AND VEHICLE LAYOUT

The five-man crew of the artillery observation vehicle is made up of :
an observer (officer)
his second-in-command
two radio operators
a driver

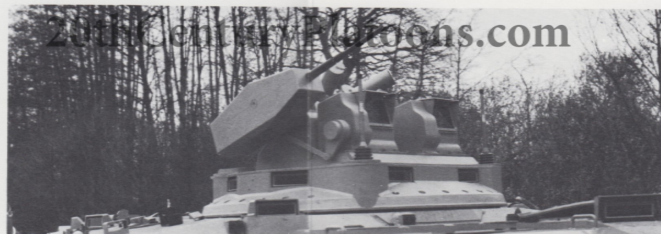
The officer and second-in-command are seated in the turret. Normally, the officer uses the binocular telescope while his second-in-command handles the laser rangefinder.

This equipment is controlled from within the turret. Singly or together both operators can observe outside the vehicle, using the rear turret hatch.

Each of the two optical instruments (binocular telescope and laser) leads to a prism head interlocked with the elevation system. Each prism head has its own automatic and manual fire control system of the machine-gun.

Traversal of the two instruments is linked to turret rotation.

The two radio operators are seated in the hull of the vehicle. They operate the radio sets and message transmitter case that is part of the ATILA system.



EQUIPMENT FEATURES TURRET

Laser rangefinder telescope (identical to that of AMX 30 tank)

day sight

Magnification X 8 Field 160 mils
Reticle with adjustable lighting

range finder

Range 8000 metres Accuracy ± 5 metres
Laser beam spread 0.5 mil
Measurement frequency 30/mn

night sight

Magnification X 4.5 Field 200 mils
Reticle with adjustable lighting

traverse and elevation accuracy ± 2 mils

Binocular telescope

Lens spacing : 120 mm
Magnifications : 2.5 and 10
Fields : 400 mils and 100 mils
Mechanical magnification selection
Elevation : -10° to $+45^\circ$
Interpupillary distance adjustment: 56 to 72 mm
Adjustable cross-wires with light source
Retractable sun filter
Traversing accuracy: ± 2 mils

Vehicle attitude corrector

Vehicle "slant" and "pitch" are measured by two accelerometers.
The angular traverse of the turret in relation to the hull is established by an encoder fixed on the turret centreline.
Correction accuracy is ± 0.1 mil.

Available radio equipment, whether in the turret or in the hull assures normal artillery liaison and maintains contact with the officer in command of the unit supported.

Finally, **an automatic weapon**, operated from inside the turret, provides local defence.

Radio equipment

The vehicle is equipped with a radio installation (UCI) allowing the following radio sets to be carried:
two TRVP 213 sets - one TRVP 13 set - one TRPP 13 (portable) set.

AMX 10 SAT

PURPOSE

The AMX 10 SAT is an artillery topographic vehicle intended for both fire control, and advance reconnaissance, officers of artillery units.

Its function is to provide topographical data (target location and directional references) to the degrees of accuracy needed by:

gun batteries called upon to open effective and rapid fire immediately after an emergency deployment;

advance sub-units, to accelerate and to simplify their role in preparing deliberate deployment positions, before occupation by the guns.

For these missions the vehicle is designed to carry all topographic and/or preparatory fire control equipment, required by the crew.

GENERAL CHARACTERISTICS

Derived from the AMX 10 PC, the AMX 10 SAT has identical performances and general characteristics, as well as the same silhouette topped by the TOUCAN II turret.

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Major internal modifications concern :

elimination of work table, map storage unit and two lefthand seats to provide inboard space for topographic equipment.

introduction of an integrated navigational aid :

Of the artillery type with optical output this aid can provide and deliver directional data outside the vehicle, as well as accept any directional reference available outside.

Principal performances (with erreur probability factors) :

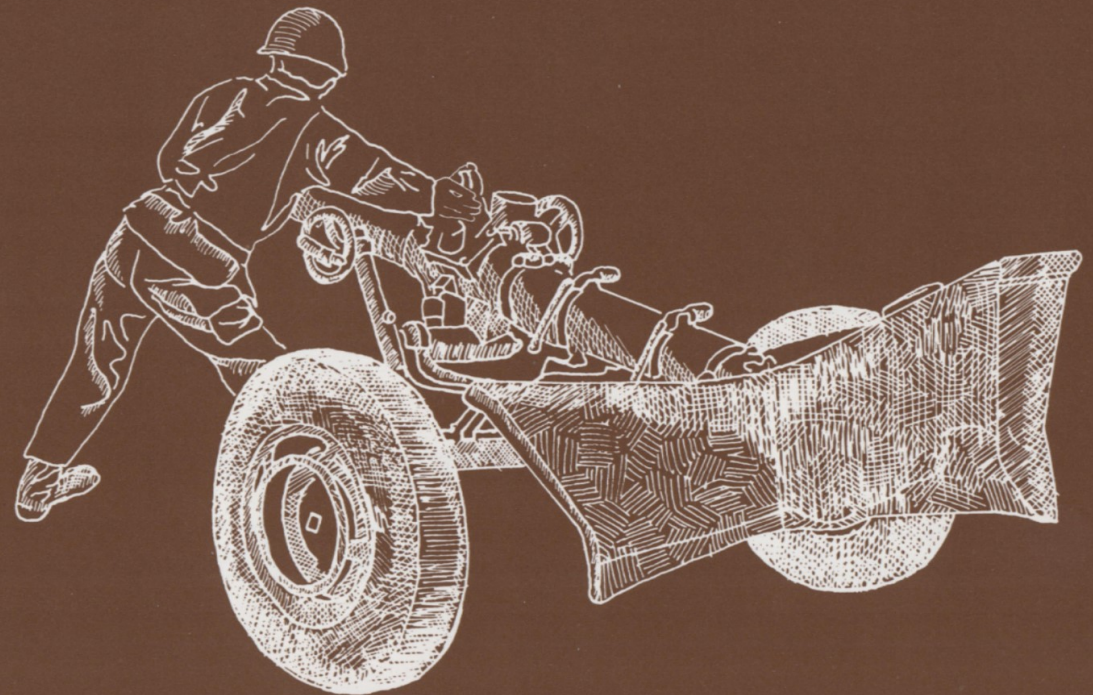
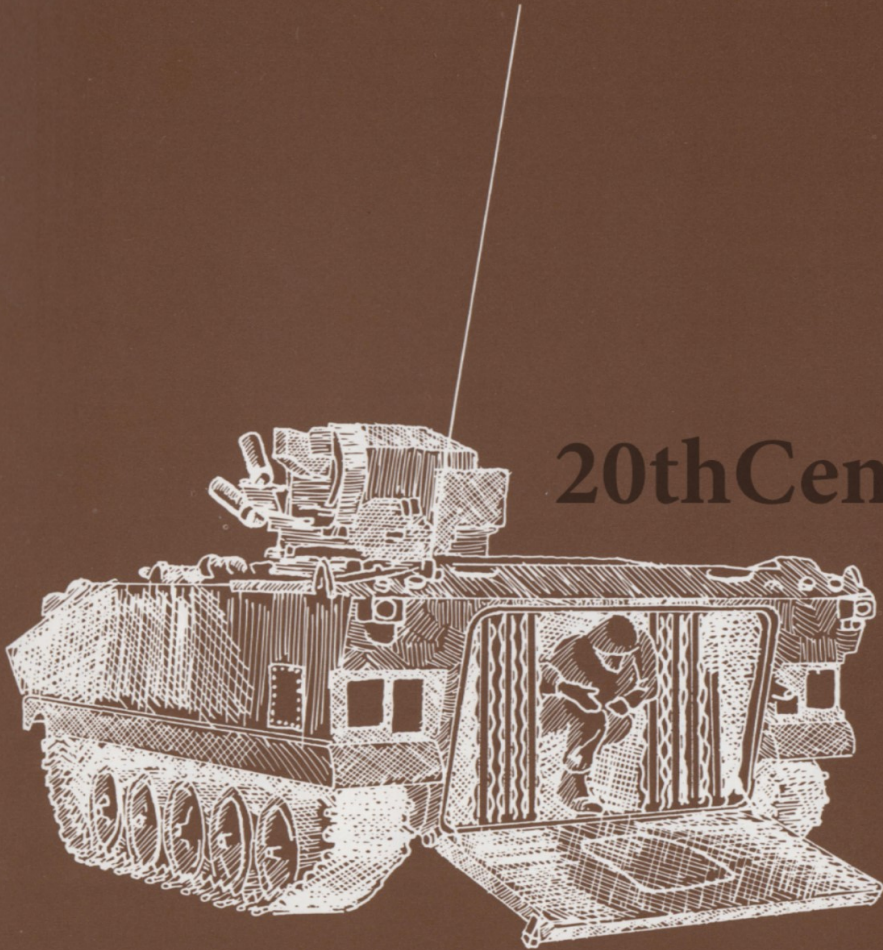
autonomous north-seeking capability: to three miles in less than ten minutes

heading retention : 1 mil/hour

position determination: 0.5 % of distance covered.

AMX 10 TM

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AMX 10 TM

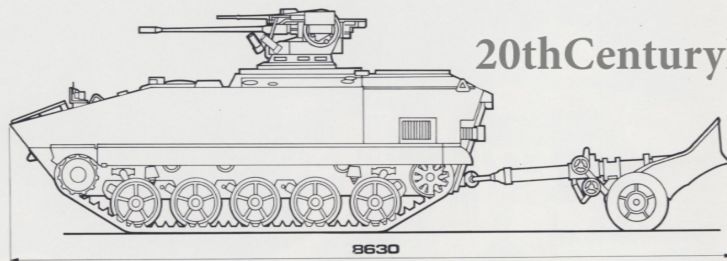
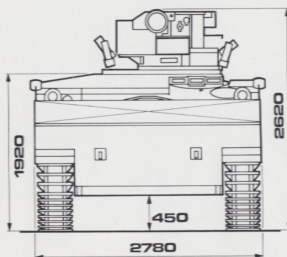
PURPOSE

The AMX 10 TM is a Mortar Towing vehicle designed and developed to provide heavy **fire support to ground troops**.

It is designed to **tow a mortar**, namely the 120-mm Thomson-Houston-Hotchkiss-Brandt rifled mortar, type MQ-120-RT-61 **together with onboard ammunition and mortar crew**.

The AMX 10 TM combines the close support fire

power and high rates of fire of the 120-mm rifled mortar to qualities of mobility and rapid deployment essential in present-day combat.



GENERAL CHARACTERISTICS

Derived directly from the AMX 10 P combat vehicle, the AMX 10 TM differs only by internal arrangement and crewing as well as the cupola which nevertheless carries the same armament as the AMX 10 P.

The two vehicles offer the same general characteristics, the same mobility and the same protection.

CREW POSITIONS AND VEHICLE LAYOUT

The crew is composed of six men:

- | | |
|----------------------|-----------------------|
| the mortar commander | a loader |
| a gun-layer | an ammunition carrier |
| an artificer | a driver |

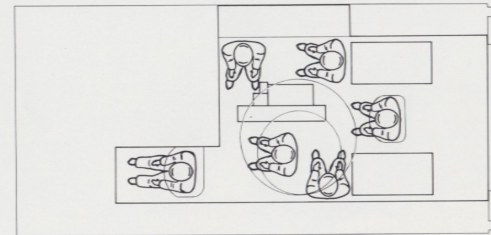
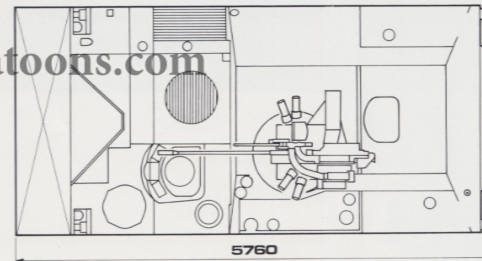
The driver is seated to front left. The gun commander is seated behind the driver inside the cupola, forward and left of the crew compartment.

The crew compartment is divided into two areas:

a **forward area** reserved to the four-man mortar crew, the **rear area** occupied by two 120-mm mortar ammunition storage racks on either side of a central aisle and by two "on-board" mortar equipment packs.

Ammunition storage:

The vehicle carries 60 120-mm projectiles, of which 56 are stored horizontally in containers and 4 stocked vertically. Storage is so arranged that access to ammunition is from the rear allowing instant selection of any type of 120-mm projectile.



WEAPONS

The weapons integrated on the AMX 10 TM are mounted externally on a **single-seat TOUCAN I cupola**.

As on the AMX 10 P, they comprise:
a 20-mm cannon
a coaxially mounted AA 7.62 NATO machine gun.

Elevation and traverse systems

Elevation and traverse of the single-seat TOUCAN I cupola are manually operated.

Traverse: 360°

Elevation: - 13° to + 50°

Maximum traverse speed: 12°/sec.

Maximum elevating speed: 16°/sec.

6 periscopes assure all-round vision.

120-mm MORTAR

Linkage with towing vehicle:

The 120-mm mortar is linked to the vehicle by the standard AMX 10 P tow hook to rear. This system allows the mortar to be brought rapidly into action.

The 120-mm rifled mortar fires projectiles with performance characteristics comparable to those of field artillery in the 105 mm class, while retaining the lightweight and mobile features of conventional 120-mm smooth-bore mortars.

Ease of handling and a high trajectory that can reach into deeply broken terrain, allow this equipment to provide **decisive close support firepower** to mechanised infantry when disembarked.

The mortar can fire **a wide variety of projectiles**, including the PR 14 standard charge explosive projectile, the PRPA rifled projectile with booster charge, the anti-armour projectile and smooth-bore projectiles with fixed or retracted fins as well as smoke and illuminating projectiles.

Principal performance characteristics:

Time into action: 3 minutes

Normal rate of fire: 6 rounds per minute

Maximum rate of fire: 10 rounds per minute

120-mm rifled mortar.

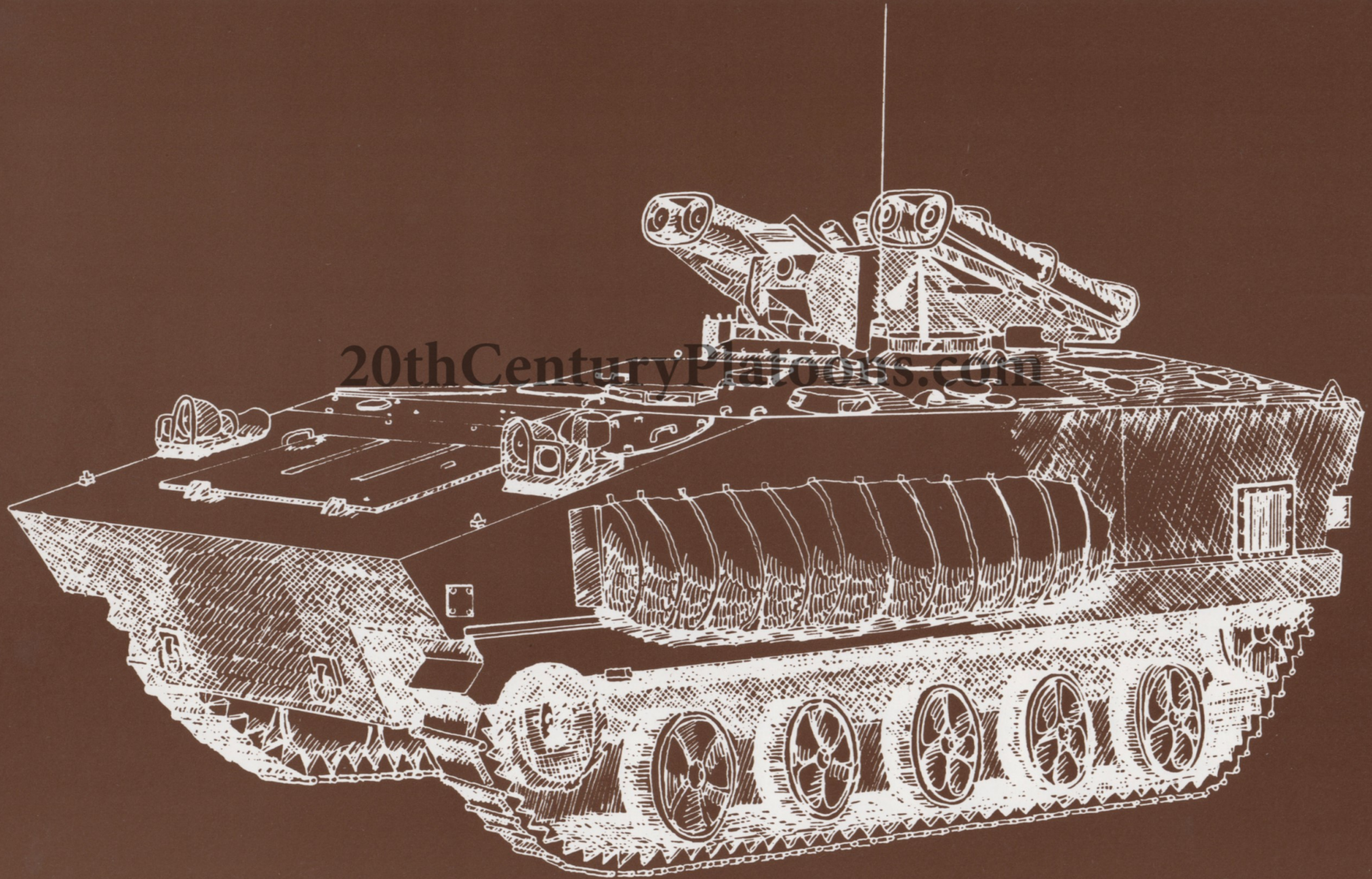
Optional Equipment

An available mortar flotation kit allows the AMX 10 TM to exploit fully the inherent amphibious capability common to all AMX 10 series vehicles.



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AMX 10 HOT



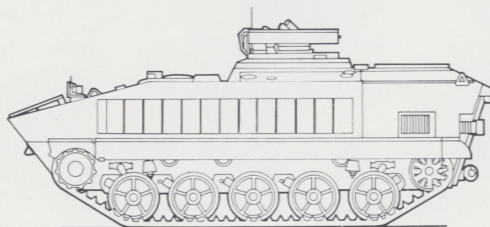
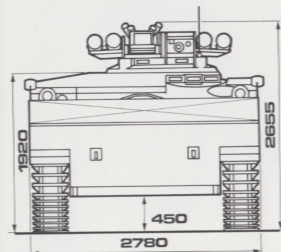
AMX 10 HOT

PURPOSE

The AMX 10 HOT is an **ANTITANK COMBAT** vehicle, equipped with a turret for launching HOT system missiles. HOT (fast subsonic optically wire-guided), is a second-generation long-range antitank weapon system.

Developed on the semi-automatic principle, the **4 000-metre** range and high cruising speed of HOT enable it to destroy even the best-protected battle tanks before they can engage their own armament.

The AMX 10 HOT system thus provides the commander in the field with an **outstanding anti-tank capability**, whether used independently or as a complement to other armour.

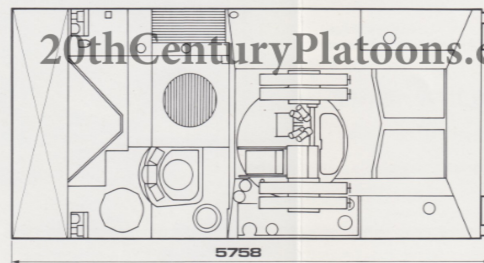


GENERAL CHARACTERISTICS

The AMX 10 HOT is derived directly from the AMX 10 P combat vehicle. Its hull is modified only by internal arrangements necessary to house the 14 missiles.

Derived from the TOUCAN II model of the AMX 10 P, the turret assures excellent ballistic protection of the crew while permitting maximum exploitation of the HOT system.

The AMX 10 HOT has the same mobility and protection characteristics as the AMX 10 P.



CREW POSITIONS AND VEHICLE LAYOUT

The crew comprises five men:

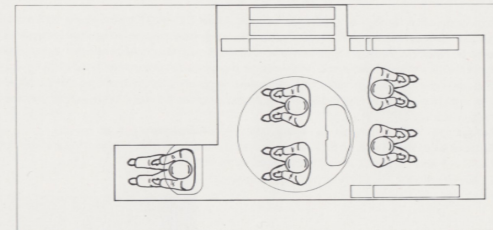
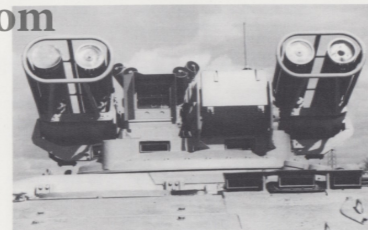
Two men in the turret:

the tank commander responsible for missile firing
the radio operator

Three men in the hull :

the driver
two loaders

In addition to the four ready-to-fire HOT missiles in the turret the vehicle layout provides **storage for 14 missiles** in the hull, thus conferring on it **excellent combat autonomy**.



HOT TURRET WITH MISSILE LAUNCH RAMP

Derived from the TOUCAN II turret of the AMX 10 P, the HOT turret is also a two-seater, offering panoramic vision with full control of missiles from inside the vehicle.

The turret is manned by two men in dual basket seats that rotate with the turret :

to the left, the HOT commander responsible for observation, fire and guidance of the missile,
to the right the radio operator.

Externally, the turret carries four ready-to-fire missiles installed in pairs on each side of the turret body centreline.

The missiles are mounted on ramps elevated either automatically or manually from inside the turret. This permits rapid and repeated launches of the four missiles without reloading delays.

Missile launch angles

azimuth : 360°

elevation : -6° to $+18^{\circ}$

Turret employment

The turret is designed for observation and firing of missiles **observation** is carried out from within the turret through periscopes when the operators are seated in a lowered position, or with operators in the raised position when head and shoulders emerge through the hatch.

firing of missiles is initiated from inside the turret.

reloading into the launching ramps is done externally, using the rear door of the vehicle folded back to form an access platform.

LASER RANGEFINDER

Provision of a laser rangefinder allows AMX 10 HOT operators to establish target ranges accurately and instantly, thereby optimizing the weapon system. (A second version of the AMX 10 HOT, without laser rangefinder, can be equipped with local defence armament mounted in the small MASCOT cupola.) The tank commander has a M 546 laser rangefinder telescope at his disposal. It is composed of an M 517 prism head and an M 427 telescope with $\times 8.3$ magnification.

Range : 8 000 metres — **Field :** 8° — **Accuracy :** ± 5 m

Optical Sighting : the M 509 monocular telescope offers two magnifications :

$\times 4$ — Field of 240 mils for target acquisition

$\times 12$ — Field of 80 mils for night firing.

Elevation and traverse systems

Electrically powered with manual standby controls.

Traverse

Automatic: 0 to $18^{\circ}30/s$ for both operators with override on the tank commander's side.

Manual: 0 to $3^{\circ}/s$ used by both operators for 2 turns/s of aiming handwheel.

Elevation

Automatic: 0 to $17^{\circ}/s$ and manual: 0 to $4^{\circ}/s$ for 2 turns/s of aiming handwheel.

HOT LAUNCH UNIT

This comprises :

sighting and aiming equipment and a guidance system to assure automatic correction of missile path.

Exterior launch ramps.

The fire control system requires only that the gunner should track the target through an optical sight, thus establishing a line-of-sight to which the missile is automatically locked.

COMMUNICATIONS EQUIPMENT

The radio equipment is provided by TRVP 13 and TRVP 213 type sets.

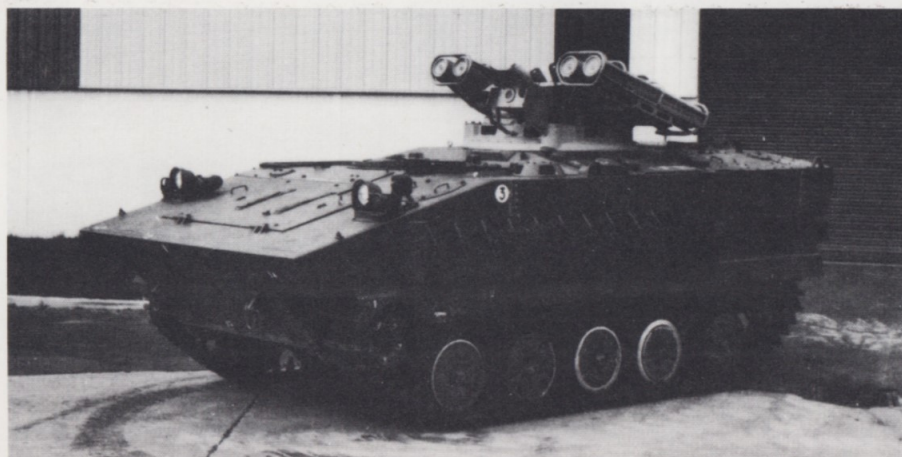
For the AMX 10 HOT unit vehicle :

1 TRVP 13 set, manually controlled, power : 1.5 W, range : 15 km.

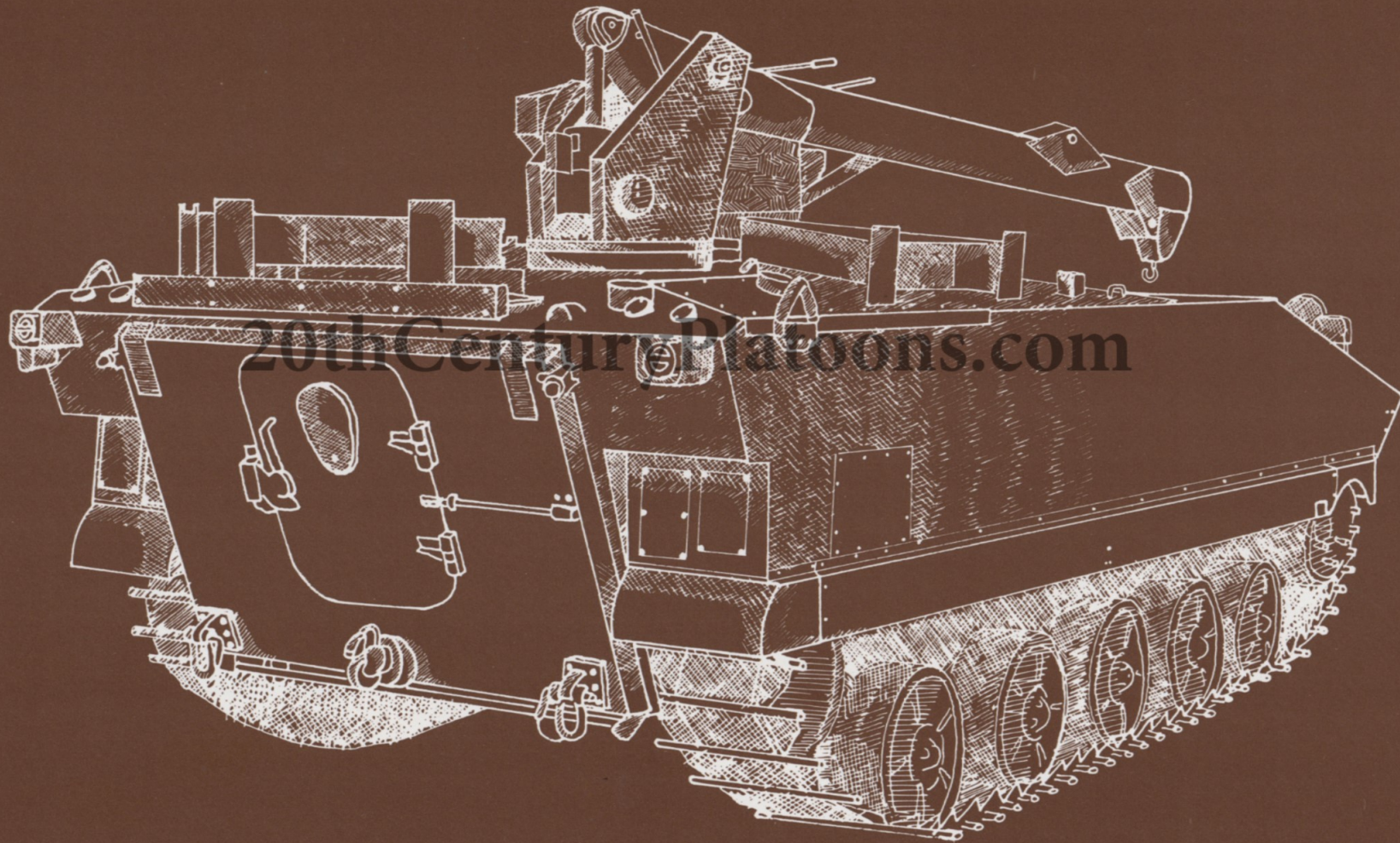
For AMX 10 HOT command vehicle :

1 TRVP 213 set, power : 15 W, range : 30 km.

All crew members are connected to the vehicle intercom system.



AMX 10 ECH



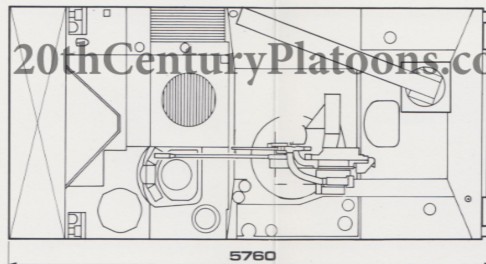
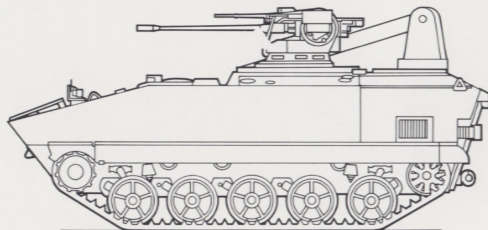
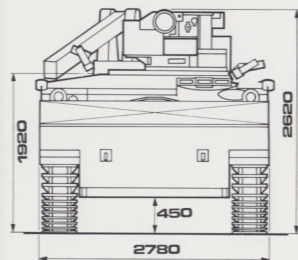
AMX 10 ECH

PURPOSE

The AMX 10 ECH is a first-echelon **SUPPORT** vehicle designed to carry a crew of armoured or mechanized unit mechanics into forward areas to perform the following tasks:

mechanical fault-finding
track and suspension repairs
standard assembly exchanges on occasion
prepare for recovery by AMX 30 D vehicles

The AMX 10 ECH will generally operate with AMX 30 D recovery tanks of armoured units



GENERAL CHARACTERISTICS

Derived directly from the AMX 10 P combat vehicle the AMX 10 ECH is varied only by internal layout, crewing, cupola and radio-intercom system.

Otherwise, these two vehicle types have identical mobility and protection characteristics.

EQUIPMENT FEATURES

To fulfil assignments in cooperation with the AMX 30 D, the AMX 10 ECH includes the following specialised equipment:

A **lifting crane**, mounted to the rear right-hand side of the vehicle. It can for example lift off the rear roof and cooling shroud of the AMX 30 or the power plant of the AMX 10. Its capacity is 8000 m. daN.

CREW POSITIONS AND VEHICLE LAYOUT

The five man crew is composed of

one chief mechanic

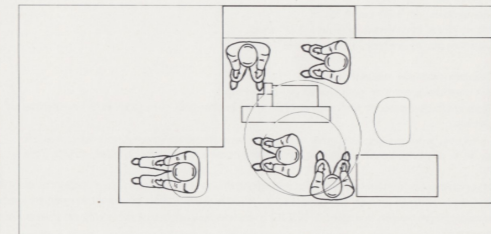
The **chief mechanic** is seated behind the driver, inside the front cupola to the left of the crew compartment.

three mechanics

The crew compartment is designed to accommodate **three mechanics** and the on-board first echelon tool and spares kit.

one driver

The **driver** is seated to the left front of the vehicle as in the AMX 10 P.



Twin sheer-legs and lifting jacks

The two sheer-legs fixed to the roof, and two jacks housed in the crew compartment, allow running repairs to suspensions and tracks of AMX 10 and AMX 30 vehicles (e.g. replacement of torsion bars).

First echelon tools and spares

These kits can be stored directly on vehicle floor space kept clear for the purpose, and in storage racks located to the left side of the crew compartment.

CUPOLA AND ON-BOARD WEAPONS

The AMX 10 ECH is equipped with a **single-seat TOUCAN I cupola** (replacing the AMX 10 P's two-seat TOUCAN II turret) with the weapon externally mounted.

On-board weapons are identical to those of the AMX 10 P, namely :

one 20 mm gun

one 7,62 mm machine gun, coaxial to the 20 mm gun.

These weapons can be operated from inside the turret under NBC conditions.

Elevation and traverse system

Elevation and traverse controls are manually operated, with the following characteristics :

Traverse : full 360°

Elevation : -13° to $+50^\circ$

Maximum traverse speed : $12^\circ/\text{sec}$

Maximum elevation speed : $16^\circ/\text{sec}$.

Cupola optical equipment

Six periscopes for all-round observation

One mobile-head prism sight, coaxial to the 20 mm gun with a choice of two paths :

to right, a telescopic sight with 6 magnification for ground targets
to left, a periscopic gonio sight for observation and antiaircraft fire.

an alidade for external aiming, integrated to the 20 mm gun regards elevation for acquisition of air targets, and if necessary for ground engagement.

a searchlight with range of 1000 metres linked mechanically to the elevation system.

RADIO-INTERCOM EQUIPMENT

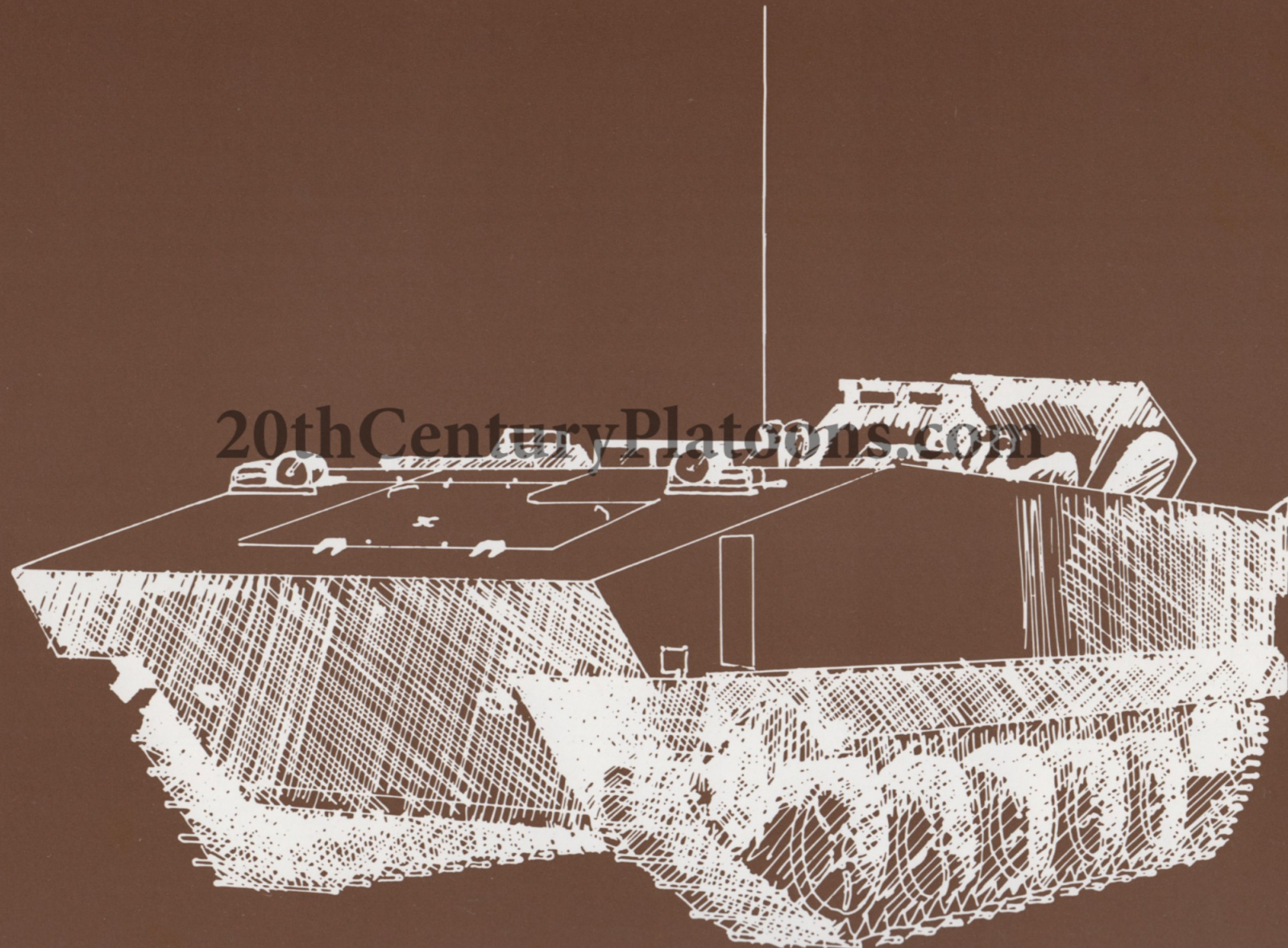
This includes :

an interphone system identical to that fitted to the AMX 10 P

a TRVP 13 radio set.



AMX 10 AMB



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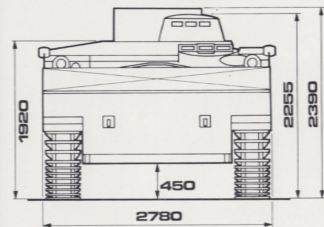
AMX 10 AMB

PURPOSE

The AMX 10 AMB **AMBULANCE** vehicle is designed to evacuate casualties from the battlefield, to rear areas.

It allows collection, transportation and first-aid for three to five casualties, whether stretcher or sitting cases, by a medical crew using in-board equipment.

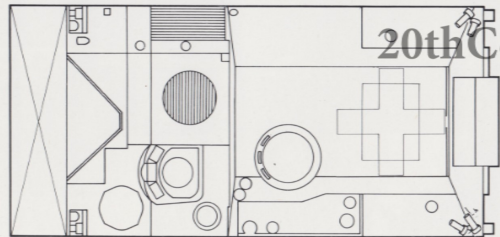
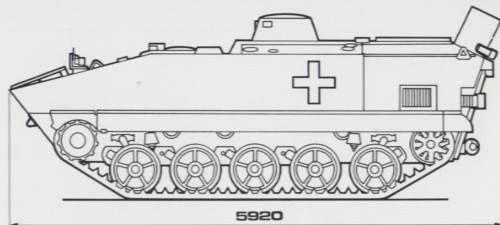
A technically sophisticated vehicle, the AMX 10 AMB allows wounded to be evacuated from the battlefield and to receive urgent and early first aid from para-medics.



GENERAL CHARACTERISTICS

Derived directly from the AMX 10 P combat vehicle the AMX 10 AMB is varied only by internal arrangement, crewing, and of course, the absence of integrated weapons.

Otherwise, the two vehicle types share identical mobility and protection characteristics, and can both operate in an NBC environment.



CREW POSITIONS AND VEHICLE LAYOUT

The three-man crew is composed of :
two medical orderlies and one driver.

According to requirement, internal equipment can be arranged to carry :

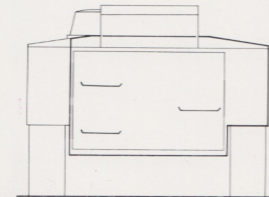
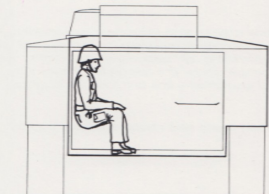
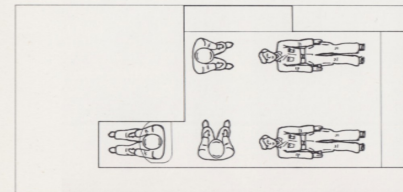
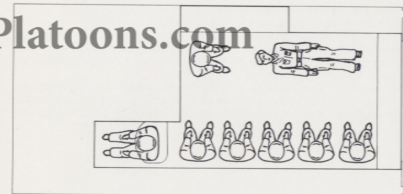
In both configurations, orderlies can use the centre aisle for observation and care of wounded. The side bench can be raised, and the two stretchers folded and stored inside the vehicle.

either **three stretcher cases** (two bunked stretchers on one side of the centre aisle and a single stretcher on the other)

As in the AMX 10 P, the driver is seated front left, with medical orderlies seated forwards on each side of the vehicle.

or **one stretcher case** on the right-hand side of the centre aisle and **4 sitting casualties** opposite.

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EQUIPMENT FEATURES

To allow collection, accommodation and transport of casualties together with medical orderlies, special equipment features include :

Observation kiosk

To supplement vision through periscopes (three available to driver and one in the rear compartment), a kiosk located behind the driver is fitted out to allow observation under protected by the medical orderly vehicle commander.

Air-conditioning

An air-conditioning system is obtained by :
thermal insulation of the vehicle,
an air-cooling unit.

This limits maximum interior temperatures to between 30° and 33 °C thus offering optimum conditions for care of casualties.

Searchlight and electrical installations

A searchlight mounted at the rear of the vehicle, assists with locating and recovering of casualties by night. Electrical installations in the crew compartment provide daylight-type lighting, and power connections for medical equipment are provided throughout the compartment.

Washbasin and reserve water supply

MEDICAL EQUIPMENT

This equipment is in two categories :

First-aid Equipment

Oxygen treatment :

Available simultaneously to three casualties.

Transfusions :

Available simultaneously to three casualties with administration of serum, blood etc. Refrigerated storage for transfusion fluids.

Equipment for clearing respiratory or gastric tracts.

Optional : Cardiotherapy equipment for cardiac defibrillation and stimulation.

Equipment for medical observation (optional)

Optimum observation of major casualties can be provided by a monitor connected to the radio network. Associated to the on-board radio, this monitor allows continuous transmission of medical data from the ambulance to a field hospital or a medical command post. The system also permits voice transmission between hospital and ambulance.

With such equipment and configuration, the AMX 10 AMB can effectively fulfil its assignment for rapid first-aid and medical observation of wounded, during transfer from combat areas to fixed installations or field hospitals located to the rear.

AMX 10 RC



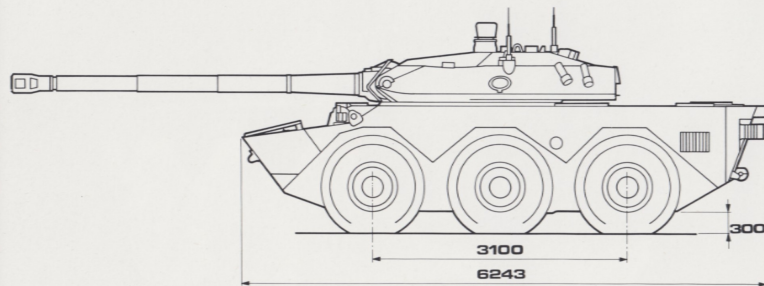
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AMX 10 RC

PURPOSE

As part of the AMX 10 series of armoured vehicles, the wheeled AMX 10 RC version is specially designed to meet RECONNAISSANCE and ANTITANK COMBAT assignments.

With excellent mobility, outstanding fire power and the protection offered to its crew, it is a modern and effective weapon system for reconnaissance units. As an integral part of major mechanized forces AMX 10 RC units are capable of fast moving combat that the threat or presence of nuclear weapons would impose.



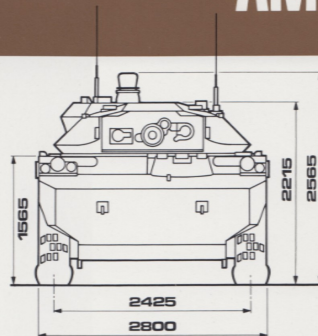
GENERAL CHARACTERISTICS

Standardization throughout the AMX 10 series of several mechanical components has resulted in reduced industrial development costs and streamlined logistic support. However the specific AMX 10 RC assignments called for original designs of turret, suspension and undercarriage. The requisite qualities obtained in

the AMX 10 RC are those of a reconnaissance vehicle adapted to antitank operations in a nuclear environment: excellent tactical mobility fire power with a high-performance fire control system effective protection of crew.

FIRE POWER

The main armament of the TK 105 turret mounted on the AMX 10 RC is the 105-mm MECA-model gun (with high accuracy, long range) performance characteristics, this gun can fire the following ammunition:
Hollow-charge antitank (OCC 105 MECA M.32) rounds:



MOBILITY

The outstanding mobility of the vehicle, both on roads and cross-country is obtained by:

a propulsion unit identical to that of the AMX 10 P (engine, converter, gearbox, steering mechanism) an undercarriage of six driving wheels equipped with 1400 X 20 low-pressure tyres (pressure variable according to terrain and the possibility of fitting puncture-proof V.P.P.V. - type tubes) a wheeled skid-steering system similar to that used by tracked vehicles

an oleopneumatic suspension with variable ground clearance.

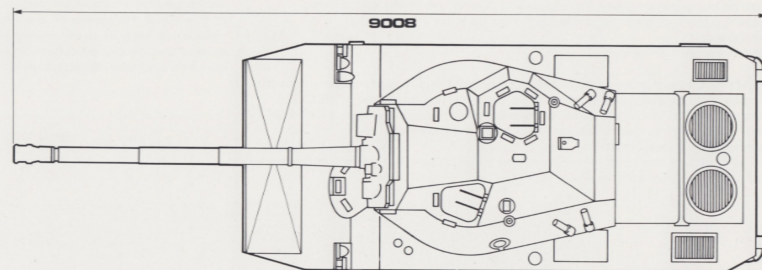
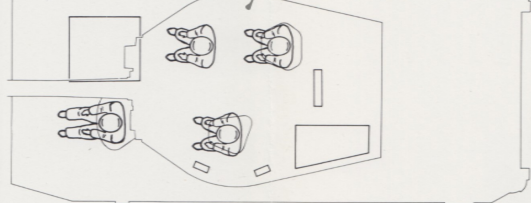
The vehicle is also amphibious.

Principal test-performance characteristics as recorded:

Maximum road speed	> 80 km/h
Average road speed	60 km/h
Average cross-country speed	25/30 km/h

Radius of action (road)	800 km
Combat endurance	26 hours (NATO standards)
Obstacle crossing:	
Grade Negotiation	60 %
Straight sided trench	1.15 m
Step	0.70 m
Maximum speed on water (with water jets)	2 m/s
Total combat-ready weight	15.5 t
To facilitate night movement a "passive system" QB-31-A light intensification driving periscope is available to the driver.	

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Hollow-charge fin-stabilized shell. Muzzle velocity 1100 m/s
Weight of complete round 14.4 kg
Weight of projectile 5.7 kg of which 0.920 kg of explosives
Penetration: at 0° angle incidence: > 360 mm
at 60° angle incidence: > 150 mm
H + L accuracy < 2 mils
High explosive (OE 105 MECA) rounds:
Fin-stabilized high explosive shell.

Muzzle velocity 800 m/s
Weight of complete round 13.7 kg
Weight of projectile 7.1 kg of which 1.740 kg of explosive
Performance superior to American 105 HEM 1 shell in grazing fire
Accuracy H + L < 2 mils
Pratice (SCC 105 MECA M) rounds:
Muzzle velocity 1100 m/s
Ballistic performances identical to those of

hollow-charge antitank ammunition. In addition, the TK 105 turret is equipped with: a 7.62-mm coaxial machine-gun (model AA 52 NF 1) four smoke pot launchers for local defense. The on-board ammunition gives the AMX 10 RC considerable combat endurance: 38 rounds of 105 mm, including 12 in ready-use turret racks 4000 rounds of 7.62 mm, 16 D.REB smoke pots.

FIRE CONTROL SYSTEM

The advanced technology of its fire control system allows the AMX 10 RC to deliver rapid, long-range and effective fire by day and night.

It is designed to satisfy three criteria:

high hit probability with the first round on a fixed or mobile target, minimum intervention time and, simplicity of use,

the TK 105 turret is equipped with:

an electrohydraulic elevation and traversing system, optical daylight instruments (periscopes, gunner's telescopic sight, panoramic telescope for tank commander) that allow localisation and identification of targets with minimum delay, an automatic fire control system of the optimized C.O.T.A.C. type which takes the following parameters into account during the firing sequence: distance from the target as determined by laser rangefinder, tank slant, forward speed of target.

This fire control system combined with the quality of the armament provides excellent accuracy against moving targets up to distances of 2000 m.

Additionally, a low light level television observation system (THOMSON DIVT 13) permits the following functions in darkness:

surveillance - identification - fire.

Coupled to the fire control system, this passive system gives a remarkable night combat role to the AMX 10 RC.

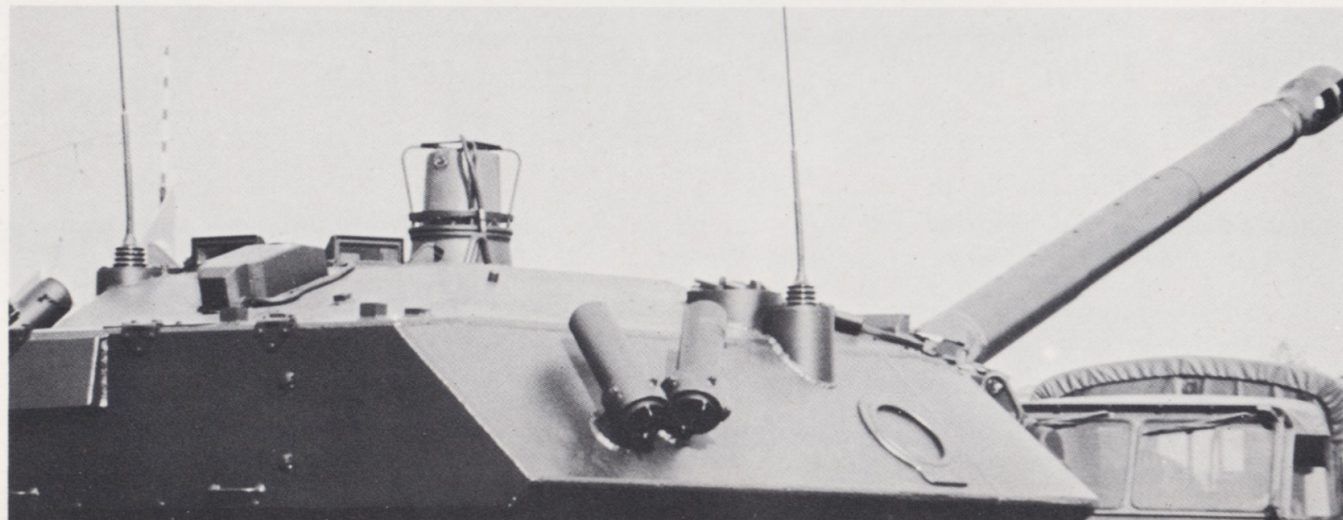
PROTECTION

The high quality of the optical equipment allows the crew to complete all combat operations without leaving the turret. They therefore remain under cover from small or medium-calibre machine-gun fire as well as from shell splinters, inside the light-alloy turret and hull armour.

Endowed with an air filtration and pressurization system in the crew compartment the AMX 10 RC can operate under the threat or in the presence of nuclear weapons.

Finally, the low-profile silhouette, the quiet transmission and totally passive night vision equipment, ensures remarkable discretion on the battlefield.

Developed within the advantageous economic and industrial structure shared by the AMX 10 series of tracked vehicles, the AMX 10 RC wheeled reconnaissance vehicle, with original design and addition options of ultra-modern equipment, offers an optimum solution to reconnaissance problems, as its current success demonstrates.



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GIAT



AMX 10 RC

offensive reconnaissance



AMX 10 PAC 90

light tank

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THE AMX 10 MULTIPLES

COMPATIBLE PERFORMANCES

- same mobility
- same high speeds by road
- same obstacle - crossing capability
- same endurance
- same amphibious character

= COMPATIBLE TACTICAL MIX

STANDARDISED EQUIPMENT

- same basic chassis
- same power unit
- same transmission
- same suspension
- same driver layout

= EASE OF MAINTENANCE
= EASE OF TRAINING



AMX 10 multiples seen at SATORY V



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