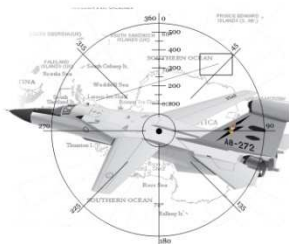


# SHOTGUN ONE



## ARMED FORCES OF INDONESIA Tentara Nasional Indonesia



## Fact Sheets

*Media Department*

ADF Issue

Weapons Systems Brief

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ADF V.2.1 RESEARCH SHEETS

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# TENTARA NASIONAL INDONESIA TNI

## Introduction

The Armed Forces of Indonesia (Indonesian: Tentara Nasional Indonesia, TNI , formerly Angkatan Bersenjata Republik Indonesia, best known by the acronym ABRI comprises approximately 410,000 personnel including the Army (TNI-AD), Navy (TNI-AL) including marines, and Air Force (TNI-AU).

The army is by far the largest, with about 303.000 active-duty personnel, compared to around 74,000 in the Navy and 33,000 in the Air Force.[citation needed]

Defense spending in the national budget is less than 1% of GDP, but is supplemented by revenue from many military-run businesses and foundations, both legal and illegal. The force doesn't include law enforcement and paramilitary personnel such as POLRI (Indonesian police) approx. 380,000 personnel, BRIMOB [police mobile brigade] approx 39,000 armed personnel, MENWA [university student regiment] approx 26,000 trained personnel, and HANSIP [civilian defence].

## Military of Indonesia

Commander-in-Chief	Sartono Kartodirdjo
Available for military service	60,543,028, age 18–49 (2005 est.)
Fit for military service	48,687,234, age 18–49 (2005 est.)
Budget	\$4,74 billion (2008)
Percent of GDP	3.2%



## Political role of the military

During the Suharto era, the military had a "dual function" (dwifungsi in Indonesian); first, it would preserve the internal and external security of the country, preserving it as a unified nation, and second, it would ensure that government policy followed a path that the military leadership felt was wise.

This justified substantial military interference in politics. Long-time president Suharto was an army general, and was strongly supported by most of the military establishment. Traditionally a significant number of cabinet members had military backgrounds, while active duty and retired military personnel occupied a large number of seats in the legislature. Commanders of the various territorial commands played influential roles in the affairs of their respective regions.

Indonesia has not had a substantial conflict with its neighbours since the 1963-1965 confrontation with Malaysia, although competing South China Sea claims, where Indonesia has large natural gas reserves, concern the Indonesian government. Without a credible external threat in the region, the military's primary role in practice has been to assure internal security. Military leaders now say they wish to transform the military to a professional, external security force, but acknowledge that the armed forces will continue to play an internal security role for some time.

In the post-Suharto period since 1998, civilian and military leaders have advocated removing the military from politics (for example, the military's representation in the House of Representatives was reduced and finally ended), but the military's political influence remains extensive. The TNI has been notorious since the massacre of alleged pro-communists in 1965-6 and the East Timor Crisis. In both events, the TNI allegedly mistreated and killed hundreds and thousands of people.

## Army

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### Indonesian Army

The Indonesian Army was initially formed during the War of Independence, when it participated in a guerilla war along with informal militia. As a result of this, and the need to maintain internal security, the Army has been organized along territorial lines, aimed at defeating internal enemies and external invaders once they have occupied the nation.

### Indonesian Navy

Personnel of the Indonesian Navy is estimated at 74,000 personnel. The Indonesian Navy purchased a number of ships of the former East German navy in the 1990s. Navy vessels include KRI Cobra and others. In 2006, Indonesian Navy purchased 2 Kilo class - 636 conventional submarines, 2 Shipset Yakhont Missile and 20 BMP-3F amphibious light tank with option of 100 more BMP-3 from Russia. Indonesia also plan to buy landing craft ships from Russia.[citation needed]

### Navy Aircraft inventory

All Indonesian Navy aircraft serve in DINAS PENERBANGAN TNI-AL (Indonesian Naval Aviation). The Indonesian Navy also purchased 8 Mi-2 (now based in Surabaya), but only two have arrived due to problems with Indonesian Navy Agencies.[citation needed] The Navy operates 52 fixed wing aircraft, and 23 combat and transport helicopters.

### Indonesian Air Force

Indonesia became the second country (after Thailand/Siam) in South East Asia to acquire an Air Force capability. Presently the Air Force operates 250 aircraft, including over 70 combat jets and 63 helicopters. There are 33,000 personnel in the Indonesian Air Force.[citation needed]

### Police - Law enforcement in Indonesia

While not strictly part of the armed forces, the national police often operate in a paramilitary role, independently or in cooperation with the other services on internal security missions. Indonesian Police use the name of POLRI (Kepolisian Republik Indonesia).

## INDONESIAN ARMY TNI-AU



Indonesian Army Military Area Commands (Kodam) as of 2007 (Map and articles by [Davidelit](#))

### Military Area Commands


The **Indonesian Army** has an estimated strength of 400,000. The following lists the Military Area Commands (Kodams), incorporating provincial and district commands each with a number of infantry battalions, sometimes a cavalry battalion, artillery, or engineers. Currently there are 12 Military Commands, and those are:









- Kodam Iskandar Muda, overseeing Aceh province as part of the Aceh special autonomy law. Previously under the Kodam I/Bukit Barisan.
- Kodam I/Bukit Barisan, overseeing northern Sumatra provinces of North Sumatra, West Sumatra, Riau and Riau Islands.
- Kodam II/Sriwijaya, overseeing southern provinces on Sumatra island of Jambi, Bengkulu, Bangka Belitung, South Sumatra and Lampung.
- Kodam Jaya, overseeing Jakarta as the capital city of Indonesia. Kodam Jaya also oversees two regions outside Jakarta of Bekasi which actually in West Java province and Tangerang which is in Banten province.
- Kodam III/Siliwangi, overseeing West Java and Banten provinces.
- Kodam IV/Diponegoro, overseeing Central Java and Yogyakarta provinces.
- Kodam VI/Tanjungpura, overseeing all provinces on Kalimantan island (Borneo) of Central Kalimantan, East Kalimantan, South Kalimantan and West Kalimantan.
- Kodam VII/Wirabuana, overseeing all provinces on Sulawesi island of Gorontalo, Central Sulawesi, North Sulawesi, South Sulawesi, Southeast Sulawesi and West Sulawesi.
- Kodam IX/Udayana, overseeing provinces of Bali, East Nusa Tenggara and West Nusa Tenggara. Former Indonesian province of East Timor was also under the jurisdiction of Kodam IX/Udayana.
- Kodam XVI/Pattimura, overseeing Maluku and North Maluku provinces.
- Kodam XVII/Trikora, overseeing West Papua and Papua provinces.

### Operational Commands

- \* Special Forces Command (Kopassus), est 5,530 divided into five groups
- \* Strategic Reserve Command (Kostrad), est 35,000
  - o 1st Division, with 3rd, 13th, and 17th Airborne Brigades
  - o 2nd Division, with 6th, 9th, 18th Airborne Brigades
  - o KOSTRAD also commands an independent airborne brigade, an independent cavalry brigade, two field artillery regiments and several combat service support units such as combat engineers.

## Army inventory

Vehicle	Origin	Role	Version	In service	Notes
<b>Tanks</b>					
AMX-13	 France	Light Tank	AMX-13	275	-
FV101 Scorpion	 United Kingdom	Light Tank	Scorpion 90	90	-
PT-76	 Russia/ Soviet Union	Amphibious Light Tank	PT-76B	30	Fitted with 76 mm Cockerill Gun with larger gunner's sights.
<b>Infantry Fighting Vehicle</b>					
AMX-VCI	 France	Infantry Fighting Vehicle	AMX-VCI M _____ AMX-VTT	200 _____ 182	-
AMX-10	 France	Infantry Fighting Vehicle	AMX-10P	50	-
BMP-2	 Russia/ Soviet Union	Infantry Fighting Vehicle	BVP-2	40	Czechoslovak production version of BMP-2
BMP-3	 Russia/ Soviet Union	Infantry Fighting Vehicle	BMP-3F	0	30 are on order and are scheduled to be delivered in 2008
<b>Armoured Fighting Vehicle</b>					
Alvis Saladin	 United Kingdom	Armoured Fighting Vehicles	FV-601	78	-
Ferret armoured car	 United Kingdom	Armoured Fighting Vehicles/Reconnaissance		55	-
Cadillac Gage Commando	 United States	Armoured Fighting Vehicles	Commando V-150 _____ Commando V-100 _____ Commando Scout	58 _____ 50 _____ 28	-
Alvis Stormer	United	Armoured Fighting Vehicles	AVLB	40	-

	Kingdom				
<b>Armoured Personnel Carrier</b>					
Cadillac Ranger	Gage	 United States	Armoured Personnel Carrier	PeaceKeeper 1	200
Pindad APS		 Indonesia	Armoured Personnel Carrier		150
BTR-40		 Russia/ Soviet Union	Armoured Personnel Carrier/Reconnaissance	BTR-40ID	130
Alvis Saracen		 United Kingdom	Armoured Personnel Carrier	Mk3 ----- Mk6	55
VAB		 France	Armoured Personnel Carrier	VAB VTT	46
Pindad APR		 Indonesia	Armoured Personnel Carrier		42
BTR-50PK		 Russia/ Soviet Union	Armoured Personnel Carrier	BTR-50PK	14
<b>All-terrain Vehicle</b>					
VBL		 France	4X4 All Terrain Vehicle		18
<b>Total Vehicle</b>					
			<b>Total</b>	Tanks ----- Infantry Fighting Vehicle ----- Armoured Fighting Vehicles ----- Armoured Personnel Carrier ----- 4X4 All Terrain Vehicle	445 ----- 422 ----- 309 ----- 637 ----- 18
					Did not include the 20 new BMP-3Fs

## Unarmored Vehicles

Steyr 700 AP, Nissan Q4W73, DAF YA 400, Land Rover LWB, M-151 Jeep, Leyland 4000 kg, Unimog trucks, Steyr 680M, Bedford MK, Steyr 17M29, Cakra FAV, Flyer FAV, Casspir (used by Kopassus)

**Other:** 12 x NDL-40 77 mm (built by PTDI), 6x RM-70 Grad 122 mm (used by Marine Corps), 24 BM-14 140 mm

Aircraft	Origin	Type	Versions	In service	Notes
Aero Commander	USA	utility transport	680	3	
Bell 47	USA	utility helicopter	47G	10	
Bell 205	USA	utility helicopter	205A-1	10	
Bell 412	USA	transport helicopter	412	14	
			412SP	14	
Britten-Norman Islander	UK	utility transport	BN-2A	1	
CASA C-212 Aviocar	Spain	tactical transport		2	
Cessna 310	USA	utility transport		4	
Douglas DC-3	USA	tactical transport	C-47	2	
Eurocopter Bo 105	Indonesia	utility helicopter		17	built by IPTN
Mil Mi-17 Hip-H	Russia	transport & light attack helicopter	Mi-17-V5	10	
Mil Mi-35 Hind-F	Russia	attack helicopter		8	
Schweizer 300	USA	utility helicopter	300C	6	



## AMX-13

TNI operate 275 AMX-13



AMX-13 light tank Photo: [User:Bukvoed](#)

### Introduction

The AMX-13 was a French light tank produced from 1953 to 1985. It served with the French Army and was exported to over twenty-five other nations. Including prototypes and export versions there are over a hundred variants including self-propelled gun, anti-aircraft systems, APCs, and TOW/ATGM versions. It is estimated that total production of the AMX-13 family was 7,700 units, of which around 3,400 were exported.

### Specifications

Weight	13.7 tonnes empty/14.5 tonnes combat
Length	4.88 m (gun forward: 6.36 m)
Width	2.51 m
Height	2.35 m
Crew	3 (Commander, gunner and driver)
Armor	Steel 10mm (minimum), 40 mm (maximum)
Primary armament	75 mm (or 90 mm or 105 mm) with 32 shells
Secondary armament	7.5 mm (or 7.62 mm) coaxial MG with 3,600 cartridges, 7,62 mm AA MG (optional), 2x2 smoke grenade dischargers
Engine	SOFAM Model 8Gxb 8-cyl. water-cooled petrol 250 hp (190 kW)
Power/weight	15 hp/tonne
Suspension	torsion-bar
Operational range	400 km
Speed	60 km/h



### Additional characteristics

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- \* Ground clearance: 370 mm
- \* Fording: 600 mm
- \* Vertical obstacle 650 mm
- \* Trench: 1.6 m
- \* Gradient 60 %
- \* Side slope: 60 %
- \* NBC system: None
- \* Night vision: Optional

## FV101 SCORPION

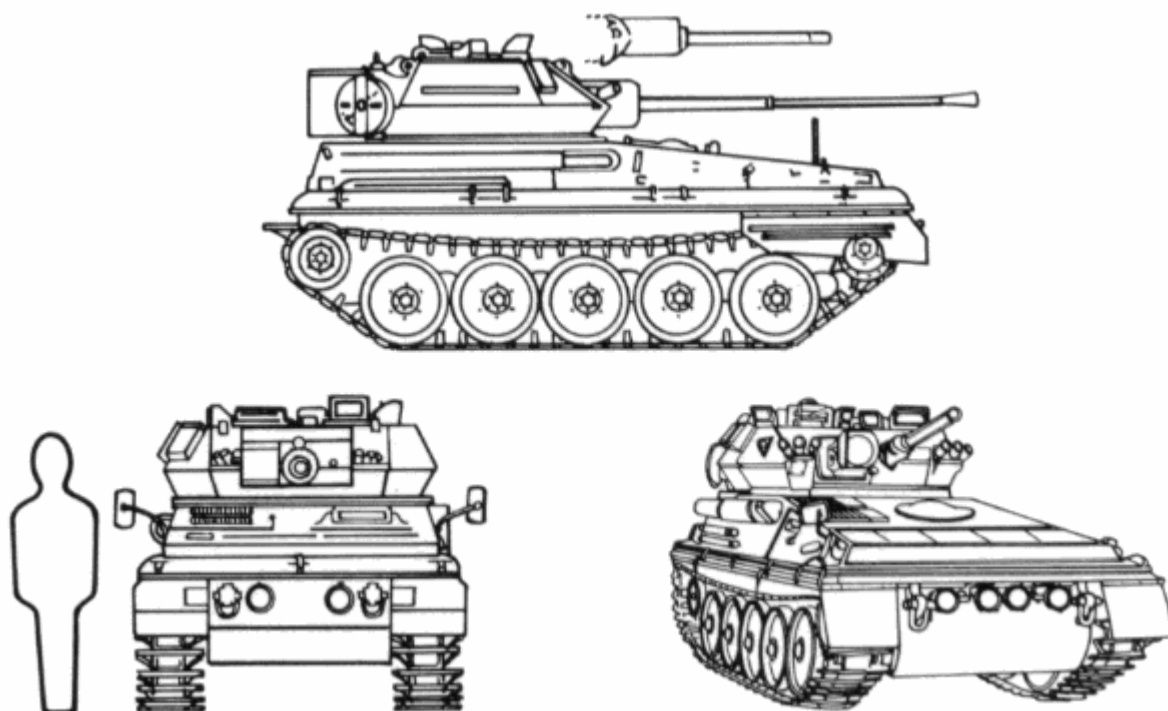
90 Scorpions in operation



The FV101 Scorpion is a British light tank, part of the Combat Vehicle Reconnaissance (Tracked) or, CVR(T) family. The full design name is Combat Vehicle Reconnaissance (Tracked) Fire Support (Scorpion). Manufactured by Alvis Vickers it was introduced into service with the British Army in 1973 and served until 1994. More than 3,000 were produced. It is also one of the fastest tanks in the world, along with pre-WWII BT series. the 76mm gun had no fume extractor and could suffocate the crew if the vehicle was closed down for NBC protection).

### Specifications

Weight	8.07 tonnes
Length	4.9 m
Width	2.2 m
Height	2.1 m Crew 3
Armour	12.7 mm Primary
armament	76 mm gun L23A1 40 rounds
Secondary armament	Coaxial 7.62 mm L37A1 machine gun 3,000 rounds
Engine	Cummins BTA 5.9 litre (diesel)
Operational range	190 hp (142 kW) Power/weight 24 hp/tonne Suspension torsion-bar 644 km Speed 82.2 km/h (51mph)



## PT-76

30 in operation



The PT-76 (Obiekt 740[5]) is a Soviet light amphibious tank which was introduced in early 1950s and soon became the standard reconnaissance tank of the Soviet Army and the other Warsaw Pact armies. It was widely exported to other friendly states, like India, Iraq, North Korea and Vietnam — in all, over 25 countries used the PT-76. Its designation PT-76 (ПТ-76) stands for Russian Plavayushtsiy Tank - 76 (Плавающий Танк - 76) - "Amphibious Tank - 76". Number "76" comes from the caliber of the main armament, 76.2 mm D-56T series rifled tank gun. Even though its armament and armour are obsolete by modern standards, its water propulsion system has an ability to sometimes outweigh armament and armour limitations.[7] Its design was so successful at the time that many specialized vehicles like BTR-50 APC, ZSU-23-4 SPAAG, ASU-85 airborne self-propelled gun and 2K12 Kub anti-aircraft missile launching vehicle were based on it.

### Specifications

Weight	14.6 tonnes for PT-76 15.4 tonnes for PT-76B
Length	6.91 m hull only 7.635 m with barrel in forward position
Width	3.15 m
Height	2.325 m
Crew	3 (driver, commander and loader)
Armor	Homogeneous, cold rolled, welded steel 20 mm at 35° turret front 16 mm at 35° turret side

	11 mm at 33° turret rear
	8 mm at 0° turret top
	10 mm at 80° upper hull front
	13 mm at 80° lower hull front[2]
	14 mm at 0° hull side[7][6][1]
	7 mm at 0° hull rear[1]
	5 mm at 0° hull floor[1]
Primary armament	76,2 mm D-56T rifled tank gun for PT-76 Model 1 76,2 mm D-56TM rifled tank gun for PT-76 Model 2 and PT-76 Model 3 76,2 mm D-56TS or D-56B rifled tank gun for PT-76B 40 rounds for PT-76 41 for PT-76B
Secondary armament	7.62 mm SGMT coaxial medium machine gun for PT-76 7.62 mm PKT coaxial general purpose machine gun for PT-76B 1000 rounds
Engine	V-6 6-cylinder 4-stroke in line water cooled diesel for PT-76 V-6B 6-cylinder 4-stroke in line water cooled diesel for PT-76B
Power/weight	240 hp (179 kW) at 1800 rpm for PT-7 263 hp (196 kW) at 1800 rpm for PT-76B 16.4 hp/tonne (12.3 kW/tonne) for PT-76 17.1 hp/tonnes (12.7 kW/tonne) for PT-76B
Suspension	torsion-bar
Ground clearance	370 mm
Fuel capacity	250 l for PT-76 400 l for PT-76B
Operational range	370 km - 400 km (road) for PT-76 480 km - 510 km (road) for PT-76 with additional fuel tanks 480 km (road) for PT-76B 590 km (road) for PT-76B with additional fuel tanks 100 km (water) for PT-76 120 km (water) for PT-76B
Speed	44 km/h (road) 25 km/h (cross country) 10,2 km/h (water)

Indonesian PT-76B's are fitted with a Cockerill 76,2 mm tank gun (clean barrel with multi-slot muzzle-brake on end) and larger gunners sight.

**PT-76B** (PT-76 Model 4, Ob'yekt 740B) (1958) - PT-76 with a 76,2 mm D-56TS or D-56B rifled tank gun (double-baffle muzzle brake, cartridge ejector, fume extractor and STP-2P 'Zarya' 2-axis stabilization system), 7.62 mm PKT coaxial general purpose machine gun instead of 7.62 mm SGMT coaxial medium machine gun, TDA thermo smoke generating system, new R-113 radio set instead of the old 10-RT-26E radio set (It was later replaced by R-123 radio set), PAZ (protivo-atomnaya zashita) NBC protection system, automatic fire extinguishing system, improved TShK-2-66 sight, filtration-ventilation system, improved observation devices, improved electric equipment, new V-6B 6-cylinder 4-stroke in line water cooled diesel engine developing 263 hp (196 kW) at 1800 rpm and additional internal fuel tanks for which the shape of the armour had to be slightly changed. These additional internal fuel tanks increase the fuel capacity from 250 l to 400 l. The new engine is same engine that is used in one bank of that fitted to the T-54 main battle tank. Thanks to the new engine and additional fuel tanks, the range of the vehicle has gone up to 480 km on the road, 590 km on road with additional external fuel tanks and 120 km on the water. The 76,2 mm D-56TS or D-56B rifled tank gun could fire a new undercaliber AP projectile piercing up to 75 mm at 60° hitting angle from a range of 2,000 meters. One such round was added to PT-76B typical ammo load and so it now carried 41 different rounds. The vehicle also has an increased height of the hull. This variant was produced between 1958 - 1969.

## AMX-VCI AND VTT



AMX-VTP

### Introduction

The AMX-VCI (French: Véhicule de Combat d'Infanterie) is one of the many variants of the French AMX-13 light tank. It was the front line APC of the French Army until replaced by the AMX-10P.

### In Service

- AMX-VTP: Original APC variant armed with open-mount light machine-gun **In service** 200
- AMX-VTT (AMX-VCI): APC fitted with turret mounted light machine-gun **In service** 182

### Specifications

Weight	15.0 tonnes
Length	5.7 m
Width	2.67 m
Height	2.41m
Crew	3 + 10 passengers
Primary armament	turret mounted 20mm cannon
Secondary armament	12.7 mm machine gun or 7.5 mm machine gun
Engine	SOFAM Model 8Gxb 8-cyl. water-cooled petrol
Power/weight	16.7/tonne
Suspension	Torsion-bar
Operational range	350 km
Speed	60 km/h

## AMX-10P

AMX-10P: Variant with Milan or HOT ATGM launcher. 50 in service.



### Introduction

The AMX 10 P is a French infantry fighting vehicle. It has NBC protection and amphibious capabilities, with hydro jets to swim in water. An active armour kit is currently available. The AMX-10P has been operated in the past by France, the United Arab Emirates, Greece, Indonesia, Qatar, Saudi Arabia, Singapore and Mexico.

### Specifications

Weight	14,2 tonnes
Length	5,85 m
Width	2,78 m
Height	2,57 m
Crew	3 + 8 passengers
Armor	mm
Primary armament	20mm automatic cannon M693 F1 (800 rounds)
Secondary armament	7.62mm co-axial machine gun (2000 rounds)
Engine	Hispano-Suiza HS 115 280 hp ( kW)
Power/weight	17.9 hp/tonne
Suspension	torsion bar
Operational range	600 km
Speed	65 km/h



## BMP-2



40 Czech BVP-2 built versions in service

### Introduction

The BMP-2 is a Soviet infantry fighting vehicle which was first introduced in the early 1980s. BMP stands for *Boevaya Mashina Pekhoty* (Боевая Машина Пехоты, literally "Combat Vehicle of the Infantry") †. It is a further development of the 1960s BMP-1. As well as its predecessor, BMP-2 is amphibious.

### Specifications

Weight	14.3 tonnes
Length	6.72 m
Width	3.15 m
Height	2.45 m
Crew	3 (+7 passengers)
Armor	33 mm (max) [1]
Primary armament	30 mm automatic cannon 2A42 9M113 Konkurs ATGM
Secondary armament	7.62 mm machine gun (PKT)
Engine	diesel UTD-20/3 300 hp (225 kW)
Power/weight	21 hp/tonne
Suspension	torsion bar
Operational range	600 km
Speed	65 km/h (road) 45 km/h (off-road)

The BMP-2 is broadly similar to the BMP-1. The most significant changes are:

- Main armament changed to 30 mm 2A42 autocannon and AT-5 Spandrel missile.
- The commander now sits with the gunner in an enlarged turret.
- Seven troops are carried instead of eight.
- Two rear infantry roof hatches instead of four.
- Slightly improved armour.

The driver sits in the front left of the vehicle, with the engine in a separate compartment to his right. The driver has his own entry hatch above him, with three day periscopes. The centre TNPO-170A periscope can be replaced with either a TNPO-350B extended periscope for amphibious operation or a TVNE-1PA night vision scope. An infantry man sits immediately behind the driver, and has a firing port and vision block. TNPO-170A periscopes are used throughout the vehicle and are electrically heated.

In the centre of the vehicle is the welded steel turret which seats the commander and gunner, both of whom have hatches. The commander sits to the right and has three day vision periscopes, a 1PZ-3 day-sight designed for anti-aircraft use with 1x, 2x and 4x magnification, an OU-3GA2 infra-red searchlight, a TNP-165A designator and a TKN-3B binocular sight with x4.75 day magnification and x4 night-sight magnification.

The gunner sits to the commanders left and has a smaller rectangular hatch with a rearward facing day periscope, additionally there are three other day periscopes facing forward and left. The gunners has a BPK-1-42 binocular sight with a moon/starlight vision range of 650 meters or 350 meters using the infra-red searchlight, and a TNPT-1 designator. A FG-126 infra-red searchlight is mounted coaxially to the 30 mm cannon.

The main armament is a stabilized 30 mm 2A42 autocannon with dual ammunition feeds which provide a choice of 3UBR6 AP-T and 3UOR6 HE-T / 3UOF8 HE-I ammunition. The gun has a selectable rate of fire, either slow at 200 to 300 rounds per minute or fast at 550 rounds per minute. The stabilisation provides reasonable accuracy up to a speed of about 35 kilometres per hour.

The AP-T ammunition can penetrate 15 millimetres of armour at sixty degrees at 1,500 meters, while a new APDS-T tungsten round can penetrate 25 millimetres at the same distance. A typical ammunition load is 160 rounds of AP ammunition and 340 rounds of HE ammunition. The ammunition sits in two trays located on the turret floor rear. The gun can be fired from either the commander or the gunners station.

The commander's 1PZ-3 sight is specifically designed for anti-aircraft operation and combined with the high maximum elevation of 74 degrees, it allows the 30 mm cannon to be used effectively against helicopters and slow flying aircraft. The turret traverse and elevation are powered and it can traverse 360 degrees in 10.28 seconds and elevate through 74 degrees in 12.33 seconds.

Reloading the BMP-2's 30 mm cannon can be somewhat problematic, and can take up to two hours, even if the ammunition is prepared. Additionally the cannon is normally only used on the slow rate of fire, otherwise fumes from the weapon would build up in the turret faster than the extractor fan can remove them.

The effective range of the 30 mm cannon is up to 1500 metres against armor, 2500 metres against ground targets, and 3,000 metres against air targets.

A coaxial 7.62 mm PKT machine gun is mounted to the left of the 30 mm cannon, and 2,000 rounds of ammunition are carried for it. On the roof of the turret is an ATGM launcher, on Russian vehicles this fires AT-5 Spandrel missiles, but on export models it normally fires AT-4 Spigot missiles. A ground mount for the missile is also carried, allowing it to be used away from the vehicle. The missiles are a substantial improvement on the AT-3 Sagger missiles used on the BMP-1, in both range and accuracy.

Behind the turret is the troop compartment which holds six troops, the seventh sits just behind the driver. The troops sit back to back, along the centre of the vehicle. Down each side of the compartment are three firing ports with periscopes. Access to the compartment is by the two rear doors, which also hold fuel tanks, both doors have integral periscopes and the left door has a firing port.

In addition to the main weapons it can carry a man portable surface to air missile launcher and two missiles, and an RPG launcher and five rounds. The vehicle is fitted with a PAZ overpressure NBC system and fire suppression system, and carries a GPK-59 gyrocompass.

The BMP-2's armour is broadly similar to the original BMP-1. It's frontal and side armour is no longer effective against the most recent .50-calibre SLAP [Sabotted light anti-armour projectile] and the 25mm cannon of the US M2 Bradley MICV or the British GKN Warrior IFV 30 RARDEN. Like the BMP-1, the rear doors of the BMP-2 are filled with diesel fuel offering some risk from incendiary rounds. These additional fuel tanks are shut off from the fuel system when in combat.



The BMP-2 is amphibious with little preparation, using hydrodynamic fairings to convert track momentum into water jets. Peacetime regulations require that any BMPs entering water must have a working radio set, since its bearings are not airtight and it can be carried away by currents in case of loss of engine power (the vehicle lacks an anchor).

## Protection issues

The original BMP-1 had a significant shortcoming in its protection scheme, which only became obvious during the 1979 invasion of Afghanistan. The one-man-turret fighting vehicle seated its driver and commander in tandem layout, in the front-left side of the hull alongside the diesel engine. When a BMP-1 hit the obsolete kind of "tilt-rod" antitank landmine, its steeply sloped lower front glacis armour plate allowed the mine's arming rod to tilt with little resistance until the maximum deflection was reached with the mine already well under the chassis. When it subsequently detonated, the blast usually killed both the driver and the vehicle commander, causing a significant loss of specialist personnel in the Soviet Red Army.

This shortcoming was addressed in the BMP-2 design, where the tank commander shares the well-armoured two-man turret with the gunner. The driver's station has been enlarged and he is provided with an armoured driver's seat, in addition to extra belly-armour in the lower front.

The problem most often cited by western analysts is the design of the main fuel tanks. Due to the low profile of the vehicle the designers had to place the fuel tanks between the two rows of outward-facing passenger seats, in other words, the infantry passengers actually sit on the bulk of the vehicle fuel storage, with extra fuel carried in the hollow rear doors. As the rear doors are weakly armoured, a hit with any kind of incendiary round will send burning fuel into the crew compartment, resulting in horrendous injuries and painful death to the occupants trapped inside the burning vehicle and a possible explosion. However the rear door tanks aren't always filled as they are meant to increase road travel range of the vehicle, and are almost always empty when the BMP goes into combat. In intense war areas where the BMP sees action relatively often and relatively near to its base of operation, it is a practice not to fill them at all as a rule, and to add fuel to the internal tanks from other sources if the need arises. That however also means that an attack conducted behind enemy lines in a relatively safe area would have much more effect. Nonetheless, the inner fuel tanks (which are used) are more vulnerable than those of many modern IFVs - the weak armor means powerful shots (like RPGs in Chechnya and Afghanistan) can pierce both the outside vehicle armor and the inner tank armor.

Another inherent flaw of the BMP-1 was in its troop seating scheme. In order to allow the infantrymen use their assault rifles while on the move, firing ports were installed in the hull and soldiers were seated on two back-to-back benches, mounted along the centreline of the fighting compartment. In case the BMP rolled over a more advanced type of magnetic anti-tank mine, the resulting explosion could kill the entire complement of

infantrymen. (In many other troop carriers, soldiers are seated on separate benches against the hull sides. Although this layout prohibits the use of infantry weapons from inside the fighting compartment, in most cases of mine explosion the loss of life is significantly reduced, although loss of lower limbs is still frequent).

This shortcoming was not addressed by the later BMP designs, since Soviet military thinkers considered the auxiliary firepower of the troops' assault rifles a significant factor in the BMP's combat value. In practice, most conscript soldiers did not receive much training in firing from the vehicle while on the move. Even in case of professional soldiers, the cramped interior of the BMP-1 and 2, and the poor optical quality of its unstabilized firing port periscopes made it difficult to conduct aimed fire while on the move.

The basic hull armour on the BMP-2 can be easily penetrated by any shaped-charge missile, from the 66mm LAW on up. Due to this limitation, Russian troops in combat zones customarily ride outside the BMP, sitting on top. This limits the chance that a single RPG round could kill or wound everyone inside the vehicle, but has obvious downside on the likelihood of passenger survivability in a war-zone. One important modification carried out as the result of operational experience in Afghanistan was the fitting of a second layer of stand-off armour, usually a high resistant ballistic rubber-like material, to act as spaced armour around the top of the hull sides and around the turret.

These issues, alongside the higher cost of maintenance (when compared with the wheeled Bronetransportyor troop carriers) led many former Eastern Bloc satellite states to abandon the use of BMP fighting vehicles after the Warsaw Pact was dissolved.

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## BMP-3

### BMP-3F 30 in operation



### Introduction

The BMP-3 is a Russian infantry fighting vehicle which was first observed by the West in 1990. BMP stands for *Boevaya Mashina Pekhoty* (Боевая Машина Пехоты, literally "Infantry Combat Vehicle")

**BMP-3F** - Specially designed for operations at sea, with improved seaworthiness and buoyancy, and high fire accuracy at sea force 2. This can endure continuous amphibious operation for seven hours.

### Specifications

Weight	18.7 tonnes
Length	7.14 m
Width	3.2 m
Height	2.4 m
Crew	3 (+7 passengers)
Armor	35mm max
Primary armament	100mm gun/launcher 2A70, 30mm autocannon 2A72
Secondary armament	3×7.62mm PKT machine guns
Engine	UTD-29M diesel 500 hp (375 kW)
Power/weight	27 hp/tonne
Suspension	torsion bar
Operational range	600 km
Speed	72 km/h (road) 45 km/h (off-road)

### Armament and equipment

The "Troyka" is one of the most heavily armed combat vehicles around, fitted with a 2A70 100mm rifled gun, which can fire conventional HE-Frag shells or 9M117 (AT-10 Stabber) ATGMs (40 rounds + 8 ATGM are carried), 2A72 dual feed autocannon with 500 rounds, and a 7.62mm machine gun with 2,000 rounds, all mounted

coaxially in the turret. There are also two 7.62mm bow machine guns, again with 2,000 rounds each. The BMP-3 is capable of engaging targets out to 5,000 - 6,000 meters, with its ATGM weapon system 9K116-3 "Basnya" (with an approximately eighty percent probability of a hit at that range). However, there is a minimum engagement range (about 100 meters in this case) within which the missile should not be fired and cannon fire should be used instead.[citation needed] In addition, there is a flight time of approximately twelve seconds to the maximum missile range.[citation needed] If the missile launcher is destroyed, missile guidance ceases and the missile may miss its target. It is important to note that the minimum engagement distance, flight time and vulnerability of launcher is representative of nearly all ATGM systems in service, due to most of them being command-guided (as opposed to fire-and-forget).

According to the manufacturer's web-site, all weapons can be fired from the halt, on the move, and afloat with the same effectiveness. The ability to hit targets on the move with missiles was successfully demonstrated during competitive evaluations in the UAE in 1991.

The turret is fitted with the 2K23 system which consists of an automatic loader, a ballistic computer 1V539, a cross-wind sensor, a 2E52-2 stabilising system, the 1D16-3 laser range finder, the 1K13-2 gunner's sight/guidance device and the PPB-1 gunner's sight. The commander has a combined optical sight 1PZ-10, a day/night vision device TKN-3MB and an IR search light OU-3GA2.

Also on board are one RPG-7, five RPG-18's, two MANPADS "Strela-3" or "Igl'a" and 10 hand grenades F-1.

Although early models were powered by a 450hp engine UTD-29, most BMP-3's are equipped with the 500hp version UTD-29M. The other standard equipment consists of 5 firing ports with associated vision blocks, a tranceiver R-173, a receiver R-173P, a GO-27 radiation and chemical agent detector, an FVU filtration system, an automatic fire extinguisher and finally 6 smoke grenade launchers 81mm 902V "Tucha".

The United Arab Emirates, the largest operator of the BMP-3 vehicle has expressed interest in mounting the BMP-3 turret on its future wheeled infantry fighting vehicle, the Patria AMV, thus enabling a more agile and faster vehicle, with the same firepower and protection capabilities.



## ALVIS SALADIN

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The Saladin (FV601) was a six-wheeled armoured car built by Alvis and used by the British Army. It replaced the AEC Armoured Car that had been in use during World War II.



FV-601 78 in service

### Specifications

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Weight	11.6 t
Length	4.93 m
Width	2.54 m
Height	2.39 m
Crew	3
Armour	up to 32 mm
Primary armament	76 mm gun
Secondary armament	2 x machine gun
Engine	Rolls-Royce B80 Mk.6A, 8 cyl petrol 170 hp (127 kW)
Power/weight	15.5 hp/tonne
Suspension	6x6 wheel
Operational range	400 km
Speed	72 km/h

## FERRET ARMoured CAR

55 in service



### Introduction

The Ferret armoured car, also commonly called the Ferret Scout car, is a British armoured fighting vehicle designed and built for reconnaissance purposes. The Ferret was produced between 1952 and 1971 by the UK company, Daimler. It was widely adopted by regiments in the British Army as well as Commonwealth countries throughout the period.

### Specifications

Weight	3.7 t
Length	3.7 m (12 ft 2 in)
Width	1.91 m (6 ft 3 in)
Height	1.88 m (6 ft 2 in)
Crew	2 (commander, driver)
Armour	?
Primary armament	7.62 mm MG
Secondary armament	none
Engine	Rolls Royce B60 6-cylinder petrol 130 hp (97 kW)
Power/weight	35.1 hp/tonne
Suspension	4x4 Wheel
Operational range	306 km
Speed	93 km/h



## CADILLAC GAGE COMMANDO



The Cadillac Gage Commando is an amphibious APC built by Cadillac Gage. The 4x4 version is no longer produced, although Cadillac Gage states that production may resume if needed. The vehicle could be outfitted for many roles, including armored personnel carrier, ambulance, Fire apparatus, anti-tank vehicle, mortar carrier, etc. The M1117 Armored Security Vehicle is a modern derivative still in production.

## Specifications

Weight	9,888 kg.
Length	5.69 m
Width	2.26 m
Height	2.54 m (turret roof), 1.98 m (hull top)
Crew	3+2
Armor	classified
Primary armament	1 x 20 mm, 1 x 7.62 mm Machinegun
Secondary armament	2x6 40 mm Smoke Dischargers
Engine	V-504 V8 diesel turbo charged engine 202 bhp
Power/weight	18.75 bhp/ton
Operational range	643 km
Speed	88 km/h (road), 5 km/h (water)

The V-100 was available in turret and open-top models. Factory prototype turret options included the T-60, T-70, and T-90. The T-60 featured a combination of two .50 caliber machine guns, two .30 caliber machine guns, or one of each, and had manual traverse. The specific .30 caliber machine gun options were extremely varied, with from factory configurations including the M1919A4E1, M37, M73, M219, and MG42. Later the M60 and FN MAG were also added to the list of options.[2] The Cadillac Gage company also intended to use the solenoid trigger equipped fixed machine gun version of the Stoner 63 weapon system, but this was dropped after tests showed the smaller caliber cartridge to be unsuited to this role.

## V-150

The V-150 was a hybrid variant which actually came after the V-200 and was based on the V-200 but had some V-100 features. It could be equipped with diesel or gasoline engines and most were produced for the Saudi Arabian National Guard. Their version was called the V-150S. In the 1980s Portugal developed a series of clones called the Chaimite, which included a version with a 90mm turret (V-400 Chaimite), but the Portuguese Army chose to buy 15 examples of the US-made V-150 Command



## ALVIS STORMER

40 AVLB in service



### Introduction

Alvis Stormer is a modern military armoured vehicle manufactured by the British company, Alvis Vickers, now BAE Systems Land Systems, a subsidiary of BAE Systems Land and Armaments.

The Stormer is a development of the CVR(T) family of vehicles (Scorpion, Scimitar, Spartan etc), essentially a larger, modernised version with an extra road-wheel on each side.

### Specifications

Weight	12.7 tonnes
Length	5.27 m
Width	2.76 m
Height	2.49 m
Crew	2 + 12
Engine	Perkins 6 litre, 6 cylinder diesel 250 hp (186 kW)
Power/weight	21 hp/tonne
Suspension	torsion bar
Operational range	800 miles, 640 km
Speed	50 mph, 80 km/h

## CADILLAC GAGE RANGER

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200 in service

### Description

The Cadillac Gage Ranger is a 4x4 armored personnel carrier produced by Cadillac Gage. It is essentially an armored truck. The largest customer was the United States Air Force which at one time had over several hundred. It is also used by Luxembourg and Indonesia. The Ranger was called the Peacekeeper in USAF service. They were produced in the early 1980s on a Dodge 200 or Dodge Ram pickup truck chassis. Many were subsequently sold off to local police as SWAT vehicles. A newer version called the PeaceKeeper II is produced on a Ford F-350 chassis.

## BTR-40ID LOCALLY MODIFIED INDONESIAN VARIANT

130 BTR-40ID in service



The BTR-40 or Bronetransporter, literally "armoured transporter".) is a Soviet non-amphibious wheeled armored personnel carrier and reconnaissance vehicle[3] It is often referred to as Sorokovke in Soviet service.

- **BTR-40** armed with a medium machine gun in a cube-shaped turret on top of a superstructure inside the troop compartment. It also has four smoke grenade dischargers on both sides of the hull.

- **BTR-40** armed with 40 mm gun in an angular turret on top of a superstructure inside the troop compartment. It also has four

smoke grenade dischargers on both sides of the hull. It has a searchlight on the left hand side of the hull. It is intended to be used for fire support.

### Specifications

Weight	5.3 tonnes
Length	5 m[2]
Width	1.9 m[2]
Height	2.2 m (1.83 m without armament)
Crew	2 + 8 passengers (BTR-40 and BTR-40V)[2] 2 + 6 passengers (BTR-40B)
Armor	6-8 mm
Primary armament	7.62 SGMB medium machine gun (1250 rounds (total)) (optional)
Secondary armament	2x7.62 SGMB medium machine gun (1250 rounds (total)) (optional)
Engine	6-cylinder GAZ-40 80 hp (60 kW) at 3400 rpm
Power/weight	15.1 hp/tonne (11.3 kW/tonne)
Suspension	4x4 wheel, leaf spring
Ground clearance	400 mm
Fuel capacity	122 l
Operational range	430 km (road) 385 km (cross country)
Speed	80 km/h

## ALVIS SARACEN

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### Introduction

The **FV603 Saracen** was a six-wheeled [armoured personnel carrier](#) built by [Alvis](#) and used by the [British army](#) that became a recognisable vehicle as a result of its part in the policing of Northern Ireland.

### Specifications

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Weight	11 ton
Length	4.8 m
Width	2.54 m
Height	2.46 m
Crew	2 + 9
Armour	16mm
Primary armament	2 x machine gun
Secondary armament	none
Engine	Rolls-Royce B80 Mk.6A, 8 cyl petrol 119 kW
Suspension	6 x 6 wheel
Operational range	400
Speed	72 (off-road 32)

## BTR-50

BTR-50PK 14 in service



### Description

The BTR-50 (BTR stands for Bronetransporter (БТР, Бронетранспортер, literally "armoured transporter") † is a Soviet amphibious armoured personnel carrier based on the PT-76 amphibious light tank chassis. The BTR-50 was tracked, unlike most members of the BTR series, which were wheeled.

Like the PT-76, the BTR-50 has a flat, boat-shaped hull. Unlike the PT-76 it has a new superstructure added to the front of the vehicle. The hull of the BTR-50 is made of all-welded steel with the crew compartment at the front, troop compartment in the center and the engine compartment at the rear. It has an ability to transport up to twenty fully equipped infantrymen who sit on benches which run across the full width of the troop compartment. They mount and dismount the APC by climbing over the sides of the hull. Driver sits in the center of the front of the hull and has three vision blocks and periscopes located at the top of the sloping glacis plate. During night operations the center periscope is switched for the TVN-28 night vision device which gave the driver a clear vision up to 60 meters. The driver also has a small hatch that opens upwards and while it can't be used for the driver to leave the vehicle, it can be opened by the driver in relatively safe areas for extra vision. When in combat the hatch is closed and the driver can use a vision block for a limited vision. Under the driver's seat there is an emergency hatch which can be used by all crew members. The commander who sits on the left hand side of the front of the vehicle has three vision blocks and periscopes in a projecting bay and a copula with vision block on its basis facing forward. It is located on top of projecting bay, opens forwards and can be locked vertically. The vehicle can operate in temperatures between -40°C and +40°C.[2]

The torsion bar suspension consists of six evenly spaced large rubber-tired road wheels with the drive sprocket at the rear and the idler at the front. Road wheels are hollow to ensure additional amphibious abilities. Usage of hollow road wheels increased APC's buoyancy by 30%. There are no track-return rollers. The first and last road wheels have a hydraulic shock absorber and the steel tracks with a single pin have 96 chain links each when new. There is a small, thin, horizontal skirt over each track. The engine used in the BTR-50 is the V-6 6-

cylinder 4-stroke in line water-cooled diesel engine developing 240 hp (179 kW) at 1800 rpm gives it a road speed of 44 km/h with a cruising range of 400 km. The vehicle can cross 30° side slopes, 60° gradients, 1.1 m high vertical obstacles and 2.8 m wide trenches. The engine has a cooling system and initial heater (intended for ignition when air temperature is -20°C or below). The BTR-50 amphibious APC had the 5 gear manual shaft-type transmission system similar to the one in T-34/85 medium tank. The gearbox has four forward gears and one reverse gear. The vehicle has a side clutch that enables it to make turns, mechanical transmission and a handbrake. The vehicle has three fuel tanks, two in the right side of the front of the engine compartment and the other one at the rear. All three fuel tanks carry 400 liters of fuel when combined. The vehicle has four mounts for additional external fuel tanks in the rear of the hull. The two mounts on the corners of the hull are for a flat type external fuel tanks and the two mounts in the center of the rear of the hull are for a drum type external fuel tanks.[1]

BTR-50 is amphibious thanks to its flat, boat-shaped hull which is hermetical and ensures minimal resistance when APC is afloat and can swim after switching on the two electric bilge pumps, erecting the trim vane which improves the stability and displacement of the vehicle in water and prevents the water from flooding the bow of the APC and switching the driver's periscope for a swimming periscope that enables the driver to see over the trim vane. There is also a manual bilge pump for emergency use. The bilge pumps keep the APC afloat even if it is hit, damaged or leaks. In water it is propelled by two hydrojets, one in each side of the hull, with the entrance under the hull and exits at the rear of the hull. There are also additional assistant water-jet entrances in both sides of the hull over the last road wheels. The rear exits have lids that can be fully or partially closed, redirecting the water stream to the forward-directed exits at the sides of the hull, thus enabling the vehicle to turn or float reverse, for example to go left the left water-jet is covered, to go the right the right water-jet is covered and to make a 180° turn the left water-jet sucks in water and the right water-jet pushes it out. This system was designed by N. Konowalow. It is the same system as the one used in PT-76 amphibious light tank. The vehicle has a low freeboard of 15 m to 20 m and lacks a snorkel therefore it has swimming capability limited to only the calmest waters.

Its armour is composed of homogeneous, cold rolled, welded steel is very thin by modern standards, 13 mm in the front, 10 mm on sides and top, 7 mm in the rear. While its maximum armour protects it fully against small arms fire and small artillery shell fragments, it doesn't protect it against big artillery shell fragments and a .50-calibre machine gun fire which can penetrate BTR-50 maximum armor of 13 millimeters. Also while its front armour protects it against 7.62 mm small arms fire, the 7.62 machine gun fire can sometimes penetrate it. The vehicle is equipped with an IR driving light and an IR searchlight. It lagged behind other Soviet armoured fighting vehicles because it had no fire or NBC (nuclear, biological, chemical) protection systems, which significantly reduced its effectiveness. The only APC variant to have NBC protection system was the BTR-50PK.

**BTR-50PK** (Ob'yekt 750K) (K stands for krisha - "roof") (1958) - BTR-50P fitted with an armored roof and the troops entering and dismounting the vehicle via two rectangular roof hatches that open to either side. There is also another rectangular roof hatch in the front of the roof. BTR-50PK is armed with a pintle-mounted 7.62 mm SGMB medium machine gun. This variant has an NBC protection system. The vehicle has two ventilators, one at the front of the troop compartment on the right side and one at the rear of the troop compartment on the right side. It is likely that these vehicles were mostly not produced but upgraded from BTR-50P APCs. There was another production lot of BTR-50PK which had a single firing port on each side of the superstructure. They are rarely seen in use as armoured personnel carriers as the majority of this production lot consisted of specialized variants such as command vehicles before being replaced in production by another production lot with two firing ports on each side of the superstructure.



## VÉHICULE BLINDÉ LÉGER



### Introduction

The Panhard Véhicule Blindé Léger ("Light armoured vehicle") is a wheeled 4x4 all-terrain vehicle offered in various configurations. It was designed to combine the agility of the Peugeot VLTT liaison vehicle with adequate protection against small arms fire, artillery fragments, mines and NBC weapons. The VBL is fully amphibious and can swim at 5.4 km/h ; it is also air transportable by C-130 and C-160, and the future A400M. The VBL was developed during the 80s and entered operational service in France in 1990. It has a fuel consumption of 16 litres/100 km.

### Specifications

Weight	3.5 to 4 tonnes
Length	3.80 m (4.00 m long version)
Width	2.02 m
Height	1.70 m
Crew	2-3
Armour	STANAG level 1 (protection against 7.62×51 NATO rounds and shrapnel)
Primary armament	depends on the version
Secondary armament	none
Engine	Peugeot XD3T turbo-diesel hp ( kW)
Power/weight	
Suspension	0.35 m ground clearance
Operational range	600 km (can be extended to 1000 km with external gas tanks)
Speed	greater than 100 km/h

## MIL MI-17 HIP-H

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### Introduction

The Mil Mi-17 (also known as the Mi-8M series in Russian service), is a Russian-designed helicopter currently in production at two factories in Kazan and Ulan-Ude.

### General characteristics

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- Crew: Three – two pilots and one engineer
- Capacity: 32 passengers or 4,000 kg (8,800 lb) on internal/external hardpoints.
- Length: 18.42 m (60 ft 5 in)
- Rotor diameter: 21.352 m (69 ft 10 in)
- Height: 4.76 m (15 ft 7 in)
- Disc area: 356 m<sup>2</sup> (3,830 ft<sup>2</sup>)
- Empty weight: 7,100 kg (15,700 lb)
- Loaded weight: 11,100 kg (24,470 lb)
- Max takeoff weight: 13,000 kg (28,700 lb)
- Powerplant: 2× Klimov TV3-117VM turboshafts, 1,450 kW (2225 shp) each

### Performance

- Maximum speed: 250 km/h (156 mph)
- Range: 950 km (594 miles)
- Service ceiling 6,000 m (19,690 ft)
- Rate of climb: 8 m/s (ft/min)
- Disc loading: 31 kg/m<sup>2</sup> (6 lb/ft<sup>2</sup>)
- Power/mass: 0.26 kW/kg (0.16 hp/lb)
- Fuel consumption: 600 kg/h (1,320 lb/h)

### Armament

\* up to 1,500 kg (3,300 lb) of disposable stores on six hardpoints, including bombs, rockets, and gunpods.

## MIL MI-35 HIND-F

2 Mi-35P operated by the Army Corps/TNI-AD (bought in 2004), 5 Mi-35P ordered in 2006, and additional 3 Mi-35 in 2007. So far 8 are in service.



### Description

The Mil Mi-24 (Cyrillic Миль Ми-24, NATO reporting name "Hind") is a large helicopter gunship and low-capacity troop transport produced by Mil Moscow Helicopter Plant and operated from 1972 by the Soviet Air Force, its successors, and over thirty other nations.

In NATO circles the export versions, Mi-25 and Mi-35, are simply denoted with a letter suffix as "Hind D" and "Hind E" respectively. Soviet pilots called the aircraft летающий танк (letayushchiy tank, "flying tank"). Non-official, more common nicknames were Крокодил (Krokodil, "Crocodile"), due to the helicopter's camouflage new scheme [1] and Стакан (Stakan, "Glass"), because of the flat glass plates which surrounded the three place cockpit of the Hind A version.

### General characteristics

- Crew: 3 (pilot, weapons system officer and technician)
- Capacity: 8 troops or 4 stretchers
- Length: 17.5 m (57 ft 4 in)
- Rotor diameter: 17.3 m (56 ft 7 in)
- Wingspan: 6.5 m (21 ft 3 in)
- Height: 6.5 m (21 ft 3 in)
- Disc area: 235 m<sup>2</sup> (2,530 ft<sup>2</sup>)
- Empty weight: 8,500 kg (18,740 lb)
- Max takeoff weight: 12,000 kg (26,500 lb)
- Powerplant: 2× Isotov TV3-117 turbines, 1,600 kW (2,200 hp) each



## Performance

- Maximum speed: 335 km/h (208 mph)
- Range: 450 km (280 miles)
- Service ceiling 4,500 m (14,750 ft)

## Armament

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### Internal guns

- flexible 12.7 mm Yakushev-Borzov Yak-B Gatling gun on most variants
- fixed GSh-30K on the Mi-24P/VP
- flexible GSh-23L on the Mi-24VP
- PKT door mounted machine guns

### External stores

- Total payload is 1500 kg of external stores.
- Inner hardpoints can carry at least 500 kg
- Outer hardpoints can carry up to 250 kg
- Wing-tip pylons can only carry the 9M17 Phalanga in the Mi-24A-D and the 9K114 Shturm complex in the Mi-24V-F.

### Bomb-load

- All bombs within weight range ZAB, FAB, RBK, ODAB etc., Up to 500kg.
- MBD-4 multiple ejector racks with 4xFAB-100
- KGMU2V submunition/mine dispensers

### First generation armament (standard production Mi-24D)

- GUV-8700 gunpod (with a 12.7 mm Yak-B + 2x7.62 mm GShG-7.62 combination or one AGS-17)
- UB-16 and UB-32 S-5 rocket launchers
- S-24 240mm rocket
- R-60 (twin rail launchers)
- 9M17 Phalanga (a pair on each wingtip pylon)

### Second generation armament (Mi-24V and upgrades)

- UPK-23-250 gunpod carrying the GSh-23L
- S-25 350mm rockets
- B-8V20 a lightweight long tubed helicopter version of the S-8 rocket launcher
- UB-13 S-13 rocket launcher
- 9M39 Igla missile 2-4 tubes per launcher
- 9K114 Shturm in pairs on the outer and wingtip pylons

### ATE upgrade (Superhind MkIII B)

- 30 mm turreted cannon
- 8x Ingwe anti-tank guided missile
- Bombs
- S-8, S-13, S-240 rocket pods

### Other

- In foreign service other weapons have sometimes been converted for use

- Modern prototypes can carry the 9K121 Vikhr (Ukrainian prototypes), 9M120 Ataka-V (Mil prototypes), R-73 and a variety of semi-active laser guided rockets and missiles.
- Variants up to at least Mi-24V (HIND-E) have swivel mounts fitted at the three forward windows on each side, including the two in each door; a rifle can be clamped into these mounts to allow embarked troops to fire from inside the cabin. The forward window on each door has a socket for a pintle-mounted machine gun as well as the rifle mount, although there is not enough space to effectively use both at once. All rifle mounts can be folded or slid out of the way to clear the windows. The windows are hinged at the top and fold up inside the cabin; clips on the cabin ceiling hold them open. The rearmost window on each side cannot be opened.(much like on Soviet APCs from that period). The infantry weapon mounts may have been removed from later production aircraft.
- During the war in Afghanistan, additional hand-held weapons were carried internally for crew self defence if shot down. Extra rounds of rocket ammunition were often carried so that the crew could land and self-reload in the field.