

chapter **3**

ARMAMENT



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Pistol (KAVEH 7, 9 & KAVEH REVOLVER)



DESCRIPTION

The Kaveh's pistols caliber 9 mm was developed through a rigorous "voice of customer" process in accordance with military standards. The Kaveh's pistols have been put through extensive testing and evaluation at the professional end-user level. The result is pistol that delivers superior performance in durability and reliability, ergonomics, trigger and modularity. The new semi-automatic pistol makes "Kaveh" one of the few manufactures to offer polymer and metallic framed handguns in hammer and striker fire operating system. We have updated our visual identify and tag line to better reflect our commitment to product quality innovation, craftsmanship and value.



KAVEH 7



KAVEH 9



REVOLVER

A R M A M E N T

TECHNICAL SPECIFICATIONS

Model	KAVEH 7	KAVEH 9	KAVEH REVOLVER
Cartridge (mm)	9x19	9x19	0.38 (in)
Magazine Capacity (Rounds)	17	15	6
Overall Length (mm)	202	186	7 (in)
Barrel Length (mm)	114	102	2 (in)
Overall Width (mm)	30	30	1.37 (in)
Overall Height (mm)	138	127	6.95 (in)
Weight unloaded magazine (empty) (g)	703	665	470
Action: Single Action (SA) Double Action (DA)	SA	SA	SA & DA
Firing system	Striker	Striker	Hammer
Frame	PWMI	PWMI	AA7075-T6
Acc. To MIL-STD1913 Rails	✓	✓	-

*PWMI: Polymer with metallic inserts



Pistol (AUGER & SAED)



DESCRIPTION

The Kaveh's pistols caliber 9 mm were developed through a rigorous "voice of customer" process according with military standard. The Kaveh's pistols have been put through extensive testing and evaluation at the professional end user level. The result is pistol that delivers superior performance in durability and reliability, ergonomics, trigger and modularity. The new semi-automatic pistol makes "Kaveh" one of the few manufactures to offer polymer and metallic framed handguns in hammer and striker fired operating system. We have updated our visual identify and tag line to better reflect our commitment to product quality innovation, craftsmanship and value.

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SAED



AUGER

TECHNICAL SPECIFICATIONS

Model	SAED	AUGER
Cartridge (mm)	9x19	9x19
Magazine Capacity (Rounds)	15	15
Overall Length (mm)	196	181
Barrel Length (mm)	112	101
Overall Width (mm)	36	33
Overall Height (mm)	139	137
Weight unloaded magazine (empty) (g)	865	715
Action:		
Single Action (SA)		
Double Action (DA)	SA & DA	SA & DA
Firing system	Hammer	Striker
Frame	AA7075-T6	PWMI*
Acc. To MIL-STD1913 Rails	-	✓

*PWMI: Polymer with Metallic Inserts



Nonlethal Laser Weapons



SPECIFICATIONS

1. Using green laser for disrupting criminal's sight.
2. Ability to cause criminal's temporary blindness.
3. Easy charging and User-friendly.
4. Reducing the possibility of causing serious damage to rioters as well as the possibility of damage to other people.



TECHNICAL SPECIFICATIONS

Index	Value
Laser output	1000 mw
Operation temperature	-5+45 °C
Operation situation	Low lux environment
Effective range	30 m (Adjustable)
Weight	~ 1 kg
Power supply	Lithium polymer battery

A R M A M E N T

T9 Sub-Machine Gun

The sub-machine gun T9 cal. 9mm is an automatic weapon that can be used for either single or bursts shots from all shooting positions. The weapon is loaded directly with pressure of powder gas. Bullets are fed from 30-round box type magazine. In order to carry the weapon easily and for better usage, it is usually equipped with retractable butt stock; if required, it can be replaced with fixed butt stock.



TECHNICAL SPECIFICATIONS

Caliber	9 x 19 mm
Muzzle velocity	400 m/s
Rate of fire	800 rds. /min
Effective range	200 m
Barrel length	225 mm
Weight	3.16 kg
Overall length	690 mm



MAHER Shotgun



DESCRIPTION

MaHer is a pump action shotgun which is used by police forces. It can be used with /without stock and short/long barrel.

GENERAL SPECIFICATIONS

1. Pump action shotgun for law-enforcement forces
2. Pump Action Tactical Shotgun
3. Capable of using telescopic stock

A R M A M E N T



TECHNICAL SPECIFICATIONS

Caliber	12 guage
Weight (with scope and bi-pod)	2.5 kg
Arming mechanism	Pump action
Magazine capacity	5 rds. in magazine + 1 round in breech
Barrel length	460 mm&360 mm
Fire system	Selective fire (safe & fire)
Aiming system	Mechanical aiming system optical aiming system(scope, thermal camera, filter, water proof, red dot)
Mechanism	pump action
Barrel life	6000 rds.



G3 Automatic Rifle



The G3 Rifle is an automatic rifle which can fire single or burst shots from all firing positions. The G3 Rifle is recoil operated weapon incorporating a delayed roller locked bolt system. Ammunition is fed from a 20-rounds magazine or can be inserted manually. Telescopic sights or infrared scopes can be employed without modifying the rifle. Rifle grenades can be launch fired with this weapon. The G3 Rifle is available in two models 1. Fixed Butt stock G3 assault Rifle (G3-A3) 2. Retractable Butt stock G3 Rifle (G3-A4)



A R M A M E N T

TECHNICAL SPECIFICATIONS - G3-A3 RIFLE

Caliber	7.62 x 51 mm
Rate of fire	500-600 rds. /min
Effective range	600 m
Length of weapon	1020 mm
Length of barrel	450 mm
Muzzle velocity	800 m/sec
Weight of weapon without magazine	4300 g
Weight of empty magazine	284 g
Capacity of magazine	20 rds.

G3 - A4 RIFLE

Length of weapon (butt stock retracted+)	1020 mm - 840 mm
Weight of weapon without magazine	4600 g



Individual Assault Rifle (MASAF)



Masaf is a short piston type (gas-operated system) carbine, which is one of the lightest and most accurate carbines in the world. It's the highest reliability and continuity of operational fire between the existing carbines in our country.

GENERAL SPECIFICATIONS

Fully modular structure

Possibility of installing equipment such as optic sights, grenade launchers, bipod, etc;

On this platform, three standard assault rifle, carbine and self-defense have been implemented. It is also extensible platform to include a light machine gun and sniper family as well. It has bolt catch;

Four Picatinny standard rail MIL 1913 are used on four sides of this gun

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TECHNICAL SPECIFICATIONS

Caliber	5.56 × 45 mm
Effective range	500 m
Muzzle velocity	900 m/s
Weight	3070 g (Without magazine scope)
Rate of fire	700-900 rds. /min
Length	790-890 mm
Stock	Telescopic
Fire system	Selective fire (safe semi-automatic & automatic fire)
Muzzle devices	Flash suppressor and muzzle brake
Aiming system	Mechanical aiming system Optical aiming system (scope thermal camera filter water proof red dot)
Other devices	Picatinny rail
Feeding and Magazine capacity	20 30 and 40rds magazine capacity can be used
Mechanism	Piston type gas system
Barrel life	6000 rds.



7.62 mm (KL103 Assault Rifle)



The assault rifle type AK47 is a gas-operated rifle capable both of semi-automatic and automatic fire. It is intended to destroy hostile individual and groups, and can also be used in close combat by bayonet and butt stock. It has become the weapon of many armed forces especially suited for the Guerrilla warfare in all weather conditions. The rifle is supplied in various types such as fixed butt stock (KLS), side folding butt stock (KLT) and under folding butt stock (KLF). It should also be mentioned that this rifle has a multipurpose bayonet.



A R M A M E N T

TECHNICAL DATA	
Caliber	7.62 x 39 mm
Rate of fire	600 round/min
Effective range	300 m
Weight of empty magazine	350 g
Length of barrel	415 mm
Capacity of magazine	30 rounds
Weight (empty magazine)	
Model KLS	3570 g
Model KLF	3800 g
Model KLT	3600 g
Length of Rifle with butt-stock (retracted and extended)	
Model KLS	890 mm
Model KLF	895-655 mm
Model KLT	895-690 mm



KL-7.62 mm Assault Rifle



The assault rifle type KL-7.62 mm is a gas-operated rifle capable both of semi-automatic and automatic fire. It is intended to destroy hostile individual and groups, and can also be used in close combat by bayonet and butt stock. It has become the weapon of many armed forces especially suited for the guerrilla warfare in all weather conditions. The rifle is supplied in various types such as fixed butt stock (KLS), side folding butt stock (KLT) and under folding butt stock (KLF). It should also be mentioned that this rifle has a multipurpose bayonet.

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TECHNICAL DATA

Caliber	7.62 x 39 mm
Rate of fire	600 round/min
Effective range	300 m
Weight of empty magazine	350 g
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Capacity of magazine	30 rounds
Weight (empty magazine)	
Model KLS	3570 g
Model KLF	3800 g
Model KLT	3600 g
Length of Rifle with butt stock (retracted and extended)	
Model KLS	890 mm
Model KLF	895-655 mm
Model KLT	895-690 mm



7.62 mm Sniper LS2(MERSAD)



LS2 SNIPER RIFLE is a weapon with bolt action system, and suitable range and power to paralyze enemy prominent personnel. The advantages of the rifle include durability, ergonomics, high accuracy and safe operation. LS2 has 5-round built-in magazine and by using standard rail MIL 1913, it has the capability to mount a variety of day and night sights.



TECHNICAL SPECIFICATIONS

Caliber	7.62x51 mm
Length	1130 mm
Weight, without Optical Sight	7.2 kg
Barrel Length	622 mm
Effective Range, with Telescopic Sight	800 m

7.62 mm Sniper (SVD)

The SVD was designed as a squad support weapon. The long-range engagement ability was lost to ordinary troops when submachine guns were adapted. The rifle is a semi –automatic, gas-operated with 10 round magazine. It can be used with various optical and night – vision sights.



TECHNICAL SPECIFICATIONS

Caliber	7.62 x 54 mm
Length	1220 mm
Weight, without Optical Sight	3.8 kg
Barrel Length	620 mm
Effective Range, with Telescopic Sight	1300 m
Muzzle velocity	830 m/s
Rate of fire	30-40 rds. /min
Magazine capacity	10 rds.
Operation mechanism	Short-stroke, gas piston system



12.7×108 mm Sniper (NASR)



This long range sniper rifle is a heavy barrel for accurate and precise path of fired projectile of energetic potential. The primary mission of this rifle is targeting and eliminating the cabin of military vehicles, antenna of search radars, turbines, launchers, cabin of helicopters, light naval craft, concrete bunkers, observation posts, command vehicles and soldiers wearing anti-bullet vest.

The main features of this rifle are as follows:

1. Effective targeting range of 1800 meters
2. High accuracy
3. Semi-automatic operation with a 5-shot magazine
4. Provision of optical sight attachment with standard mount
5. Foldable stock for easy carrying
6. Anti-materiel

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TECHNICAL SPECIFICATIONS

Caliber	12.7 x 108 mm
Magazine capacity	5 rounds
Overall length	1746 mm
Barrel length	1000 mm
Muzzle device	muzzle brake and flash suppressor
Muzzle velocity	820 m/s
Number of rifles	8, right hand
Weight without ammunition	12.9 kg
Max. height on bipod	431 mm
Effective range	1800 m
Operation mechanism	Semi-automatic , indirect, gas-operated
Service life	2500 Shots



12.7×99 mm Sniper (HOVEYZEH)



Hoveyzeh is a 12.7mm semi-automatic, multipurpose, anti-personnel, anti-materiel, long range and special sniper rifle. Therefore, Hoveyzeh can be used as a surprise and tricky sniper for the destruction of armored groups and facilities. This weapon has a unique recoil reduction mechanism. This mechanism and muzzle brake reduces the forces acting on internal mechanism and the shooter.



TECHNICAL SPECIFICATIONS

Caliber	12.7 × 99 mm
Weight (without magazine)	12.75 kg
Length	1450 mm
Barrel length	740 mm
Magazine capacity	5 rd
Muzzle device	Muzzle brake & flash suppressor
Operation mechanism	Semi-automatic, short recoil
Muzzle velocity	875 m/s
Effective range	1800 m

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12.7×99 mm Sniper (AM-50)

The AM-50 (12.7mm anti-materiel) is a single-shot, manual bolt-action, multi-purpose, long range sniper rifle for infantry to annihilate individual important targets, light vehicles and pillboxes. The rifle is fitted with a highly efficient muzzle brake and recoil is sufficiently reduced to permit accurate and fine firing.



TECHNICAL SPECIFICATIONS

Caliber	12.7 x 99 mm
Weight (without magazine)	12.2 kg
Length	1480 mm
Barrel length	913 mm
Muzzle velocity	875 m/s
Effective range	1800 m
Muzzle device	muzzle brake and flash suppressor



KAMIN 20 mm gun



The 20mm sniper rifle is a multipurpose single shot rifle with a long range and high accuracy. Light armoured vehicles, command vehicles, concrete platforms, antenna of search radars, cabins of helicopters and naval craft, infantrymen, observation posts and soldiers wearing anti-bullet vest can be hit by this rifle.

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TECHNICAL SPECIFICATIONS

Caliber	20 x 102 mm
Effective range	2000 m
Muzzle velocity	1000 m/sec.
Operating mechanism	Single shot, manual, bolt action
Sighting system	Optical sight
Telescopic sight specs.	3-12 x 50
Firing position	Prone position
Barrel length	1245 mm
Weight of rifle	22 kg
Overall dimensions with telescope sight (min. possible height) L x W x H	1800 x 210 x 370 mm
Service life of rifle	5000 rounds



BAHER 23 mm gun



Taking advantage of 23mm powerful bullets, Baher sniper gun, plays a significant role in increasing the tactical power of the armed forces. This weapon is portable by two crews and can be operated in the shortest possible time by mounting on a tripod. The aiming on this weapon is done by a monocular sight. The mission of this gun is destruction of ground and sea targets, in which ordinary bullets of small-caliber sniper weapons have no side effect on them. This weapon can be used against targets such as armored vehicles, trenches, boats, etc. which are in the range of 2000 m.



A R M A M E N T

TECHNICAL SPECIFICATIONS

Caliber	23 mm
Rifling	8 grooves rh
Weight gun complete with tripod	57 kg
Weight	aiming device, 1 kg
Weight of round	450 gr
Gas pressure	3200 bar
Max. vertical range	1500 m
Max. effective range	2000 m
Muzzle velocity	970 m/s
Operation	Bolt action
Operational temperature range	-30 to +60 °C



7.62×54 mm (PKM)



The PKM is a gas-operated light machine gun and is intended for use in regular and guerrilla warfare. The reasons of extensive usage of this rifle in most armed forces are simple operation, light weight, high accuracy and efficiency. This machine gun is infantry support gun normally fired from its bipod mount; however it can be installed on tripod and is used in the classic role of a heavy machine gun to provide long-range area fire and cover final protective lines at range of 1000 meters.

A R M A M E N T



TECHNICAL SPECIFICATIONS

Caliber	7.62 x 54 mm
Muzzle Velocity	830 m/s
Rate of Fire	650 rds. /min
Effective Range	1200 m
Weight	8 kg
Ammunition	7.62 x 54mm (special coating)
Length	1192 mm
Length of Barrel	604mm
Feed Device	Cartridge Belt
Capacity of Magazine	100 & 200 rds.
Barrel length	772 mm
Weight of weapon	Total 12.7 kg



7.62×54 mm (PKT)



The PKT is an electric machine gun which uses the electrical and mechanical mechanisms simultaneously. The combination of the electrical and mechanical systems cause it to be utilized in the aircraft industry and armored industry.

General Specifications

1. PKT can be installed to the BMP-2 turret or other military vehicles
2. Coaxial with cannon's barrel
3. Ability to aim and fire to avoid wasting cannon's ammunitions
4. Electric-made firing capability



A R M A M E N T

TECHNICAL SPECIFICATIONS

Caliber	7.62 × 54 mm
Effective Range	1200 m
Muzzle Velocity	830 m/s
Weight	11.6 kg (Without magazine)
Rate of Fire	650-800 rds. /min
Length	1079 mm
Barrel Length	772 mm
Magazine Capacity	100 and 200 rds.
Mechanism	Rotating bolt
Number of Grooves	4



12.7 mm Automatic Gun NSVP



The NSVP is a lightweight man-portable machine gun intended to be used against helicopters, paratroopers, infantry soldiers and light armoured vehicles. It can be mounted on the ground (on a tripod), on vehicle, on naval craft and on tank.

The advantages of the NSVP are: suitable range, less stoppage in comparison with the machine guns of the same type, quick exchange of barrel during operation, quick disassembly and reassembly, lightweight and capability of being equipped with telescopic sight and night vision equipment.

ARMAMENT



TECHNICAL SPECIFICATIONS

Caliber	12.7 x 108 mm
Effective Range	2000 m
Max. Range	3300 m
Muzzle Velocity	830 m/s
Practical Rate of Fire	600 – 700 round/min.
No. of Rifles	8 - Left To Right
Service Life of The Gun	7000 rounds for two barrels
Barrel Length	1100 mm
Overall Dimensions (L×W×H)	1557 × 135 × 175 mm
Weight (Without Tripod)	25 kg
Weight of Tripod	33 kg
Weight of Telescope Sight	1 kg
Magazine Box Capacity	50 Rounds
Weight of Magazine Box (With Ammunition)	12.5 kg
Weight of Magazine Box (Empty)	2.9 kg



12.7 mm Machine Gun



The D-54 is an automatic machine gun with a high rate of effective fire primarily designed to be used against air targets flying at an altitude of about 1600 meters. However, as its secondary role, the D-54 can be used against the ground targets specially the moving infantry troops at a range of 3300 meters. This machine gun can be mounted and used on the ground, on vehicle, on naval craft and on helicopter. It is equipped with a mechanical sighting device and a mechanical elevating and traversing assembly.



A R M A M E N T

TECHNICAL SPECIFICATIONS

Caliber	12.7 x 108 mm
Number of Rifling Grooves	8
Rate of Fire	550-600 rds./min
Muzzle Velocity	830 m/s
Max. Effective Range	2000 m
Max. Range	3300 m
Length of Machine Gun	1590 mm
Total Weight Without Ammunition	80 kg
Service Life for two barrels	7000 rounds



12.7 mm Machine Gun (W85)



Meimak is a lightweight, man-portable automatic machine gun mainly designed for anti-aircraft role but can be used as a heavy support machine gun against ground targets. Meimak can be mounted and used on the ground (on an adjustable tripod), on vehicle, on naval craft and on helicopter. The main sighting device of this machine gun is a mechanical system; however, upon request, an optical sighting system can also be mounted on it. Meimak is gas-operated and belt-fed. It is an outstandingly light machine gun, about 57% lighter than the D-54 machine gun. The types of ammunition used with this machine gun cover the same types as used with the D-54 machine gun.

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TECHNICAL SPECIFICATIONS

Caliber	12.7 x 108 mm
Number of Rifling Grooves	8
Rate of Fire	550-600 rds./min.
Muzzle Velocity	830 m/s
Max. Effective Range	2000 m
Max. Range	3300 m
Length of Machine Gun	1800 mm
Total Weight Without Ammunition	34 kg
Service Life for two barrels	7000 rounds



12.7 mm (ARIO-H762)



ARIO-H762 is a tactical platform which has a flexible gun structure design, so with slight modification most machine guns can be installed.

1. Appropriate for defense
2. Advance tracking feature
3. Easy to use and reliable system
4. Designed based on military standards
5. Remote control as an option
6. Could be installed on any light or heavy duty vehicles
7. Equipped by day camera, IR camera and laser range finder



A R M A M E N T

SPECIFICATIONS

Maximum elevation speed	60°/sec
Maximum azimuth speed	60°/sec
Azimuth	Nx360
Elevation	-30 to 50 degree
Pedestal weight	130 kg
Pedestal height	80 cm

CONTROL PANEL,

Remote control and network	Available
Auto Tracker	Optional



12.7 mm Four-Barrel Gatling Gun



The 12.7 mm is chain-gun, towed or self-propelled anti-troops, four-barrel weapon. It was designed to engage low altitude air targets, troops and strategic locations and anti-personnel and anti-materiel. It can be used on light naval vessels.

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TECHNICAL SPECIFICATIONS

Caliber	12.7 mm
Cartridge	12.7 × 108 mm
Number of barrels	4
Rifling	8 grooves
Rate of fire	1500-3000 rds. /m
Effective range	2000 m
Maximum range	3300 m
Muzzle velocity	830 m/s
Weight	45 kg



14.5 mm Single Barrel gun



The 14.5 mm is towed or self-propelled anti-aircraft single barrel semi-out cannon. It was designed to engage low-flying targets at a range of 2 km and desired for direct defence of troops and strategic locations against air defence assault conducted by helicopters and low-flying aircrafts.



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TECHNICAL SPECIFICATIONS

Caliber	14.5 mm
Operation	undirected gas
Effective range	2000 m
Weight, overall	100 kg
Rate of fire	550 rds. /m
Muzzle velocity	960 m/s
Traverse	360°
Elevation in anti-air role	-15° to 40°



20 mm Gatling Gun M197 (Vulcan)



The best way to defend against air and surface attacks is to use the weapons with high rate of accurate controlled fire. The 20mm three-barrel Gatling gun M197 with a variable rate of fire of 300-1500 rounds/minute and fast movements in traverse and elevation, is a very appropriate gun for this purpose.

The primary role of the M197 Gatling gun is to be mounted on Cobra attack helicopters to be used against air and surface targets; however as a secondary role, it can be fitted on vehicles and speedboats too. The gun can also effectively be used against insurgents and smugglers by disciplinary forces.

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TECHNICAL SPECIFICATIONS

Caliber	20 mm
Number of Barrels	3
Muzzle Velocity	1030 m/s
Rate of Fire	300-1500 r/m
Max. Weight	2945 kg
Overall Length	188 cm
Max. Range	4000 m
Effective Range	2000 m
Operating Mechanism	Electric Firing Mechanism, 270-400 V



FATH 30 mm



The 30mm aircraft cannon is a single barrel weapon with a high rate of fire which is mounted on MIG-29 fighter aircraft. The cannon is used against both air and ground targets. This aircraft cannon has been developed in Ukraine in 1970s.



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TECHNICAL SPECIFICATIONS

Caliber	30 mm
Rate of fire	1500-1800 rounds/min.
Effective range	2000 m
Max. range	4000 m
Muzzle velocity	860 m/s
NO. of rifling grooves	16 right hand
Weight	50 kg
Length	1978 mm
Width	156.5 mm
Height	185 mm
Service life	2000 rounds



30 mm Automatic gun (2A42)



The 2A42 is a gas-operated automatic gun mounted on personnel carrier and is used against the following targets:

1. Light armoured vehicles up to a range of 1500 meters;
2. Infantrymen up to a range of 4000 meters;
3. Air targets at a maximum altitude of 2500 meters. Max. range 8000 m

All the operational procedures of the gun are performed and controlled from inside the gun's cupola fitted on the personnel carrier.

To prepare the gun for firing, it can be charged in one of the following ways:

1. by manual charging mechanism;
2. by squib-operated charging mechanism.

The gun is fitted with a safety device which has two positions of "Lock" and "Fire".

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TECHNICAL SPECIFICATIONS

Caliber	30 mm
Number of Rifling Grooves	16, Right hand
Rate of Fire, Fast	500-550 r/m
Rate of Fire, Slow	200-300 r/m
Muzzle Velocity, With Armour-Piercing Tracer Round	970 m/s
Overall Length	3030 mm
Weight, Without Ammunition And Accessories	115 kg
Elevating Range	75°
Traversing Range	360°



30 mm (KAMAND)



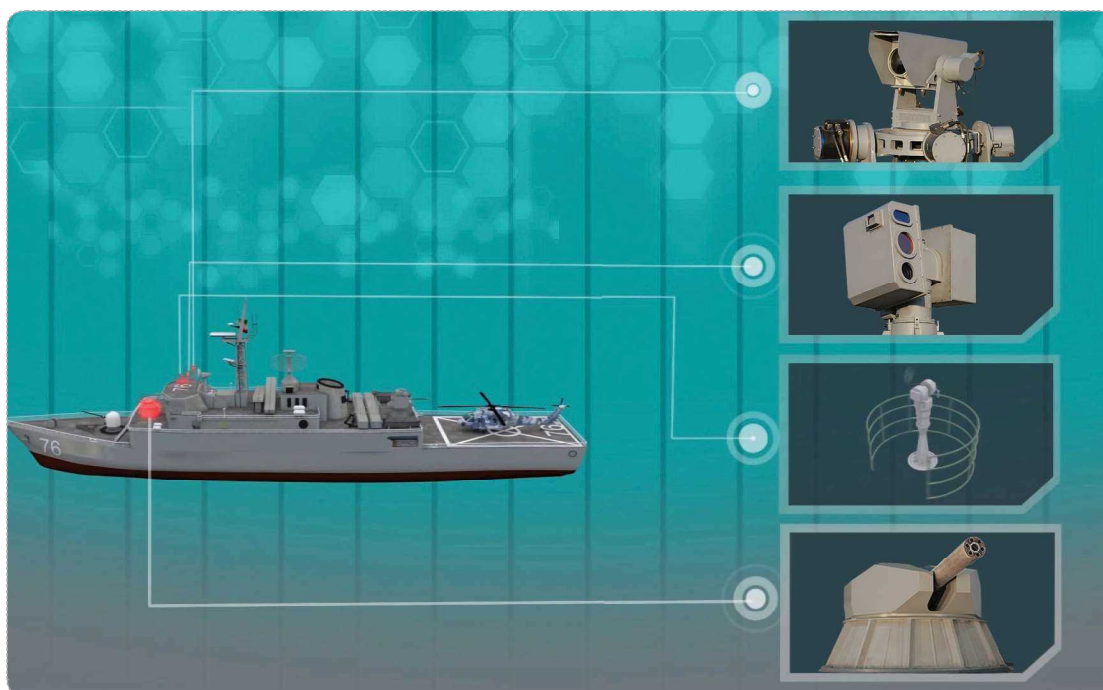
The AK-630 is a point defense Close-In Weapon System (CIWS) which is mounted on warships to be used against the aircraft and missiles that have broken through the layers of air defense.

This system is a 30mm Caliber six-barrel Gatling gun with a high firepower of 4000-5000 rounds / minute.

In general, the AK-630 can be used against the following targets: Cruise missiles
Fighter aircraft and drones (unmanned aircraft) Naval craft and floating mines



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TECHNICAL SPECIFICATIONS

Caliber	30 mm
Rate of Fire	4000-5000 rds. /min.
Effective Range	4000 m
Max. Range	8000 m
Number of Barrels	6
Muzzle Velocity	875 m/s
Elevation Range	-12° to +88°
Traverse Range	163°
Elevation Speed	50° per sec.
Traverse Speed	70° per sec.
Weight (Without Ammunition)	2000 kg
Feeding System	Automatic
Magazine Capacity	2000 rounds
Power Supply	380V – 50 Hz



40 mm Automatic Naval Gun-Bofors



This 40 mm automatic naval gun is one of the most effective medium caliber naval guns used by a wide variety of warships and frigates all over the world. This naval gun is used against air targets (fighter aircraft, helicopters, guided bombs and missiles), surface targets (speedboats and technical equipment of warships) and coast targets (bunkers, vehicles, installations and technical equipment). Utilizing a relatively high rate of accurate fire of 300 rounds/min., a central fire control system and radar interception of air targets, this 40mm naval gun can play an effective role in the theater of operation.

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TECHNICAL SPECIFICATIONS

Caliber	40 mm
Number of Rifles	16
Rate of Fire	300 rounds/min.
Max. Muzzle Velocity	1025 m/s
Max. Weight	3300 kg
Max. Range	12000 m
Effective Range (Against Surface Targets)	6400 m
Effective Range (Against Air Targets)	4600 m
Traverse Range	360°
Elevation Range	-10° to +85°
Max. Elevation Speed	45 deg./sec.
Max. Traverse Speed	85 deg./sec.
Max. Gas Pressure	3250 kg/cm ²
Accuracy Life	2000 rounds



76 mm (FAJR 27)



Hadid Fajr 27 is a standard, medium caliber and single mount naval gun with a traverse of 360°. As a main weapon this navy gun can be mounted on all types of warships and stationary platforms in seashores due to its compact system to fire at surface and aerial targets. This weapon is controlled by a Firing Control System (FCS). Feeding, loading and firing cycle is fully automatic.



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TECHNICAL SPECIFICATIONS

Model	HM60
Caliber	76 mm
Max. Range	16300 m
Effective Range of Fire	12000 m
Rate of Fire	80 Rds/min.
Elevation	-15° ~ +85°
Traverse (Training)	N × 360°
Length of Barrel	4700 mm
Firing Mode	Automatic
Max. Chamber Pressure	3500 Bar
Muzzle Velocity	925 m/s
Ready-To-Fire Projectile	81 Rds
Tracking Accuracy	1 mil
Max. Speed of Elevation	35°/Sec
Max. Speed of Traverse	60°/Sec
Total Weapon Weight (Not Including Consulate and Ammunition Weight)	7160 Kg



38 mm Anti-Riot Grenade Launcher



Grenade Launcher-Pistol model, Retractable Butt Stock

ANTI-RIOT 38 mm gun is in two grenade launcher and pistol models which are of signal grenade launchers kind. The operational mechanism is single shot, the barrel is smooth bore and cocking is of break-open type. ANTI-RIOT 38mm Grenade launchers are used for firing gas (like tear gas), illuminating, incendiary and smoke cartridges.

Six-Shot Grenade Launcher

This grenade launcher is a light-weight, smooth-bore, shoulder-held weapon with a 6-shot revolving cylinder (magazine) capable of firing the non-lethal riot control rounds including tear gas, vomiting agent, smoke and rubber baton rounds to a distance of 120 meters.

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Grenade Launcher-Pistol model



Grenade Launcher
with Retractable Butt Stock



Six-Shot Grenade Launcher

TECHNICAL SPECIFICATIONS

Type	Grenade Launcher-Pistol model	Grenade launcher with Retractable Butt Stock	Six-Shot Grenade Launcher
Caliber (mm)	38	38	38
Feed	Break-Open, Single Fed	Break-Open, Single Fed	-
Length (mm)	265	660-770	740
Height (mm)	175	190	-
Rate of fire practical (rds. /min)	5	5	15-18
Maximum range (m)	100	125	100
Weight (kg)	1.36	2.29	3.8
Magazine capacity	--	--	6 Rounds



40 mm Hand-held Revolver Grenade Launcher



The 40mm multiple grenade launcher is a light weight ,semi-automatic shoulder-held grenade launcher with a six-shot revolver cylinder (magazine) that fires the standard low velocity 40×46 mm grenades. Using the HE and HEDP ammunition, this grenade launcher is a serious threat against enemy's technical equipment, light armoured vehicles, assembly areas and light fortifications at a range of 300-400 meters. It can also be used for riot control by launching the non-lethal ammunition such as tear gas, smoke, etc. rounds.



TECHNICAL SPECIFICATIONS

Caliber	40 mm
Effective range	375 m
Max. range	400 m
Practical rate of fire	15 - 18 rounds / minute
Operating temperature	-35° c to 52° c
Capacity of magazine	6 rounds
Muzzle velocity	76 m/s
Type of Ammunition	all standard 40×46mm grenades
Firing mode	single shot, semi-automatic
Weight (without Ammunition)	5.9 kg
Length with folded butt	670 mm
Service life	1000 Rounds

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40 mm (Multiple, Low Velocity Grenade Launcher)

In 1961, this kind of weapon was produced for the army of America. These weapons have extraordinary functionality in guerrilla warfare and cover range Max.400 meters. Numerous varieties of ammunition, light weight, high accuracy, reliability, reasonable price and simple design are some characteristics of this weapon.



TECHNICAL SPECIFICATIONS

Overall length	737 mm
Tube length	356 mm
Weight	2.72 kg
Turnover	Breech loading sniper
Muzzle velocity	76 m/s
Firing rate	6 r/m
NO. of rifles	6 right hand
Effective range	375 m
Max. range	400 m



30 mm (Grenade Launcher "k30")



This is a local design 30mm Grenade Launcher which due to its light weight, can be used in different operational conditions. Having the capability of firing a wide range of 30mm grenades, it can be used against enemy troops and fortifications.

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TECHNICAL SPECIFICATIONS

Caliber	30 mm
Weight without magazine	18 kg
Weight of tripod	12 g
Rate of fire	350-400
Muzzle velocity	180 m/s
Magazine capacity	30 rounds
Maximum range	1800 m
Dimensions	840 x 1165 x 490 mm



40 mm grenade machine gun (GMG)



It fires 40 mm grenades at a rate of 340 rounds per minute. It is belt-fed and can be loaded from either side, making it easy to mount on platform, with a variety of day and night sights available. It can be used for most medium range infantry support situations.

It is an automatic grenade launcher with a massive internal breech. It fires from an open bolt which can be fed from the left or right side. The weapon is handled by a two man crew .It is capable of single-shot or burst firing.



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TECHNICAL SPECIFICATIONS

Model	NA40	Hoor ol Azim
Caliber (mm)	40x53	40x53
Muzzle Velocity (HV) (m/s)	240	240
Firing rate (rds. /min)	300-350	300-350
Max. Range (m)	2200	2200
Effective Range (m)	1500	1500
No. of Rifles	24, right hand	24, right hand
Elevation	-5° to +26°	-5° to +26°
Weight of weapon (kg)	~30	~30
Weight of weapon (with tripod) (kg)	~68	~50
Operating mechanism	Gas-Operated open bolt	Gas-Operated open bolt – direct feeding system
Type of Ammunition	TP, HE, HEDP, HC,TB	TP, HE, HEDP, HC,TB
Accuracy life (rounds)	5000	5000



RPG-7V & RPG-7 V2 (40 mm)



A Rocket Propelled Grenade (RPG) is a shoulder fired antitank weapon system. It can be carried by an individual soldier. It is very effective, powerful, cheap and simple against tanks and armored vehicles. The RPG 7 is a reasonable single-shot smooth bore, steel tube with a diameter of 40 mm.

This recoilless, shoulder fired, muzzle loaded launcher can shoot a wide variety of Rockets. Optical sights generally come standard, although night vision sights can be used.

It has been used to Knock out tanks, destroy armored personnel carriers, building and fortifications, attack infantry, and shot down low-flying helicopters.

RPG 7 baseline 85mm High Explosive Anti-Tank Rocket Recoilless launch-Rocket booster

It has been adopted for other fire-support mission of various types of grenades such as anti-infantry HE-FRAG, multipurpose thermo baric / FAE and other Types of ammunition.

It is robust, simple and lethal and extremely popular.

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RPG-7V



RPG-7V2



TECHNICAL SPECIFICATIONS

Type	RPG-7V	RPG-7 V2
Caliber	40 mm	40 mm
Firing rate	2-4 round/min	2-4 round/min
Effective range (sighting fire range)	500 m	500 m
Sighting system	Optical and mechanical	Optical and mechanical
Weight of weapon	6.2 kg	6.2 kg
Length of weapon	950 mm	950 mm
Service life	500 shots	500 shots
Operating temperature	-30°C to +50°C	-30°C to +50°C



RPG-29V (105 mm)



The RPG-29V is a shoulder-launched smooth-bore, breech-loaded, recoilless launcher especially designed for anti-armor role and is classified as a short-range weapon. The RPG-29V is considered as a serious threat against the most modern tanks.



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TECHNICAL SPECIFICATIONS

Caliber	105 mm
Effective range	500 m
Effective range with tripod	800 m
Launcher's weight (without telescope sight)	11.5 kg
Weight of launcher's composite section	3.7 kg
Weight of launcher's steel section with belt	6.7 kg
Launcher's length (ready for launching)	1850 mm
Rate of fire	2 rockets/min
Penetration (RHA steel)	750 mm
Penetration (ERA)	600 mm
Rocket Weight	6.9 kg
Operating temperature	-33°C to +52°C
Sighting systems	Mechanical sighting device, telescope sight & night vision sight
Firing mechanism voltage	24 V
Service life	200 rockets
Type of Ammunition	HE, HEAT, HEAT-TA, TB



SPG-9 Anti-Tank Recoilless gun



The SPG-9 is a recoilless, anti-tank and anti-personnel weapon highly accurate in comparison with the guns of the same type. This weapon is capable of delivery of direct and indirect fire. It fires fin-stabilized, rocket-assisted HE and HEAT projectiles. The SPG-9 is light, and is normally transported by vehicle, and carried into position by its two crews. It has to be mounted on vehicle or boat.

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TECHNICAL SPECIFICATIONS

Caliber	73 mm
Effective range of anti-tank and antipersonnel rocket	1300 m
Max. Range	6500 m
Practical rate of fire	2-4 round/min
Traverse	15° to the right , 15° to the left
Elevation	-3° to +7°
Type of Ammunition	HE , HEAT
Rear danger area	30 m
Service life	500 shots
Weight of weapon with tripod	58 kg
Length of weapon	211 cm
Sighting device	Mechanical and optical



106 mm Recoilless Rifle



The 106 mm recoilless rifle is one of the first weapons developed for anti-tank and fortification purposes. It is one of the most effective weapons of this type which has been used since 1950. This weapon is a breech-loaded and single-shot, rifle which is used for both anti-tank and anti-personnel roles. The mount of the weapon is a tripod in the front arm of which a wheel is installed. Using its mount, the 106mm recoilless rifle can be positioned and fired on the ground and also be mounted and fired on ¼-ton tactical vehicle.

A cal.50 spotting gun is attached to the 106 mm recoilless rifle by two mounting brackets. This spotting gun is a semiautomatic, gas-operated, magazine-fed weapon which assists the gunner in determining range and leads to the target.



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TECHNICAL SPECIFICATIONS

Caliber	105 mm
Barrel length	2758 mm
No. of rifling grooves	36 left hand
Muzzle velocity	503 m/s
Max. range	7700 m
Effective range	1300 m
Elevation on truck	-7° to +56°
Elevation on the ground	-17° to +65°
Traverse on truck	-135° to + 135°
Dimensions with tripod	340 × 152 × 112 cm
Total weight of weapon	222 kg
Weight of tripod	85 kg
Sighting system	Telescope, model M92F
Telescope reticule graduation	2400 meters
Width of tripod, spread	152 cm
Width of tripod, closed	80 cm
Service life	2500 rounds
Ammunition type	HEAT, HEAP, TB, Dummy



60 mm Mortar



Hadid 60mm mortar launcher is standard smooth bore, muzzle-loaded and high -angle of- fire weapon. These weapons are designed to be effective against personnel, bunkers and light material targets, providing both fragmentation and blast effect. The components of the mortar consist of a cannon, mount, baseplate, range indicator and sight unit.

A R M A M E N T



Standard HM14

ER mortar HM94

TECHNICAL SPECIFICATIONS

Model	HM14	HM94
Caliber (mm)	60	60
Max. chamber pressure (bar)	475	840
Max. range (m)	HE: 2550 wLR: 3200	HE 3000 LR 4000 ER 5700
Elevation	+45° / +85°	+45° / +85°
Barrel Length with breech (mm)	740	1376
Total weight (kg)	17.5	24
Ammunition NATO standard	HE, RP, WP, ILL & LR	HE, RP, WP, ILL & LR

All weapons pass several kinds of QC tests such as, FAT firing test and environmental test according to MIL-810-F.



60 mm Commando Mortar



The 60 mm mortars are smooth bore, muzzle loading and indirect fire guns. These weapons are composed of the barrel, a combination base cap, and firing mechanism. The base is made up of a bipod and base plate with a screw type elevating and traversing mechanism to elevate / traverse the mortar.

The 60mm mortar is drop – fired (conventional mode) or trigger fired (conventional on handheld mode).



A R M A M E N T

TECHNICAL SPECIFICATIONS

Model	commando HM12	commando HM13C	commando HM13D
Caliber (mm)	60	60	60
Max. chamber pressure (bar)	200*	200*	200*
Max. range (m)	HE 1050	HE 1050	HE 1050
Elevation	+45°/+85°		
Barrel length with breech (mm)	675	725	895
Total weight (kg)	6	7	9.5
Ammunition NATO standard	HE, RP, WP & ILL	HE, RP, WP & ILL	HE, RP, WP & ILL

*Maximum permissible operating pressure with special instrument 350 bar.

All weapons pass several kinds of QC tests such as, FAT firing test and environmental test according to MIL-810-F.



Hadid Mortar



The Hadid (81 & 82 & 120)mm mortar launchers are standard smooth bore, Muzzle-loaded and high -angle of- fire weapons.

These weapons are designed to be used effectively against personnel, bunkers and light material targets, providing both fragmentation and blast effect. The components of the mortar consist of a cannon, mount, baseplate, range indicator and sight unit.

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TECHNICAL SPECIFICATIONS

Model	HM15	HM19B	HM16
Caliber (mm)	81	82	120
Max. chamber pressure (bar)	790	500	900
Max. range (m)	HE 5250	HE 3000	HE 6500 LR 7200
	LR 7500	LR 5000	RA 9800
Elevation	+45°/+85°	+45°/+85°	+45°/+85°
Barrel length with breech (mm)	1560	1324	1720
Total weight (kg)	52	50	140
Ammunition NATO standard	HE, LR, RP, WP & ILL	HE, RP, WP & ILL	HE,LR, RP, RA , WP & ILL

All weapons pass several kinds of QC tests such as, FAT firing test and environmental test according to MIL - 810 - F.



81 mm Automatic Mortar System



The 81 mm. Automatic Mortar System can be used as towed or self-propelled system. It is smooth bore, breech loaded by 4-mortar magazine and has indirect and direct fire capabilities.

This mortar system offers a number of operational advantages including a considerable firepower, and selective single shoot or burst firing. This mortar system can be mounted on every tactical vehicle or APC.



A R M A M E N T

TECHNICAL SPECIFICATIONS

Caliber	81 mm
Barrel length	1750 mm
Maximum Range	4700 m
Nominal Rate of Fire	120 rds. /min
Crew	2-3
Traverse (degree)	60 (30 left/30 right)
Elevation/Depression (degree)	10 to 80



160 mm Mortar Launcher



The Hadid 160mm mortar launcher is a standard smooth bore, muzzle-loaded and high -angle of fire weapon. This weapon has been designed to be effective against personnel, bunkers, fortifications and armored vehicles, providing both fragmentation and blast effect. The mortar consists of a high tensile strength alloy steel barrel, carriage and heavy flat disc baseplate.

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SPECIFICATIONS

Caliber	160 mm
Barrel length	2955 mm
Maximum Range	8500 m
Weight Overall (Firing Position)	1830 kg
Crew	6-8
Traverse	360°C
Elevation/Depression	43 to 70°C



23 mm Twin Barrel



The ZU-23 is the Iranian mode towed 23 mm anti-aircraft twin-barrelled automatic cannon. Each of the 23 mm barrels is provided with a flash suppressor and a handle is mounted on top of each barrel to enable it to be changed quickly.



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TECHNICAL SPECIFICATIONS

Caliber	23 x 152 mm
Muzzle velocity	970 m/s
Weight	950 kg
Length	4.57 m
Length of barrel	2 m (87.3 calibers)
Width	2.9 m
Height	1.2 m
Crew	2-gunner and commander
Action	Gas operated
Elevation	-10° to +90°
Traverse	360°
Rate of fire	2000 rds. /min – 400 rds. /min practical
Effective firing range	2.5 km



23 mm Single Barrel



23 mm. single barrel anti-aircraft machine gun, standing type is a suitable weapon against targets at a distance of 2500 m.

This type of gun has been designed and manufactured for mounting on light boat and tactical vehicle is used by coast-guard

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TECHNICAL SPECIFICATIONS

Caliber	23 mm
Length of Barrel with Fire Shield	2, 010 mm
Length of Barrel without Fire Shield	1, 880 mm
Length of Machine-Gun with Fire Shield	2, 780 mm
Width of Machine-Gun with Cartridge Box	2, 425 mm
Max. horizontal range	2, 000 m
Max. effective inclined range	2, 500 m
Tempo of Shooting/ with Both Machine Guns	800-1000 Shots per Min.
Firing Rate with Both Machine Guns	Up to 200 Shots per Min.
Weight of Cartridge Box with a Cartridge Belt Furnished with 50 Cartridges	35.5 kg
Weight of Machine Without Cartridge Box	222 kg



Single 23 mm Self-Propelled Motorized gun



The 23 mm is a fully integrated, self-propelled anti-aircraft system with single barrel automatic cannons mounted on vehicle.

The automatic 23 cannons have a significant threat to aircraft and light armoured ground vehicles. The optical sensor searches the targets which provide aircraft tracking.

This gun also can be controlled in semi-automatic mode by joystick action.

A R M A M E N T



TECHNICAL SPECIFICATIONS

Caliber	23 mm
Operational mode	semi-automatic
Traverse	360°
Elevation	-15° to 60°
Dimensions, gun along with vehicle	4400 × 3000 × 2000 mm
Weight, gun along with vehicle	5500 kg
Vehicle type	T-Rex Bremach
Camera	Oghab 18
Barrel weight	75 kg
Effective range	2500 m



23 mm Naval gun (HAFIZ)



Hafiz-1 system is a naval version of the zu-23-2 gun known as the Hafiz-1 naval system and consists of two 23mm mechanized twin-barrel guns plus an optic fire control system (electro-optical tracker) which is mounted on a tactical boat. One of the most serious threats to the destruction of naval military centers is the widespread use of helicopters, and if not properly handled it can be very dangerous and hit naval units of the country. Considering the technical and operational characteristics of these types of threats, one of the effective coping strategies is the mechanization of 23 mm artillery by using electric system, simultaneous use of weapons and a tracking system with fire control unit, use of thermal cameras, as well as inactive tracking systems.



TECHNICAL SPECIFICATIONS

Caliber	23 x 152 mm
Muzzle velocity	970 m/s
Rate of fire	2000 rds. /min – 400 rds. /min practical
Traverse	200°
Elevation	-5° to 85°
Maximum tracking range of target	300 m - 8 km
Angular accuracy of servo system	1 Mil
Maximum angular acceleration in azimuth and elevation	80°/s ²
Maximum angular velocity in azimuth and elevation	60°/s
Effective range	2.5 km



SAMAVAT 35 mm Air Defence System



This air defence system uses twin auto cannons, firing 35x228 mm NATO-standard ammunition. The system could be paired with the off-gun (remote) fire control radar. The weapons can be aimed either directly, by way of an advanced sighting system, or automatically, by locking on the target with radar. It is equipped with automated reloading carry 280 rounds total.

It contains a plus Doppler search radar, a pulse Doppler tracking radar and a coaxial television camera. It also has a small petrol generator.

It is an all-weather air defence system for the control of aircraft at low altitude and at low and medium altitude range up to 3000 m. The maximum effective distance is given as 4000 m.

The system takes the air surveillance, target acquisition, calculation of the derivative-action values and control of two 35 mm anti-aircraft guns.

The radar unit is readied quickly through the use of hydraulic systems for antenna erection and levelling after deployment.

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TECHNICAL SPECIFICATIONS

Caliber	35 mm
Number of Barrels	2
Rate of Fire 2 × 550	1, 100 rounds/min.
Muzzle Velocity	1, 175 m/s
Barrel Length (90° caliber)	3, 150 mm

GUN-LAYING DATA

Traverse Arc	Unlimited
Max. Traverse Speed	2095 r/s
Traverse Acceleration	3142 r/s ²
Elevation Arc	-5° to +92°
Max. Elevation Speed	1047 r/s
Elevation Acceleration	2095 r/s ²
Effective Range	4000-6000 m
Max. Range of Fire	8500 m





MESBAH-Air Defence System



The main mission of this 23mm air defensive gun is for the protection of strategic, political and economic centers and military fortifications against threats such as; cruise missiles, helicopters, unmanned aircrafts, and air to surface missiles at short ranges and low altitudes.

This low altitude air defense system includes 8 sets of mechanized twin- barrel 23mm guns, one set of optical passive fire control, a power supply for making thrust and one set of 3D search – radar system.

This radar system is able to track air targets up to a distance of 20 km and 20 targets at once and choose the most dangerous one and then directs the data to fire control system.

Fire control of this defensive system at first step tracks down targets at the distance of 10 km, and then by collecting the entire data about its distance and surrounding conditions, it will calculate the coordination of that target and gets ready to fire once the target is placed at a distance of 1500 to 2500 meters.



TECHNICAL SPECIFICATIONS

Detection Range	0.2 ~ 20 km
Max. Speed of Detected Targets	300 m/s
Max. Angular Speed of Targets	90 °/s
Motion in Azimuth	360°n
Motion in Altitude	0 ~ 100°
Angular Precision	1 million
Max. Angular Acceleration	120 °/s ²

FEATURES OF RADAR

Min. RCS	0.1 m ²
Max. Range	20 km
Radar Altitude coverage	45°
Precision on Azimuth and Altitude	± 1.5°



MESBAH 1- Air Defence System



This 8-barrel system is an integration of "chassis and electric system" and a number of "4 pieces of twin-barrel 23mm guns" that is equipped with "one 3D seeker radar", "one smart fire control unit" and "one set of power supply" for supplying the required energy.

This system utilizing advanced photography sensors and processing the acquired data is able to identify all air targets up to the height of 20 km regardless of being day or night, and then by conducting complicated calculations, predicts the target's trajectory and shoots towards that target in the end by estimation of its next position.

By connecting to Fire Control Unit (FCU), electro-optic and Sky Guard while having high agility and an acceptable fire volume, this has increased the accuracy of the system in firing through reduction of shots diffusion.



A R M A M E N T

TECHNICAL SPECIFICATIONS

Detection Range	0.2 ~ 20 km
Max. Speed of Detected Targets	300 m/s
Max. Angular Speed of Targets	90 °/s
Motion in Azimuth	360°n
Motion in Altitude	0 ~ 100°
Angular Precision	1 million
Max. Angular Acceleration	120 °/s ²

FEATURES OF RADAR

Min. RCS	0.1 m ²
Max. Range	20 km
Radar Altitude Coverage	45°
Precision on Azimuth and Altitude	± 1.5°



100 mm Anti-Aircraft gun (SA'EER)



Hadid anti-aircraft gun is a medium caliber air defense gun mounted on a four-wheeled carrier that is controlled by a firing control center and radar to fire against aerial threats flying up to a height of 36000 feet (12000m). It can also be used to destroy low-to-medium height, marine, and land targets .It can be used in both version towed or self-propelled.



TECHNICAL SPECIFICATIONS

Model	HM71
Caliber	100 mm
Max. Range of fire	21000 m
Effective (vertical) range of fire	12000 m
Max. rate of fire	10-15 rds. /min
Elevation	-3° ~ + 82°
Traverse(training)	n x 360°
Length of barrel	5358 mm
Max. chamber pressure	3000 bar
Firing mode	Automatic
Muzzle velocity	930 m/s
Truck	10 ton
Max. speed of elevation	15° /sec
Max. speed of traverse	22° /sec
Cartridge capacity	4 rds
Total weight	9100 kg



Howitzer Guns



This is a modern artillery complete gun system of modern battle field. Artillery remains, and always will to an extent, a vital component of any army land action even on the technology-heavy battle field of today. The mission of field artillery is to throw projectiles of high explosives or other munitions to places relatively far away and out of sight on the battle field.

Our products are inspected against criteria by Iranian defence standard.

Process is fully defined with inspection procedures and documentation at every level of assembly. Each weapon will be certified according to test procedures at final inspection, functional test and function firing.

The barrels are produced by Electro Slay Remelting (ESR) process. Ingots forge to desired dimension with a reduction followed by homogenization, hardening and tempering treatment and mechanical properties including tensile, impact, and toughness will be studied and also ultrasonic testing will be done to identify any internal flows.

The guns fire all standard ammunition as well as special Rocket-Assisted projectiles, including

- High-Explosive
- Illuminating
- Smoke cartridge
- High-Explosive Rocket-Assisted
- High-Explosive Base-Bleed



105 mm Howitzer

122 mm D-30I Howitzer

155 mm 39-Caliber HM41 Howitzer

TECHNICAL SPECIFICATIONS

Model	105 mm Howitzer	122 mm D-30I Howitzer	155 mm 39-Caliber HM41 Howitzer
Caliber (mm)	105	122	155
Barrel Length	23 Cal (2415 mm)	39 Cal (4785 mm)	39 Cal (6095 mm)
Weight of Barrel (kg)	325	1050	1777
Total Weight (kg)	2030	3500	6900
Recoil System	Hydropneumatic	Hydropneumatic	Hydropneumatic
Elevation	-5° to +66°	-7° to 70°	0° to 66°
Traverse	46°	360°	25° Right/ 23.5° Left
Muzzle Brake	-	Double baffle	Double baffle
Number of Grooves	36	36	48
Breech Type	Horizontal Sliding Block	Vertical Sliding Block	Interrupted screw
Max. Chamber Pressure (bar)	2700	2600	3500
Rate of Fire (Rapid)	10 rds. /min	8 rds. /min	4 rds. /min
Max. Range (km)	HE:11.62	HE: 15.6 BB: 21.5 HB: 18	HE: 18-22 BB: 30 RAP: 30
Ammunition Type	HE, ILL WP, RP	HE,BB HB,ILL WP,RP HEAT,RAP	HE,BB,HB ILL,WP,RP Leaflet VLAP,RAP
Max. Travelling Speed (km/h)	60	80	55
Number of Crew	8	8	11



122 MM Gvozdika Gun HM51



This is a modified version of the 2A31 cannon which is also fitted to the D-30 towed howitzer. The 122 mm cannon is fitted with a fume extractor and muzzle brake and is held in position. The Gvozdika is compatible with all 122 mm ammunitions developed for the D-30 howitzer. The Double-baffle muzzle brake is flush with the forward edge of the hull, and the bore evacuator is located midway along the tube.

ARMAMENT



TECHNICAL SPECIFICATIONS

Caliber	122 mm
Elevation	-3° ~ + 70°
Traverse	360°
Breech Type	Horizontal sliding wedge
Loader Type	Semi-automatic
Length of barrel (cal.)	36
Rate of fire	4 rds. /min
Min Range	1000 m
Max. Range	15300 m (with HE Ammo)
Muzzle velocity	680 m/sm
Armor penetration	460mm
Type of ammunition	HE, HB, BB, WP, HC, ILL,
Total Weight	1440 kg



125 mm Cannon gun 2A46M



Hadid 125mm cannon 2A46M is mainly mounted on battle tank T72s. It fires against self-propelled guns and destroys enemy's objects. It is a medium artillery weapon and can be fired automatically or manually.



A R M A M E N T

TECHNICAL SPECIFICATIONS

Model	HM50 (2A46M)	
Caliber	125 mm	
Max. range	with APFSDS	12000 m
	with HEAT	4000 m
Max. rate of fire	8 rds. /min.	
Elevation	-6° ~+70°	
Length of barrel	6000 mm	
Max. chamber pressure	5200 bar	
Muzzle velocity	with APFSDS	1700 m/s
	with HEAT	900 m/s
Overall weapon weight	2500 kg	



155 mm Cannon gun M109



Hadid 155 mm 39 caliber barrel is of mono block construction with an interrupted screw breech mechanism. The rifling has a constant 1:20 twist and there are 48 grooves. High-strength alloy steel is used throughout the barrel construction and heat treatment and autofrettaging are employed to provide maximum barrel life. Separate recoil and recuperator system are used in what is stated to be a variable length hydropneumatic independent design. It adopts a common chassis for its self-propelled artillery units. The Double-Baffle muzzle brake is flush with the forward edge of the hull, and the bore evacuator is located midway along the bore.

A R M A M E N T



TECHNICAL SPECIFICATIONS

Model	HM 44	
Caliber	155 mm	
Length of barrel	39 cal. (6095 mm)	
Max. range	with HE	22 km
	With RAP and BB	30 km
Max. rate of fire	4 rds. /min	
Nr. of Grooves	48	
Elevation	-3°C ~ +75°C	
Max. chamber pressure	3500 bar	
Muzzle Brake	Double baffle	
Overall weapon weight	2500 kg	
Ammunition Type (NATO 155 mm AMMO)	HE	



Technical Specifications of Gun Barrels



Barrel is the most important part of artillery weapons. To manufacture the barrels, special and advanced technologies such as GFM method for producing raw materials, high-strength alloy steel by using of specific furnaces, rifling, honing and chamber boring are used in Hadid industries.

The barrels are produced by Electro Slay Remelting (ESR) process. Ingots forge to desired dimension with a reduction followed by homogenization, hardening and tempering treatment and mechanical properties including tensile, impact, and toughness will be studied and also ultrasonic testing will be done to identify any internal flows.



TECHNICAL SPECIFICATIONS

Model	Caliber mm	Final weight kg	Length of Tube mm	Number of rifling	Rifling twist direction	Chamber length (mm)
122-D30-I	122	605	3995	36	Right-handed	594
155-IH	155	1776	6095	48	Right-handed	1058
155-M109	155	1132	6042	48	Right-handed	998
130-M46	130	1780	6840	40	Right-handed	990
130-T59/1	130	1658	6850	40	Right-handed	990
155-GHN	155	1760	7046	48	Right-handed	1213
105-M2A2	105	345	2364	36	Right-handed	399.5
105-M68	105	870	5346	28	Right-handed	633.5
125-2A46M T72s	125	1125	6000	Smooth bore	Smooth bore	840
125-2A46 T72m	125	1139	6000	Smooth bore	Smooth bore	840
122-VOZ	122	537	3995	36	Right-handed	594
100G Anti-Aircraft	100	850	5358	40	Right-handed	715.5
76-NAVAL gun	76	333	4700	24	Right-handed	688



107 mm Double and Single Barrel Commando Rocket Launcher



The 107mm commando rocket launcher is one of the most successful with high capabilities suitable for both classic and partisan warfares. The launcher's special characteristics such as lightweight, easy transportation, simple operation and quick action have imparted a high manoeuvrability to it and have made it a very effective weapon. Enemy's main fortifications, shelters, assembly areas, technical equipment and airports can be targeted by this rocket launcher. When traveling, both the rocket launcher and its tripod can be carried by two men in the form of two backpacks. It can also be carried by two men when ready for action.

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Double Barrel



Single Barrel

TECHNICAL SPECIFICATIONS

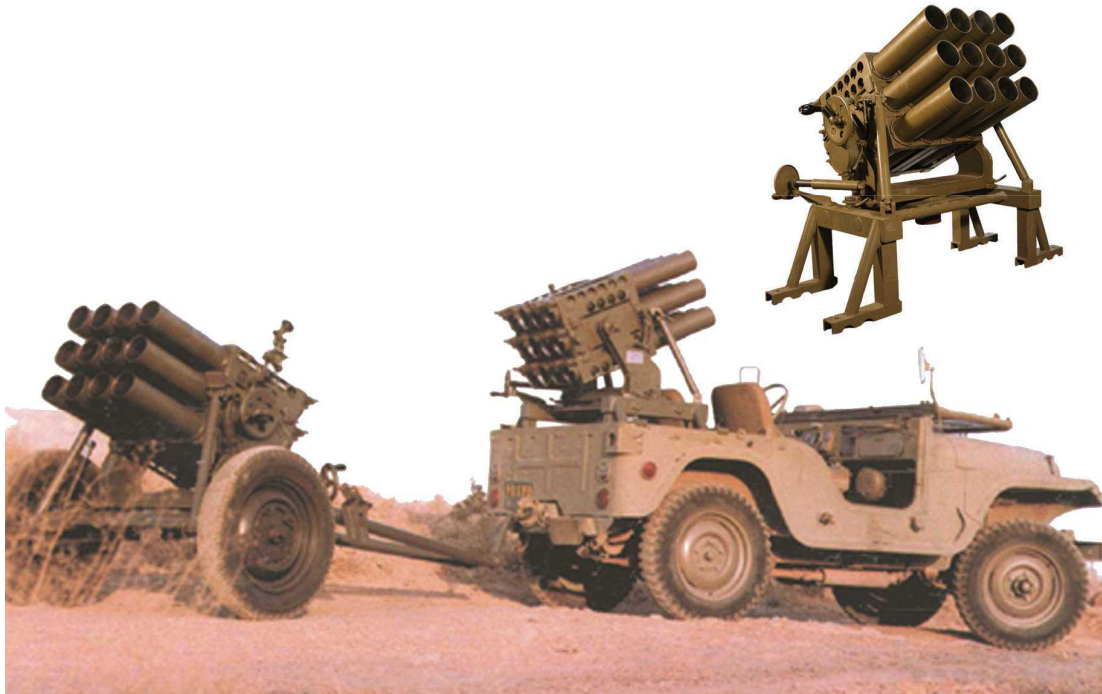
Model	Double Barrel	Single Barrel
Caliber	107 mm	107 mm
Length of barrel	80 cm	80 cm
Max. range	8500 m	8500 m
Elevation	0° to 45°	0° to 45°
Traverse	±11°	±11°
Weight of weapon (without Ammunition)	36 kg	28 kg
Weight of tripod	12 kg	12 kg
Material of barrel	steel, hard chrome	steel or composite
Time to get ready for action	1.5 to 2.5 min.	-
Firing mechanism voltage	7.5 V, DC	7.5 V, DC
Overall length (when ready for action)	1050 mm	1050 mm
Type of Ammunition	HE ,HE,I	HE ,HE,I
Service life	1000 rounds, each barrel	1000 rounds



107 MM 12 Barrel Rocket Launcher



The 107 mm launcher has 12 tubes arranged in three lines of four tubes each, all of which are parallel to each other and mounted co – axially on a cradle, the launcher is manually operated for horizontal and elevation movements. It is fitted with an optical sight for day light operations. The nozzles are canted to provide slow spin. The effectiveness of this rocket launcher is attributable to its high volume of fire, accuracy (based on CEP), quick action and manoeuvrability .It can be used towed or self-propelled by tactical vehicle.



A R M A M E N T

TECHNICAL SPECIFICATIONS

Caliber	107 mm
No. of barrels	12
Firing rate	11 - 12 sec.
Max. range	8500 m
Elevation range	0° to +60°
Traverse range	15° to the right, 15° to the left
Overall dimensions	1400 × 930 × 810 mm
Type of ammunition	HE, HE-I
Firing mode	Single shot
Power supply	12V-AC from generator 12V-DC from battery
Weight with wheeled carriage	380 kg
Elevating mechanism	Manually by elevation hand wheel through elevation gear box and determination of the angle value by quadrant on the specified point on the upper frame
Traversing mechanism	By traverse hand wheel
Operating conditions	Temperature -32°C to +52°C Humidity 98%
Service life	1000 rounds, each barrel



107 mm 11-Barrel Naval Rocket Launcher with Fire Drive System (FDS)



This rocket launcher is another version of the 107mm 11-barrel naval rocket launcher which is equipped with gyroscope. It is also used for wiping out the stationary and moving targets such as warships, frigates, oil tankers, harbors and islands.

The rocket launcher has been designed to be mounted on the speedboats travelling at speed over 45 knots.

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TECHNICAL SPECIFICATIONS

Caliber	107 mm
No. of barrels	11
Barrel length	900 mm
Max. range	8500 m
Elevation range	-5° to +45°
Launcher weight	Approx. 280 kg
Rate of fire	11 rounds/9 - 10 sec.
Operational conditions	Temperature -10°C to +60°C , humidity 95%
Acceleration function condition	3g to 4g
Consuming power	24 - 28, DC
Angular speed of elevation	Max. 25°/s with an accuracy of 3-5 mils
Time to prepare for action	Max.5 minutes with firing limiting system, max.1 minute without firing limiting system
Endurance strength	4g in operational status and 5g in navigational status
Elevation mechanism	1- Manual, from inside the cabin with the capability of reading the elevation angle from inside the cabin and from the side of launcher. 2- Hydraulic, semi-automatic 3- Hydraulic- automatic by FDS
Service life	500 rounds, each barrel



107 mm 11-Barrel Naval Rocket Launcher with Fire Control System (FCS)



The purpose of manufacturing this version of the 107mm rocket launcher is to considerably reduce the launcher's weight and to enable it to operate in the areas with degraded weather conditions. All the launchers' components are highly resistant to corrosion. The launcher has been designed to be mounted on the cabin of speedboats but with some minor changes it can be mounted on frigate, tank, personnel carrier and jeep.



A R M A M E N T

TECHNICAL SPECIFICATIONS

Caliber	107 mm
No. of barrels	11
Max. range	8500 m
Elevation range	-5° to +45°
Structure material	special aluminium
Weight of weapon (without Ammunition)	186 kg
Dimensions (L×W×H)	110 × 93 × 65 cm
Operational conditions	humidity 95% -10°C to + 60°C
Acceleration function conditions	3g to 4g
Consuming power	12V, DC
Mechanism of elevation angle determination	mechanically on the launcher and digitally on the fire control panel
Service life	500 rounds, each barrel



107 mm 19-Barrel Naval Rocket Launcher with Fire Drive System (FDS)



This naval rocket launcher is a new version of the 107mm rocket launcher which is equipped with gyroscope. It is intended to be used against the moving and stationary targets such as warships, frigates, oil tankers, harbors and islands. This rocket launcher has been designed to be mounted on the speedboats travelling at speed over 45 knots; therefore, it utilizes the high speed of the craft and its own high volume of fire in the theater of operation to suppress the enemy forces.

ARMAMENT



TECHNICAL SPECIFICATIONS

Caliber	107 mm
No. of barrels	19
Barrel length	900 mm
Max. range	8500 m
Weight (without ammunition)	approx. 400 kg
Rate of fire	19 rounds / 20-24 seconds
Elevation range	-5° to +45° (with a mechanical stop adjustable in increments of 5 degrees)
Angular speed of elevation	Max. 25°/s with an accuracy of 3-5 mils
Time to prepare for action	Max. 5 minutes with firing limiting system, max. 1 minute without firing limiting system
Operational conditions	-10°C to +60°C and humidity of 95%
Endurance strength	4g in operational status and 5g in navigational status
Power supply	24 - 28 DC
Service life	500 rounds, each barrel
Elevation mechanism	1- Manual, from inside the cabin with the capability of reading the elevation angle from inside the cabin and from the side of launcher. 2- Hydraulic, semi – automatic 3- Hydraulic- automatic by FDS



107 mm 6-Barrel Side-Mounted Naval Rocket Launcher



This version of the 107mm naval rocket launcher is mounted on speedboats in pairs, one piece of rocket launcher on each side of the boat.

This rocket launcher is capable of using a high volume of fire on stationary and moving targets utilizing high manoeuvrability and high stability of the speedboat.



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TECHNICAL SPECIFICATIONS

Caliber	107 mm
No. of barrels	6
Elevation	-5° to +20°
Max. range	8500 m
Total weight of both launchers	210 kg
Mechanism of elevation angle determination	mechanically on the launcher and digitally on the fire control panel
Operational conditions	Temp -10°C to +60°C, humidity 95%
Acceleration function conditions	3g to 4g
Structure material	special aluminium
Consuming power	24 - 28, DC
Overall dimensions(L×W×H)	930 × 620 × 630 cm
Service life	500 rounds, each barrel



122 mm Rocket Launcher (Single & 4-Tube)



Hadid 122mm rocket launcher (single and 4-tube) can fire free low-range projectiles. It is used to successfully destroy enemy's personnel, fortified field positions, shelters, weapons and such like. Due to its light weight it has a rapid displacement. Its elevation and traverse mechanisms are mechanical.

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TECHNICAL SPECIFICATIONS

Type	Single-Tube	4-Tube
Model	HM21	HM23
Caliber (mm)	122	122
Length of firing tubes (mm)	3000	3000
Number of firing tubes (PCs)	1	4
Max. range	with ARASH 2 (m)	40000
	with conventional (ARASH) (m)	20000
Rate of fire	3 rds. in 1 second	4 rds. in 4 seconds
Elevation	+5°~ +50°	-5° ~+55°
Traverse (limit of azimuth angle)	± 12°	360°
Trigger mechanism (kg)	electrical	electrical



122 mm Rocket Launcher (8-Tube)



Hadid 122mm rocket launcher (8-tube) is used to destroy enemy's personnel, fortified field positions, shelters, weapons and such like in an area. It is used in defensive and offensive missions. Due to its light weight, Hadid 122mm rocket launcher can be mounted in tactical vehicles and stationary land platforms. It also has a rapid displacement.

A R M A M E N T



TECHNICAL SPECIFICATIONS

Model	HM27
Caliber	122 mm
Length of firing tubes	3000 mm
Number of firing tubes	8 PCs
Max. range	with ARASH 2 40000 m
	with conventional (ARASH) 20000 m
Rate of fire	8 rds. in 4 seconds
Elevation	0°~ +52°
Traverse (limit of azimuth angle)	± 30°
Trigger mechanism	electrical



122 mm Naval Rocket Launcher (16-Tube)



Hadid 122mm naval rocket launcher (16-tube) is a weapon for launching free stationary projectiles. It is used to destroy enemy's floats and boats, military equipment and shore targets. It can fire a large quantity of rounds in a short period of time at an area.

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TECHNICAL SPECIFICATIONS

Model	HM26
Caliber	122 mm
Barrel length	1900 mm
Number of firing tubes	16 PCs
Max. range	10000 m
Max. rate of fire	8 rds. in 4 min
Elevation	-1° ~ +25°
Traverse	360 °
Total weight of launcher	800 kg



122 mm Rocket Launcher (24-Tube)



Hadid HM22 rocket launcher (24-tube) is used to successfully destroy enemy's personnel, fortified field positions, shelters, weapons and such like in a large area. It can fire a large quantity of rounds in a short period of time at an area. It is used in defensive and offensive missions. High mobility and manoeuvrability, precise operation and low errors in elevation and traverse mechanisms, capability of being mounted on both 4x4 trucks and land platforms and stands, rapid loading, massive fire, possibility of being used in all climate conditions are the most significant features of this rocket launcher.

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TECHNICAL SPECIFICATIONS

Model	HM22	
Caliber	122 mm	
Length of firing tubes	3000 mm	
Number of firing tubes	24 PCs	
Max. range	with ARASH 2	40000 m
	with conventional (ARASH)	20000 m
Rate of fire	24 rds. in 12 seconds	
Elevation	0°~+55°	
Traverse (limit of azimuth angle)	± 180°	
Elevation and traverse mechanisms	electromechanical	
Trigger mechanism	electrical	



122 mm Rocket Launcher (40-Tube)



Hadid 122mm rocket launcher (40-tube) is a kind of launcher that is used to successfully destroy enemies' personnel, fortified field positions, shelters, weapons and similar targets in a large area. It can fire a large quantity of rounds in a short period of time at an area. It is used in defensive and offensive missions.



TECHNICAL SPECIFICATIONS

Model	HM20
Caliber	122 mm
Length of firing tubes	3000 mm
Number of firing tubes	40 PCs
Max. range	with ARASH 2 40000 m
	with conventional (ARASH) 20000 m
Rate of fire	40 rds. /20sec
Elevation	0°~ +55°
Traverse (limit of azimuth angle)	to the right 72°
	to the left 102°
Elevation and traverse mechanisms	hydromechanics
Trigger mechanism	electrical

240 mm Naval Rocket Launcher (8-Tube)

It is a weapon for launching free stationary projectiles. It is used to destroy enemies' floats and boats, military equipment and shore targets. It can fire a large quantity of heavy rounds in a short period of time at an area.



TECHNICAL SPECIFICATIONS

Model	HM28
Caliber	240 mm
Number of firing tubes	8 PCs
Max. range	10000 m
Max. rate of fire	8 rds. in 4 min
Elevation	0° ~ 38°
Traverse	360 °
Total weight of launcher	576 kg



Anti-Mine Wedge Shoes



Wedge shoes have a capability to withstand anti-personnel mines with maximum 50 gr of TNT

Appearance:

According to the following photograph, the buyer's representative can offer his/her corrective viewpoints during the production process.

Weights and dimensions: These parameters would be determined by the Industrial Complex (according to the produced and sealed sample).

Weight: 2400gr

Height of the shoe: 35 cm

Width: 13 cm

Guarantee: This product can keep its ballistic properties stored in the temperature range of 0-40°C for two years.



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Spider Anti-Mine Shoes

Spider anti-mine shoes can resist against anti-personnel mine with maximum 100 gr of TNT

Appearance:

According to the following photograph, the buyer's representative can offer his/her corrective viewpoints during the production process.

Weights and dimensions:

These parameters would be determined by the Industrial Complex (according to the produced and sealed sample).

Weight: 3100 gr

Dimensions: (54 × 14) cm

Height of the shoe: 26 cm

Guarantee: This product can keep its ballistic properties stored in the temperature range of 0-40°C for two years.





Combat Helmet



Helmet weight including the accessories: 1400 gr in proportion to ballistic performance.

Ballistic level: According to the standard Stanag 2920, V50 ≥ 600 m/s and Class II for 9mm FMJ with velocity of 385 m/s according to MIL-STD-0106-01.

Helmet coating: paint (desert sand or olive green).

Helmet edge: provided with a rubber tape in proportion to the helmet size and color.

Suspension system: spiked hemisphere, chin strap, shock absorber foam, screws, and natural leather.

Chin strap: of three- point attachment, fast release kind, and having a three-band lock.

When kept in storage conditions as per MIL-I-4S208A, the helmet durability of ballistic performance against fragment and bullet from quality conditions point of view is guaranteed by the seller for 5 years.

Protection area: 12 dm².



Individual Trench

Goal: Individual protection against bullets class IIIA which can be equipped with composite and composite-ceramic panels to promote the protection level up to class III and IV according to NIJ 0101.04 standard.

Technical Specifications

This kind of trench provides protection against fragments according to Stanag 2920 and the bullets class IIIA according to NIJ 0101.04. This product can be equipped with polymeric and ceramic anti-bullet panels to promote the protection class up to classes III and IV.

Weight of the trench

Without panel: 13.5 kg (class IIIA).

With polymeric panels: 23 kg (polymeric panels include 5 large and 3 small ones) (class III).

With ceramic panels: 34 kg (ceramic panels include 5 large and 3 small ones) (class IV).





Anti-Bullet T-Shirt



Technical Specifications

- Protection against fragments according to standard Stanag 2920,V50-500 m/s.
- Protection against bullets class IIIA according to standard NIJ 0101.04.

Coverage area: chest and back.

Fibers material: (UHMW) PE or Aramid.

Outer layer material: tricot (underwear).

Weight of the vest: 950 gr.

Protection area: 20 dm².



A R M A M E N T

VIP Anti-Bullet Vest

Technical Specifications

Goal: Individual protection against bullets up to class IIIA according to NIJ-0101.04.

Application: Security forces, protection units, VIP, and police.

Ballistic performance: Protection against fragments according to the standard Stanag 2920,V50-500 m/s and protection against the bullets class IIIA according to standard NIJ-0101.04.

Coverage areas: chest, abdomen, and back.

Fibers material: (UHMW) PE or Aramid.

Outer layer material: cotton or serge.

Foam material: smart PU.

Weight of the vest: 2200 gr for size L





Technical Specifications

Goal: Individual protection against bullets up to class IIIA according to NIJ-0101.04.

Ballistic performance: Protection against fragments according to the standard Stanag 2920,V50-500 m/s and protection against the bullets class IIIA according to standard NIJ-0101.04.

Coverage areas: chest, abdomen, back, and sides.

Fibers material: (UHMW) PE or Aramid.

Outer layer material: Cordura black/digital fabric.

Foam material: smart PU.

Weight of the vest: 3800 gr for size L

Protection area: 35 dm² for size L.

Applicable structure

The two large front and back pockets have been provided for the vest used to upgrade the protection level of the vest to class III (by inserting the composite panel) and class IV (by inserting the composite-ceramic panel) according to NIJ0101.04.





Anti Riot Clothing



Anti Riot Clothing protects all parts of the body against impact. The plastic parts of the clothing protect the users from the knife, sharp glass, the corrosive chemicals and molotov cocktails. All parts of this product are non-flammable. Interior parts of Anti Riot Clothing are covered by the energy-absorbing materials. The size of the clothing is set by firming strips and thereby provides the possibility of proportion to body size of each user. The production of the new Clothing according to customer specifications is available.

Specifications

- Protection of the body: chest, shoulders, feet, hands and joints.
- Protective plastic parts are anti- impact.
- Ability to absorb energy of impacts and shocks and is non-flammable as well.
- Approximate total weight: 4700 gr.

A R M A M E N T





Extreme Cold Weather Clothing System



Extreme cold weather clothing has 6 layers. Different components of these layers are utilized in temperature ranges from -33°C up to $+7^{\circ}\text{C}$ and in various weather conditions such as wind, rain, snow and coldness, and in the case of mobility (practical) and stationary (guards) of fighter.

A high level of protection with ideal comfort is provided.

Capabilities

- Suitable for different weather conditions (temperature range from -33°C up to $+7^{\circ}\text{C}$).
- Prevents wind and rain entering into the clothing (waterproof and windproof).
- Allows exiting of water vapor from the body to the outside at high speed so that the person who wears it does not feel sweating (breathable).
- Prevents sudden onset of body tremor (wind chill) in very cold areas.
- Has a convenient heat and is an appropriate cover.
- Has the appropriate weight.

The layers that are in contact with body manage moisture and transfer sweat of the body to outside. In all cases the body surface is dry and it prevents the unpleasant sensation of the body surface sweating and getting wet. Middle layers are insulation of heat and it prevent from feeling cold and body tremor in cold weather and outer layers of the clothing prevent from entering climatic factors such as wind, rain and snow into clothing.

This clothing is used in temperature ranging from -33°C up to $+7^{\circ}\text{C}$, and two case of mobility (practical) and stationary (guards) of fighter.

Different combinations of these layers, which can be used in different weather conditions, are given in the table below :



ACCORDING TO NIJ STANDARD 0101.04

Combinations	Usage conditions	Number of layers	Weigh of layers
First	In case of mobility in cold & rainy weather (from -1°C up to $+7^{\circ}\text{C}$)	1 - 4	1/6 kg
Second	In case of mobility in cold weather (from -1°C up to -17°C)	1 - 2 - 4	2/2 kg
Third	In case of mobility in extreme cold weather (from -17°C up to -33°C)	1 2 - 3 - 4	2/75 kg
Fourth	In case of stationary (guards) in cold & rainy weather (from -1°C up to $+7^{\circ}\text{C}$)	1 - 3 - 5	1/8 kg
Fifth	In case of stationary (guards) in cold & dry weather (from -1°C up to -17°C)	2 - 4 - 6	3/8 kg
Sixth	In case of stationary (guards) in extreme cold weather (from -17°C up to -33°C)	1 - 2 - 3 - 4 - 6	4/6 kg