



igmman
S I N C E 1 9 5 0



Bosnia and Herzegovina



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Our city, our municipality, even our whole region have become an integral part of the global economic stage by the mere fact that we export our products to more than 50 countries worldwide.

The demand for Igman's products in the foreign markets is a clear demonstration of our quality, industrial know-how and efforts of our employees, our craftsmen and our engineers.

Seventy years of any company's history speaks to its maturity and vast experience, good organization, vitality and strategy, especially when its products are sold in the international market, as is the case with Igman, where the company competes with big companies in the defense industry.

Igman currently employs more than 1,400 professionals who are continuously perfecting their skills, because the management of the company strongly believes that the purpose of civilization development is not merely development of science and technology, but the development of mankind.

In our immediate future, we need to make daily efforts to maintain our strong international reputation and build the foundations of further development. Continuous investments in the production process, purchase of equipment, staff training, following international trends in ammunition manufacturing and good international marketing practices are the reasons we are confident in being able to meet our business plans for the coming years.

If international export is considered the primary parameter for production quality valuation, the defense industry enterprise Igman d.d. from Konjic is the champion of Bosnia and Herzegovina's economy.

David Muratbegovic

A WORD FROM OUR GENERAL MANAGER

On March 6, 1950, when Josip Broz Tito signed the decision on incorporation of this enterprise of importance for the general public, under the name 'Igman', the city of Konjic and its surroundings were awakened by this symbolic gesture from a century of social lethargy and became a part of history, entering an era of industrial development.

WHERE BOSNIA MEETS HERZEGOVINA

IGMAN was founded on March 06, 1950

OWNERSHIP
STRUCTURE: **51%** FEDERATION OF
BOSNIA AND
HERZEGOVINA **49%** PRIVATE
OWNERSHIP



CORPORATE SOCIAL RESPONSIBILITY, VISION AND MISSION

In modern business, goals of an enterprise always include the obligations towards the community in which the company operates. Igmán d.d. Konjic, as an important contributing factor to economic development in Bosnia and Herzegovina, will continue to provide significant funds for humanitarian purposes and sponsorship of cultural and sports events, and support specific NGO projects, primarily focusing on the local community.

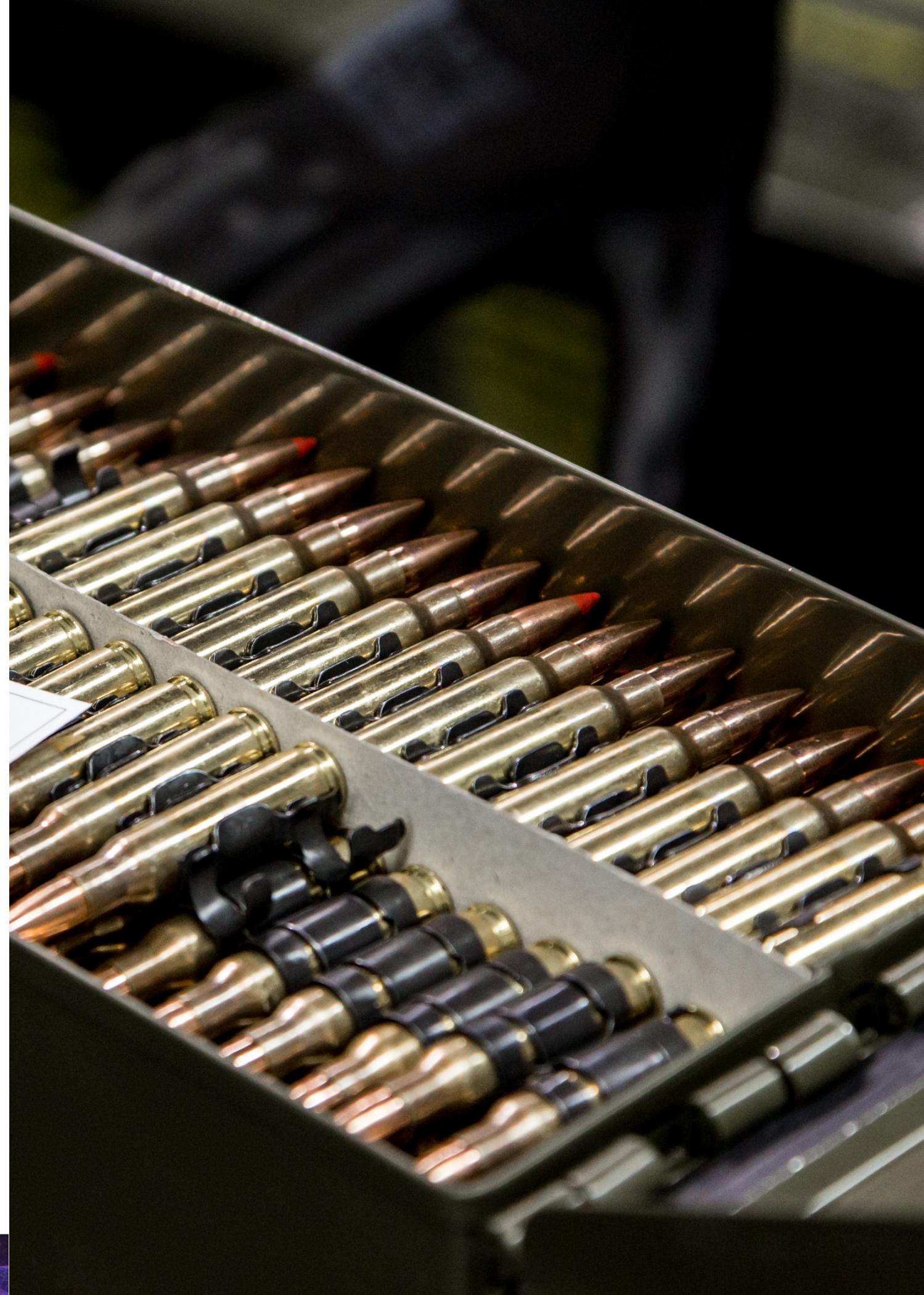
The corporate social responsibility towards the community and development of full cooperation with the community continue to be the permanent focus of Igmán.

Vision

Development of our top quality range of products through investment in modern production facilities and meeting quality and delivery demands in the most demanding markets in the world.

Mission

Production and distribution of defense industry products in accordance with predefined quality standards, encouraging continuous development of our employees, development of teamwork and building the company image.



PRODUCTION, STORAGE AND TESTING FACILITIES

„Igman“ ammunition factory owns 11,200 sqm of production facilities equipped with primary production equipment.

In addition, „Igman“ owns around 5,000 sqm of facilities for thermal processing of steel core and links, battery charging, production of spare parts and tools, electrical maintenance, production of steel core on automated milling machines, packaging, pyrotechnic mixture preparation, labeling and printing, mechanical testing, archives and administration. The factory owns 2,177 sqm of storage space for finished products (eight facilities with properly packaged products arranged in stocks). The polygon for ballistic and functional ammunition testing of 2,000 sqm. This area includes facilities and tunnels where experiments on semi-finished and finished products are performed.

For testing that requires distance to target in excess of 300 m, we use an offsite testing facility with range distance 3,500 m.



Our ammunition is in accordance with:

STANDARD AMMO:

AOP-4090 TECHNICAL PERFORMANCE SPECIFICATION PROVIDING FOR THE INTERCHANGEABILITY OF 9 mm x 19 AMMUNITION

AOP-4172 TECHNICAL PERFORMANCE SPECIFICATION PROVIDING FOR THE INTERCHANGEABILITY OF 5,56 mm x 45 AMMUNITION

AOP-2310 TECHNICAL PERFORMANCE SPECIFICATION PROVIDING FOR THE INTERCHANGEABILITY OF 7,62 mm x 51 AMMUNITION AND LINKS

AOP-4383 TECHNICAL PERFORMANCE SPECIFICATION PROVIDING FOR THE INTERCHANGEABILITY OF 12,7 mm x 99 AMMUNITION AND LINKS

AEP-97 MULTI-CALIBRE MANUAL OF PROOF AND INSPECTION (M-CMOPI) FOR SMALL ARMS AMMUNITION

**Remark: The pressure data in this catalog for standard ammo refer to EPVAT method.*

NON-STANDARD AMMO:

MANUFACTURER'S TECHNICAL SPECIFICATIONS

**Remark: The pressure data in this catalog for non-standard ammo refer to crusher method.*



Cal. 9x19mm

FMJ 124 gr (8 g),
FMJ 115 gr (7,45 g),
FMJ 147 gr (9,5 g) IPSC

Cal. 9x19 mm | BALLISTIC DATA

Used for civilian purposes for 9x19mm caliber weapon

Cal. 9x19mm with bullet	Energy (J)	V _{4,5} (m/s)	P (bar)	Accuracy mean radius (cm) at 46 m
FMJ 124 gr (8 g)	-	350 ± 15	max. 2350	max. 7,6
FMJ 115 gr (7,45 g)	-	360 ± 15	max. 2350	max. 7,6

Used for military purposes for 9x19mm caliber weapon

Cal. 9x19mm with bullet	Energy (J) at 16 m from the muzzle	V ₁₆ (m/s)	P+3Sd (bar)	Accuracy Sdx/Sdy (cm) at 46 m
FMJ 124 gr (8 g)	491 - 713	370 ± 10	max. 2850	max. 5,0
FMJ 115 gr (7,45 g)	491 - 713	380 ± 10	max. 2850	max. 5,0

Used for competition for 9x19mm caliber weapon

Cal. 9x19mm with bullet	P (bar)	Coefficient
FMJ 147 gr (9,5 g) IPSC	max. 2350	$\frac{m(\text{grain}) \times V(\text{ft/s})}{1000} \geq 125$

Cal. 9x19 mm | TECHNICAL DATA

Element	Material	Weight	Length (mm)
Bullet	Jacket	Tombac CuZn10 or Brass CuZn30	FMJ 124 gr (8,00 g) FMJ 115 gr (7,45 g)
	Core	Lead antimony	FMJ 147 gr (9,5 g) IPSC
Cartridge case	Brass CuZn28	~3,90	19,1
Propelling charge	Spherical powder	~0,35	-
Primer	Small pistol, Boxer, non-corrosive	0,23	3,10
Cartridge		Average Q (100) ± 0,3 g	29,69 ^{-0,69}

Cal. 9x19 mm | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 50 rounds in PVC separator • 1 PVC separator in cardboard box • 20 cardboard boxes in metal box M2A1 (1000 rounds) • 2 metal boxes (2000 rounds) in wooden crate 	<ul style="list-style-type: none"> • 50 rounds in PVC separator • 1 PVC separator in cardboard box • 20 cardboard boxes in carton case



Cal. 5.56x45mm

M193 Ball, M196 Tracer,
M855/SS109, M856 Tracer

Cal. 5.56x45mm | BALLISTIC DATA

Cal. 5.56x45mm with bullet	Energy (J)	V _{23,77} (m/s)	P (bar)	Accuracy mean radius (cm) at 183 m	Tracer visibility
M193 Ball	-	964,7 ± 12	max. 3792	max. 5,08	-
M196 Tracer	-	949,5 ± 12	max. 3792	max. 12,7	Visible trace from max. 69 m to min. 457 m from the weapon

Used for 5.56x45mm caliber weapon with a 1:12" twist barrel

Cal. 5x56x45mm with bullet	Energy (J) at 24 m from the muzzle	V _{23,77} (m/s)	P+3Sd (bar)	Accuracy Sdx/Sdy (cm) at 550 m	Tracer visibility
M855/SS109	min. 1480	920,5 ± 12	max. 4450	max. 20	-
M856 Tracer	min. 1480	917,4 ± 12	max. 4450	max. 30	Dim trace to min. 13 m from the weapon, visible from max. 140 m to min. 600 m from the weapon

Used for 5.56x45mm caliber weapon with a 1:7" twist barrel

Penetration M855/SS109: Bullets shall completely perforate the mild steel plate at 3,5 mm nominal (10 gauge) thickness, defined in SAE 1010 or SAE 1020, Rockwell hardness, minimum B 55, maximum B 70, placed 570 m from the muzzle at 0 degree obliquity (normal to the line of fire).

Cal. 5.56x45mm | TECHNICAL DATA

Element	Material				Weight (g)				Length (mm)			
	M193 Ball	M196 Tracer	M855/SS109	M856 Tracer	M193 Ball	M196 Tracer	M855/SS109	M856 Tracer	M193 Ball	M196 Tracer	M855/SS109	M856 Tracer
Bullet	Jacket	Tombac	Tombac plated steel strip or copper washer steel strip	Tombac	3,56	3,5	4,00	3,92	19,17	23,2	23,4	28,45
	Core	Lead antimony	Lead antimony and steel	Lead antimony	(55 gr)	(54 gr)	(62 gr)	(61 gr)				
	Tracer mixture Cup, closure	-	Tracer compos.	-	Tracer compos.							
Cartridge case	Brass				-6,10				44,70			
Propelling charge	Spherical powder				-1,64	-1,69	-1,60	-1,36	-			
Primer	Boxer non-corrosive				0,23				3,10			
Cartridge					Average Q (100) ± 0,4 g				57,40			

Cal. 5.56x45mm | PACKAGING

Version 1	Version 2	Version 3	Version 4
<ul style="list-style-type: none"> • 20 rounds in cardboard box • 50 cardboard boxes (1000 round) in metal box M2A1 • 2 metal boxes (2000 rounds) in wooden crate 	<ul style="list-style-type: none"> • 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC (1000 rounds) bags in carton case 	<ul style="list-style-type: none"> • 200 rounds in metal link belt (M27) • 4 metal link belts in metal box M2A1 (800 rounds) • 2 metal boxes in wooden crate (1600 rounds) 	<ul style="list-style-type: none"> • 20 rds in a clip • 5 clips in a cardboard box • 20 cardboard boxes in metal box M2A1 • 2 metal boxes in wooden crate



Cal. 5.56x45mm

HP (High Pressure)
bullet weight 5,5 g (85 gr)

Cal. 5.56x45mm HP (High Pressure) | BALLISTIC DATA

Cal. 5.56x45mm with bullet weight 5,5 g (85 gr)	P (bar)
	4836 ± 207

Used only for proof testing 5.56x45mm caliber weapon

Cal. 5.56x45mm HP (High Pressure) | TECHNICAL DATA

Element		Material
Bullet	<i>Jacket</i>	<i>Tombac</i>
	<i>Core</i>	<i>Lead antimony</i>
Cartridge case		<i>Brass</i>
Propelling charge		<i>Spherical powder</i>
Primer		<i>Boxer non-corrosive</i>

Cal. 5.56x45mm HP (High Pressure) | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 20 rounds in cardboard box • 50 cardboard boxes in metal box M2A1 • 2 metal boxes (2000 rounds) in wooden crate 	<ul style="list-style-type: none"> • 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 10 PVC (2000 rounds) bags in wooden case



Cal. 5.56mm

M200 BLANK

Cal. 5.56mm M200 BLANK | BALLISTIC DATA

Cyclic rate			
Weapon	BFA	Min.	Max.
M16A1 & M16A2 Rifles	M15A2	550	920
M249 Machine Gun	M15A2	650	950

Used for 5.56x45mm weapon caliber

Cal. 5.56mm M200 BLANK | TECHNICAL DATA

Element	Material	Weight (g)	Length (mm)
Cartridge case	Brass	-6,74	53,7
Propelling charge	For blank ammunition	-0,46	-
Primer	Boxer non-corrosive	0,23	3,10
Cartridge		Average Q (100) ± 0,4 g	53,5

Cal. 5.56mm M200 BLANK | PACKAGING

Version 1	Version 2	Version 3
<ul style="list-style-type: none"> • 20 rounds in cardboard box • 57 cardboard box (1140 rounds) in metal box M2A1 • 2 metal boxes (2280 rounds) in wooden crate 	<ul style="list-style-type: none"> • 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC bags (1000 rounds) in carton case 	<ul style="list-style-type: none"> • 200 rounds in metal link belt (M27) • 4 metal link belts (800 rounds) in metal box M2A1 • 2 metal boxes (1600 rounds) in wooden crate



Cal. 5.56mm

M200A1 BLANK

Cal. 5.56 M200A1 BLANK | BALLISTIC DATA

Cyclic rate			
Weapon	BFA	Min.	Max.
M16A1 & M16A2 Rifles	M15A2	550	920
M249 Machine Gun	M15A2	650	950

Used for 5.56x45mm weapon caliber

Cal. 5.56 M200A1 BLANK | TECHNICAL DATA

Element	Material	Weight (g)	Length (mm)
Cartridge case	Brass	-6,74	53,7
Propelling charge	For blank ammunition	-0,46	-
Primer	Boxer non-corrosive	0,23	3,10
Cartridge		Average Q (100) ± 0,4 g	53,5

Cal. 5.56 M200A1 BLANK | PACKAGING

Version 1	Version 2	Version 3
<ul style="list-style-type: none"> • 20 rounds in cardboard box • 57 cardboard box (1140 rounds) in metal box M2A1 • 2 metal boxes (2280 rounds) in wooden crate 	<ul style="list-style-type: none"> • 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC bags (1000 rounds) in carton case 	<ul style="list-style-type: none"> • 200 rounds in metal link belt (M27) • 4 metal link belts (800 rounds) in metal box M2A1 • 2 metal boxes (1600 rounds) in wooden crate



Cal. 7.62x39mm

M67 Ball, M78 Tracer, API, AP

Cal. 7.62x39mm | BALLISTIC DATA

Cal. 7.62x39mm with bullet	V _{23,77} (m/s)	P (bar)	Accuracy mean radius (cm) at 300 m	Tracer visibility
M67 Ball	733 ± 8	max. 2550	max. 11	-
M78 Tracer	706 ± 8	max. 2550	max. 22	Dim trace to min. 15 m from the weapon, visible from max. 115 m to min 800 m from the weapon
API	733 ± 8	max. 2550	max. 15	-
AP	733 ± 8	max. 2550	max. 15	-

Used for 7.62x39mm weapon caliber

Penetration API, AP: The bullet shall demonstrate complete penetration of 6 mm thick armour plate, min. 420 HB, located 100 meters from the weapon.

Incendiary API: At 100 m, the incendiary composition of bullets shall ignite cloth soaked in petrol located behind the armour plate.

Cal. 7.62x39mm | TECHNICAL DATA

Element	Material				Weight (g)				Length (mm)				
	M67 Ball	M78 Tracer	API	AP	M67 Ball	M78 Tracer	API	AP	M67 Ball	M78 Tracer	API	AP	
Bullet	Jacket	Tombac	Tombac	Copper washer steel strip	Tombac								
	Core	Lead antimony	Lead antimony	Steel	Lead antimony and steel	8,00	7,7	7,55	8,00	23,9	27,4	26,4	25,3
	Tracer mixture	-	Tracer compos.	-	-	(123 gr)	(119 gr)	(116 gr)	(123 gr)				
	Cup, closure	-	Tombac	-	-								
	Tube	-	Tombac	Tombac	-								
	Filler	-	-	Incend. comp.	-								
	Liner			Lead antimony									
Cartridge case	Brass				~ 7,40				38,65				
Propelling charge	Spherical powder				~ 1,67	~ 1,62	~ 1,70	~ 1,70	-				
Primer	Boxer non-corrosive				0,34				3,30				
Cartridge					Average Q (100) ± 1 g				55,80				

Cal. 7.62x39mm | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 15 rounds in cardboard box • 54 cardboard boxes (810 rounds) in metal box M2A1 • 2 metal boxes (1620 rounds) in wooden crate 	<ul style="list-style-type: none"> • 15 rounds in cardboard box • 8 cardboard boxes (120 rounds) in PVC bag • 7 PVC bags (840 rounds) in carton case



Cal. 7.62mm

M68 BLANK

Cal. 7.62 M68 BLANK | BALLISTIC DATA

Cyclic rate
<i>The cartridges shall operate the AK 47 (M70) rifles at cyclic rate of not less than 475 cartridges per minute.</i>

Cal. 7.62mm M68 BLANK | TECHNICAL DATA

Element	Material	Weight (g)	Length (mm)
Cartridge case	Brass	~8,10	49,5
Propelling charge	For blank ammunition	~0,80	-
Primer	Boxer non-corrosive	0,34	3,30
Cartridge		Average Q (100) ± 0,4 g	49,2

Cal. 7.62mm M68 BLANK | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 15 rounds in cardboard box • 69 cardboard boxes (1035 rounds) in metal box M2A1 • 2 metal boxes (2070 rounds) in wooden crate 	<ul style="list-style-type: none"> • 15 rounds in cardboard box • 8 cardboard boxes (120 rounds) in PVC bag • 8 PVC bags (960 rounds) in carton case



Cal. 7.62mm

Ignition Charge for Rifle Grenade

Cal. 7.62mm Ignition Charge for Rifle Grenade | BALLISTIC DATA

P (bar)	V ₆ (m/s)
max. 1570	59,5 ± 0,5

Cal. 7.62mm Ignition Charge for Rifle Grenade | TECHNICAL DATA

Element	Material	Weight (g)	Length (mm)
Cartridge case	Brass	~8,55	55,8
Propelling charge	NC powder	~2,38	-
Primer	Boxer non-corrosive	0,34	3,30
Cartridge		Average Q (100) ± 0,4 g	55,5

Cal. 7.62mm Ignition Charge for Rifle Grenade | PACKAGING

Version 1
<ul style="list-style-type: none"> • 15 rounds in cardboard box • 10 cardboard boxes in PVC foil



Cal. 7.62x51mm

M80 Ball, M62 Tracer,
M61 AP

Cal. 7.62x51mm | BALLISTIC DATA

Cal. 7.62x51mm with bullet	Energy (J) at 24 m from the muzzle	V _{23,77} (m/s)	P+3Sd (bar)	Accuracy Sdx/Sdy (cm) at 550 m	Tracer visibility
M80 Ball	min. 2756	833,6 ± 9,1	max. 4450	max. 20	-
M62 Tracer	min. 2756	812,3 ± 9,1	max. 4450	max. 30	Dim trace to min. 13 m from the weapon, visible from max. 140 m to min. 775 m from the weapon
M61 AP	min. 2756	833,6 ± 9,1	max. 4450	max. 20	-

Used for 7.62x51mm weapon caliber

Penetration M80 Ball: The bullet shall completely perforate the mild plate 3,5 mm nominal (10 gauge) thickness, defined in SAE 1010 or SAE 1020, Rockwell hardness, minimum B55, maximum B70, the plate shall be placed 550m from the muzzle at 0 degree obliquity (normal to the line of fire).

Penetration M61 AP: The bullet shall demonstrate complete penetration of 6 mm thick armour plate, min.420 HB, located 100 meters from the weapon.

Cal. 7.62x51mm | TECHNICAL DATA

Element		Material			Weight (g)			Length (mm)		
		M80 Ball	M62 Tracer	M61 AP	M80 Ball	M62 Tracer	M61 AP	M80 Ball	M62 Tracer	M61 AP
Bullet	Jacket	Tombac	Tombac	Tombac	9,67	9,46	9,55	29,46	34,29	32,90
	Core	Lead antimony	Lead antimony	Lead antimony and steel						
	Tracer mixture	-	Tracer compos.	-	(149 gr)	(146 gr)	(147 gr)			
	Cup, closure	-	Tombac	-						
Cartridge case		Brass			-11,50			51,18		
Propelling charge		Spherical powder			-2,85	-2,80	-2,82	-		
Primer		Boxer non-corrosive			0,34			3,30		
Cartridge					Average Q (100) ± 1 g			71,12		

Cal. 7.62x51mm | PACKAGING

Version 1	Version 2	Version 3	Version 4
<ul style="list-style-type: none"> • 20 rounds in cardboard box • 28 cardboard boxes (560 rounds) in metal box M2A1 • 2 metal boxes M2A1(1120 rounds) in wooden crate 	<ul style="list-style-type: none"> • 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC bags (1000 rounds) in carton case 	<ul style="list-style-type: none"> • 250 rounds in metal link belt M13 • 2 metal link belts in metal box M2A1 • 2 metal boxes M2A1(1000 rounds) in wooden crate 	<ul style="list-style-type: none"> • 250 rounds in metal link belt (M13) • 1 metal link belts in metal box M19A1 • 4 metal boxes (1000 rounds) in wooden crate



Cal. 7.62x51mm

API, APT

Cal. 7.62x51mm | BALLISTIC DATA

Cal. 7.62x51mm with bullet	Energy (J) at 24 m from the muzzle	V _{23,77} (m/s)	P+3Sd (bar)	Accuracy Sdx/Sdy (cm) at 550 m	Tracer visibility
API	min. 2756	833,6 ± 9,14	max. 4450	max. 30	-
APT	min. 2756	812,3 ± 9,14	max. 4450	max. 30	Dim trace to min. 13 m from the weapon, visible from max. 140 m to min. 775 m from the weapon

Used for 7.62x51mm weapon caliber

Penetration API, APT: The bullet shall demonstrate complete penetration of 6 mm thick armour plate, min 420 HB, located 100 meters from the weapon.

Penetration API: At 100 m, the incendiary composition of bullets shall ignite cloth soaked in petrol located behind the armour plate.

Cal. 7.62x51mm | TECHNICAL DATA

Element	Material		Weight (g)		Length (mm)		
	API	APT	API	APT	API	APT	
Bullet	Jacket	Tombac	Tombac				
	Core	Lead antimony and steel	Lead antimony and steel	8,75	8,70		
	Tracer mixture	-	Tracer compos.	(135 gr)	(134 gr)	32,20	35,00
	Cup, closure	-	Tombac				
	Filler, point	Incend. compos.					
	Tube	Lead antimony	Tombac				
Cartridge case	Brass		~11,50		51,18		
Propelling charge	Spherical powder		~2,80		-		
Primer	Boxer non-corrosive		0,34		3,30		
Cartridge			Average Q (100) ± 1 g		71,12		

Cal. 7.62x51mm | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 20 rounds in cardboard box • 28 cardboard boxes (560 rounds) in metal box M2A1 • 2 metal boxes (1120 rounds) in wooden crate 	<ul style="list-style-type: none"> • 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC bags (1000 rounds) in carton case



Cal. 7.62x51mm

SNIPER BULLET

FMJBT (10,9 g; 11,7 g) and
HPBT (10,9 g; 11,3 g)

Cal. 7.62x51mm SNIPER | BALLISTIC DATA

Cal. 7.62x51mm with bullet	V _{23,77} (m/s)	P+3Sd (bar)	Accuracy mean radius
FMJBT (10,9 g)	777 ± 9,1	Max. 4450	max. 0,6 MOA 2)*
FMJBT (11,7 g)			
HPBT (10,9 g)			
HPBT (11,3 g)			

Used for Sniper Rifles caliber 7.62mm

2*

Distance (m)	100	200	300	400	500	550	600
Accuracy mean radius (cm)	1,75	3,5	5,24	6,98	8,73	9,6	10,48

Cal. 7.62x51mm SNIPER | TECHNICAL DATA

Element		Material
Bullet	Jacket	Tombac
	Core	Lead antimony
Cartridge case		Brass
Propelling charge		Spherical powder
Primer		Boxer non-corrosive

Cal. 7.62x51mm SNIPER | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 20 rounds in cardboard box • 28 cardboard boxes (560 rounds) in metal box M2A1 • 2 metal boxes (1120 rounds) in wooden crate 	<ul style="list-style-type: none"> • 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC bags (1000 rounds) in carton case



Cal. 7.62mm

M82 BLANK

Cal. 7.62mm M82 BLANK | BALLISTIC DATA

Cyclic rate
<i>The cartridges shall operate the M60 Machine Gun at a cyclic rate of not less than 450 cartridges per minute and the M240 Machine Gun at a cyclic rate of not less than 650 cartridges per minute.</i>

Used for 7.62x51mm weapon caliber

Cal. 7.62mm M82 BLANK | TECHNICAL DATA

Element	Material	Weight (g)	Length (mm)
Cartridge case	Brass	~11,8	64,50
Propelling charge	For blank ammunition	~0,85	-
Primer	Boxer non-corrosive	0,34	-
Cartridge		Average Q (100) ± 0,4 g	63,15

Cal. 7.62mm M82 BLANK | PACKAGING

Version 1	Version 2	Version 3	Version 4
<ul style="list-style-type: none"> • 20 rounds in cardboard box • 28 cardboard boxes (560 rounds) in metal box M2A1 • 2 metal boxes (1120 rounds) in wooden crate 	<ul style="list-style-type: none"> • 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC bags (1000 rounds) in carton case 	<ul style="list-style-type: none"> • 250 rounds in metal link belt (M13) • 2 metal link belts (500 rounds) in metal box M2A1 • 2 metal boxes (1000 rounds) in wooden crate 	<ul style="list-style-type: none"> • 250 rounds in metal link belt (M13) • 1 metal link belts in metal box M19A1 • 4 metal boxes (1000 rounds) in wooden crate



Cal. 7.62x54mmR

M30 Ball, M87 Tracer, M90 API

Cal. 7.62x54mmR | BALLISTIC DATA

Cal. 7.62x54mm with bullet	V _{23,77} (m/s)	P (bar)	Accuracy mean radius (cm) at 300 m	Tracer visibility
M30 Ball	785 ± 10	max. 2800	max. 18	-
M87 Tracer	810 ± 10	max. 2800	max. 36	Visible trace not less than 1000 m from the weapon
M90 API	830 ± 10	max. 2800	max. 20	-

Penetration M90 API: The bullet shall demonstrate complete penetration of 6 mm thick armour plate, min 420 HB, located 100 meters from the weapon.

Penetration M90 API: At 100 m, the incendiary composition of bullets shall ignite cloth soaked in petrol located behind the armour plate.

Cal. 7.62x54mmR | TECHNICAL DATA

Element		Material			Weight (g)			Length (mm)		
		M30 Ball	M87 Tracer	M90 API	M30 Ball	M87 Tracer	M90 API	M30 Ball	M87 Tracer	M90 API
Bullet	Jacket	Tombac	Copper washer steel strip	Tombac	11,00 (170 gr)	9,40 (149 gr)	10,30 (159 gr)	30,90	36,60	36,00
	Core	Lead antimony	Lead antimony	Steel						
	Tracer mixture	-	Tracer compos.	-						
	Cup, closure	-	Tombac	Lead antimony						
	Filler, point	-	-	Incend. compos.						
	Tube	-	Tombac	-						
Cartridge case		Brass			~10,00			53,65		
Propelling charge		NC powder			~3,00	~3,17	~3,20	-		
Primer		Boxer non-corrosive			0,34			3,30		
Cartridge					Average Q (100) ± 0,5 g			77,16		

Cal. 7.62x54mmR | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 15 rounds in cardboard box • 28 cardboard boxes (420 rounds) in metal box M2A1 • 2 metal boxes (840 rounds) in wooden crate 	<ul style="list-style-type: none"> • 15 rounds in cardboard box • 10 cardboard boxes (150 rounds) in PVC bag • 5 PVC bags (750 rounds) in carton case



Cal. 7.62x54mmR

SNIPER

Cal. 7.62x54mmR SNIPER | BALLISTIC DATA

Cal. 7.62x54mmR with bullet	$V_{23,77}$ (m/s)	P (bar)	Accuracy mean radius (cm) at 300
SNIPER	785 ± 10	max. 2800	max. 6,30

Cal. 7.62x54mmR SNIPER | TECHNICAL DATA

Element		Material	Weight (g)	Length (mm)
Bullet	<i>Jacket</i>	<i>Tombac</i>	11,80	32,90
	<i>Core</i>	<i>Lead antimony</i>	(182 gr)	
Cartridge case		<i>Brass</i>	~10,00	53,65
Propelling charge		<i>NCD powder</i>	~3,00	-
Primer		<i>Boxer non-corrosive</i>	0,34	3,30
Cartridge			<i>Average Q (100) ± 0,5 g</i>	77,16

Cal. 7.62x54mmR SNIPER | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 15 rounds in cardboard box • 28 cardboard boxes (420 rounds) in metal box M2A1 • 2 metal boxes (840 rounds) in wooden crate 	<ul style="list-style-type: none"> • 15 rounds in cardboard box • 10 cardboard boxes (150 rounds) in PVC bag • 5 PVC bags (750 rounds) in carton case



Cal. 7.62mmR

BLANK

Cal. 7.62mmR BLANK | BALLISTIC DATA

Cyclic rate
<i>The cartridges shall operate the M84 Machine Gun at a cyclic rate of not less than 600 cartridges per minute.</i>

Used for M84 Machine Gun

Cal. 7.62mmR BLANK | TECHNICAL DATA

Element	Material	Weight (g)	Length (mm)
Cartridge case	Brass	~11,90	72,00
Propelling charge	For blank ammunition	~0,85	-
Primer	Boxer non-corrosive	0,34	3,30
Cartridge		Average Q (100) ± 0,4 g	72,50

Cal. 7.62mmR BLANK | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 15 rounds in cardboard box • 28 cardboard boxes (420 rounds) in metal box M2A1 • 2 metal boxes (840 rounds) in wooden crate 	<ul style="list-style-type: none"> • 15 rounds in cardboard box • 10 cardboard boxes (150 rounds) in PVC bag • 6 PVC bags (900 rounds) in carton case



Cal. 7.62x63mm

M2 Ball, M25 Tracer

Cal. 7.62x63mm | BALLISTIC DATA

Cal. 7.62x63mm with bullet	V _{23,77} (m/s)	P (bar)	Accuracy mean radius (cm) at 550 m	Tracer visibility
M2 Ball	835 ± 9,1	max. 3447	max. 19,05	-
M25 Tracer	812 ± 9,1	max. 3447	max. 45,7	Dim trace to min. 13 m from the weapon, visible from max. 92 m to min. 823 m from the weapon

Cal. 7.62x63mm | TECHNICAL DATA

Element	Material		Weight (g)		Length (mm)	
	M2 Ball	M25 Tracer	M2 Ball	M25 Tracer	M2 Ball	M25 Tracer
Bullet	Jacket	Tombac	9,85 (152 gr)	9,35 (144 gr)	28,82	36,50
	Core	Lead antimony				
	Tracer mixture	-	Tracer compos.			
	Cup, closure	-	Tombac			
Cartridge case	Brass		~12,90		63,35	
Propelling charge	NCD powder		~3,10	~3,00	-	
Primer	Boxer non-corrosive		0,34		3,30	
Cartridge			Average Q [100] ± 1 g		84,80	

Cal. 7.62x63mm | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 15 rounds in cardboard box • 10 cardboard boxes in PVC bag • 8 PVC bags (1200 rounds) in wooden case 	<ul style="list-style-type: none"> • 250 rounds in metal link belt M1 • 1 metal link belt in metal box M19A1 • 4 metal boxes (1000 rounds) in wooden crate



Cal. 7.62mm

M1909 BLANK

Cal. 7.62mm M1909 BLANK | TECHNICAL DATA

Element	Material	Weight (g)	Length (mm)
Cartridge case	Brass	-12,95	63,70
Propelling charge	For blank ammunition	-0,70	-
Primer	Boxer non-corrosive	0,34	3,30
Cartridge		Average Q (100) ± 1 g	63,30

Cal. 7.62mm M1909 BLANK | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 15 rounds in cardboard box • 10 cardboard boxes in PVC bag • 8 PVC bags (1200 rounds) in wooden case 	<ul style="list-style-type: none"> • 15 rounds in cardboard box • 36 cardboard boxes in metal box M2A1 (540 rounds) • 2 metal boxes in wooden crate (1080 rounds)



Cal. 7.9x57mm

M49 Ball, M70 Tracer

Cal. 7.9x57mm | BALLISTIC DATA

Cal. 7.9x57mm with bullet	$V_{23,77}$ (m/s)	P (bar)	Accuracy mean radius (cm) at 300 m	Tracer visibility
M49 Ball	720 ± 10	max. 2940	max. 9	-
M70 Tracer	705 ± 10	max. 2940	max. 15	Dim trace to min. 13,7 m from the weapon, visible from max. 115 m to min. 900 m from the weapon

Cal. 7.9x57mm | TECHNICAL DATA

Element		Material		Weight (g)		Length (mm)	
		M49 Ball	M70 Tracer	M49 Ball	M70 Tracer	M49 Ball	M70 Tracer
Bullet	Jacket	Tombac	Tombac	12,85 (198 gr)	12,55 (194 gr)	34,00	38,80
	Core	Lead antimony	Lead antimony				
	Tracer mixture	-	Tracer compos.				
	Cup, closure	-	Tombac				
	Tube	-	Tombac				
Cartridge case		Brass		~11,00		57,00	
Propelling charge		NCD powder		~3,00	~2,90	-	
Primer		Boxer non-corrosive		0,34		3,30	
Cartridge				Average Q (100) ± 1 g		80,60	

Cal. 7.9x57mm | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 15 rounds in cardboard box • 10 cardboard boxes in PVC bag • 8 PVC bags (1200 rounds) in wooden case 	<ul style="list-style-type: none"> • 15 rounds in cardboard box • 36 cardboard boxes in metal box M2A1 (540 rounds) • 2 metal boxes in wooden crate (1080 rounds)



Cal. 12.7x99mm

M33 Ball, M17 Tracer,
M8 API, M20 APIT, M2 AP

Cal. 12.7x99mm | BALLISTIC DATA

Cal. 12.7x99mm with bullet	V _{23,77} (m/s)	P+3Sd (bar)	Accuracy Sdx/Sdy (cm) at 550 m	Tracer visibility
M33 Ball	885,4 ± 9,1	max. 4500	max. 30	-
M17 Tracer	885,4 ± 9,1	max. 4500	max. 40	Visible trace of full luminosity from a point not greater than 200 m from the muzzle of the weapon to a point not less than 1500 m from the muzzle
M8 API	885,4 ± 9,1	max. 4500	max. 30	-
M20 APIT	885,4 ± 9,1	max. 4500	max. 40	Visible trace of full luminosity from a point not greater than 200 m from the muzzle of the weapon to a point not less than 1000 m from the muzzle
M2 AP	885,4 ± 9,1	max. 4500	max. 30	-

Penetration M8 API, M2 AP, M20 APIT: The bullet shall completely perforate 22 mm thick armour plate, hardness 321-375 HB, placed at 100 m from the muzzle of the weapon.

Incendiary flash M8 API, M20 APIT: The incendiary composition of bullets shall ignite produce an incandescent flash when fired against a target at 160 m.

Cal. 12.7x99mm | TECHNICAL DATA

Element	Material					Weight (g)					Length (mm)										
	M33 Ball	M17 Tracer	M8 API	M20 APIT	M2 AP	M33 Ball	M17 Tracer	M8 API	M20 APIT	M2 AP	M33 Ball	M17 Tracer	M8 API	M20 APIT	M2 AP						
Bullet	Jacket	Tombac	Tombac	Tombac	Tombac	Tombac	42,31	40,05	42,65	40,12	42,56	58,67	58,67	58,67	58,67	58,67					
	Core	Steel	Steel	Steel	Steel	Steel															
	Tracer mixture	-	Tracer compos.	-	Tracer compos.	-											(653 gr)	(618 gr)	(661 gr)	(620 gr)	(656 gr)
	Cup, closure	Lead antimony	Tombac	Lead antimony	Tombac	Lead antimony															
	Filler, point	Borax	Borax	Thermit comp.	Thermit compos.	Borax															
Cartridge case	Brass					~55,10					99,31										
Propelling charge	NCD powder					~15,10	~14,90	~15,10	~14,90	~15,10	-										
Primer	Boxer non-corrosive					1,23					5,54										
Cartridge						Average Q (100) ± 2g					138,43										

Cal. 12.7x99mm | PACKAGING

Version 1	Version 2	Version 3
<ul style="list-style-type: none"> • 140 rounds in metal box M2A1 • 2 metal boxes (280 rounds) in wooden crate 	<ul style="list-style-type: none"> • 10 rounds in cardboard box • 5 cardboard boxes (50 rounds) in PVC bag • 2 PVC bags (100 rounds) in carton case 	<ul style="list-style-type: none"> • 100 rounds in metal link belt (M9) • 1 metal link belts in metal box M2A1 • 2 metal boxes in wooden crate (200 rounds)



Cal. 12.7x99mm

M33 SNIPER

Cal. 12.7x99mm SNIPER | BALLISTIC DATA

Cal. 12.7x99mm with bullet	$V_{23,77}$ (m/s)	P+3Sd (bar)	Accuracy mean radius
M33 SNIPER	885,4± 9,1	max. 4500	R _{mean} ≤ 1.33 MOA R _{mean} ≤ 21.3 cm at 550 m (600 yards)

Cal. 12.7x99mm SNIPER | TECHNICAL DATA

Element		Material
Bullet	Jacket	Tombac
	Core	Steel
	Cup, closure	Lead antimony
	Filler, point	Borax
Cartridge case		Brass
Propelling charge		NCD powder
Primer		Boxer non-corrosive

Cal. 12.7x99mm SNIPER | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 140 rounds in metal box M2A1 • 2 metal boxes (280 rounds) in wooden crate 	<ul style="list-style-type: none"> • 10 rounds in cardboard box • 5 cardboard boxes (50 rounds) in PVC bag • 2 PVC bags (100 rounds) in carton case



Cal. 12.7x99mm

SPECIAL BULLETS

Solid Ball, Solid AP, Solid API

Cal. 12.7x99mm SPECIAL BULLETS | BALLISTIC DATA

Cal. 12.7x99mm with bullet	P+3Sd (bar)	Accuracy mean radius
Solid Ball	max. 4500	$R_{mean} \leq 1 \text{ MOA}$ $R_{mean} \leq 32.01 \text{ cm at } 1100 \text{ m (1200 yards)}$
Solid AP	max. 4500	$R_{mean} \leq 1.05 \text{ MOA}$ $R_{mean} \leq 33.61 \text{ cm at } 1100 \text{ m (1200 yards)}$
Solid API	max. 4500	$R_{mean} \leq 1.1 \text{ MOA}$ $R_{mean} \leq 35.21 \text{ cm at } 1100 \text{ m (1200 yards)}$

Used for Sniper Rifles caliber 12.7mm (.50)

Penetration Solid AP, Solid API: The bullet shall completely perforate 20mm thick armour plate (hardness 302-341 HB) placed at 500 m from the muzzle of the weapon.

Incendiary Solid API: At 500 m, the incendiary composition of bullets shall ignite cloth soaked in petrol located behind the armour plate.

Cal. 12.7x99mm SPECIAL BULLETS | TECHNICAL DATA

Element		Material		
		Solid Ball	Solid AP	Solid API
Bullet	Jacket	-	Brass	Brass
	Core	CuZn39Pb3	Steel tungsten	Steel tungsten
	Filler	-	-	Thermite comp.
Cartridge case		Brass		
Propelling charge		NCD powder		
Primer		Boxer non-corrosive		

Cal. 12.7x99mm SPECIAL BULLETS | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 10 round in cardboard box • 10 cardboard boxes (100 rounds) in metal box M2A1 • 2 metal boxes (200 rounds) in wooden crate 	<ul style="list-style-type: none"> • 10 rounds in cardboard box • 5 cardboard boxes (50 rounds) in PVC bag • 2 PVC bags (100 rounds) in carton case



Cal. 12.7mm

M1A1 BLANK

Cal. 12.7mm M1A1 BLANK | BALLISTIC DATA

Cyclic rate
The blank cartridge shall operate the M2 HB machine gun at an average cycle rate of not less than 450 cartridges per minute, and not more than 600 cartridges per minute at -18°C to +52°C

Used for 12.7x99mm caliber weapon

Cal. 12.7mm M1A1 BLANK | TECHNICAL DATA

Element	Material	Weight (g)	Length (mm)
Cartridge case	Brass	~55,10	99,46
Propelling charge	NC powder	~2,80	-
Primer	Boxer non-corrosive	1,23	-
Cartridge		Average Q (100) ± 1 g	99,30

Cal. 12.7mm M1A1 BLANK | PACKAGING

Version 1	Version 2	Version 3
<ul style="list-style-type: none"> • 140 rounds in metal box M2A1 • 2 metal boxes (280 rounds) in wooden crate 	<ul style="list-style-type: none"> • 10 rounds in cardboard box • 5 cardboard boxes (50 rounds) in PVC bag • 2 PVC bags (100 rounds) in carton case 	<ul style="list-style-type: none"> • 100 rounds in metal link belt (M9) • 1 metal link belts in metal box M2A1 • 2 metal boxes in wooden crate (200 rounds)



Cal. 12.7x108mm

B32 API, BZT44 API,
Ball, AP, Tracer

Cal. 12.7x108mm | BALLISTIC DATA

Cal. 12.7x108mm with bullet	V _{23,77} (m/s)	P (bar)	Accuracy mean radius (cm) at 300 m	Tracer visibility
B32 API	810 - 825	max. 3040	max. 20	-
BZT44 API	810 - 825	max. 3040	max. 20	Visible trace not less than 1000 m from the weapon
Ball	810 - 825	max. 3040	max. 20	-
AP	810 - 825	max. 3040	max. 20	-
Tracer	810 - 825	max. 3040	max. 20	Visible trace not less than 1200 m from the weapon

Used for 12.7 x 108mm caliber weapon

Penetration B32 API, AP: The bullet shall demonstrate penetration 22 mm thick armour plate (321-375 HB) at 100 meters from the weapon.

Penetration BZT44 API: The bullet shall demonstrate penetration 15 mm thick armour plate (321-375 HB) at 100 meters from the weapon.

Incendiary B32 API, BZT 44 API: At 70m, the incendiary composition of bullets shall ignite cloth soaked in petrol located behind the armour plate 15mm (321- 375 HB).

Cal. 12.7x108mm | TECHNICAL DATA

Element	Material					Weight (g)					Length (mm)						
	B32 API	BZT44 API	Ball	AP	Tracer	B32 API	BZT44 API	Ball	AP	Tracer	B32 API	BZT44 API	Ball	AP	Tracer		
Bullet	Jacket	Tombac plated steel strip or cooper washer steel strip	Tombac plated steel strip or cooper washer steel strip	Tombac plated steel strip or cooper washer steel strip	Tombac plated steel strip or cooper washer steel strip	Tombac plated steel strip or cooper washer steel strip											
	Core	Steel	Steel	Steel	Steel	Steel											
	Tracer mix.	-	Tracer compos.	-	-	Tracer compos.	(740 gr)	(679 gr)	(740 gr)	(740 gr)	(679 gr)	64,00	64,50	64,60	64,60	64,50	
	Tube	-	Tombac	-	-	Tombac											
	Filler, point	Thermit compos.	Thermit compos.	Borax.	Borax	Borax											
Liner	Lead antim.	Lead antim.	Lead antim.	Lead antim.	Lead antim.												
Cartridge case	Brass					~67,00					108						
Propelling charge	NC powder					~16,50	~16,50	~16,50	~16,50	~16,50	-						
Primer	Berdan					1,10					4,15						
Cartridge						Average Q (100) ± 2g					147,00						

Cal. 12.7x108mm | PACKAGING

Version 1	Version 2	Version 3	Version 4
<ul style="list-style-type: none"> • 104 rounds in sheet metal box • 2 sheet metal boxes (208 rounds) in wooden crate 	<ul style="list-style-type: none"> • 50 rounds in one DShK belt • 1 DShK belts in one metal box (50 rounds) • 2 metal boxes in wooden crate (100 rounds) 	<ul style="list-style-type: none"> • 10 rounds in cardboard box • 5 cardboard boxes (50 rounds) in PVC bag • 2 PVC bags (100 rounds) in carton case 	<ul style="list-style-type: none"> • 60 rounds in one DShK belt • 1 DShK belts in one DShK function metal box (60 rounds) • 3 DShK function metal boxes in wooden crate (180 rounds)



Cal. 12.7x108mm

SNIPER

Cal. 12.7x108mm SNIPER | BALLISTIC DATA

Cal. 12.7x108mm with bullet	$V_{23.77}$ (m/s)	P (bar)	Accuracy mean radius (cm) at 300 m
M33 SNIPER	810-825	max. 3040	max. 15

Used for 12.7 x 108 mm caliber weapon

Cal. 12.7x108mm SNIPER | TECHNICAL DATA

Element		Material	Weight (g)	Length (mm)
Bullet	Jacket	Tombac plated steel strip or cooper washer steel strip	48,00 (755 gr)	64,00
	Core	Steel		
	Filler, point	Borax		
	Liner	Lead antimony		
Cartridge case		Brass	~67,00	108,00
Propelling charge		NC powder	~17,00	-
Primer		Berdan	1,10	4,15
Cartridge			Average Q (100) ± 2 g	147,00

Cal. 12.7x108mm SNIPER | PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 104 rounds in sheet metal box • 2 sheet metal boxes (208 rounds) in wooden crate 	<ul style="list-style-type: none"> • 10 rounds in cardboard box • 5 cardboard boxes (50 rounds) in PVC bag • 2 PVC bags (100 rounds) in carton case

CERTIFICATES



Bureau Veritas; "Igman" d.d. Konjic successfully adopted new versions of three international quality management standards: ISO 9001:2015, ISO 14001:2015, and ISO 45001. All these certificates are a proof that we meet the strictest quality and safety standards in the field of highly sophisticated ammunition production.



Bisnode Group; Platinum Creditworthiness Rating (AAA)



LRC BIS; According to criteria of the creditworthiness assessment company, „Igman“ was found to be member of the elite group of financially most reliable companies in Bosnia and Herzegovina.



100 Largest in Bosnia and Herzegovina; 1st place for 2022 in the Large Company category – military industry.



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