
igman
SINCE 1950

We export products to 5 continents in more than 50 countries

igman
SINCE 1950

CONTENT:

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.

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 1,200 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.

WHERE BOSNIA MEETS HERZEGOVINA

IGMAN was founded on March 06, 1950

OWNERSHIP STRUCTURE:

51%
FEDERATION OF BOSNIA AND HERZEGOVINA

49%
PRIVATE OWNERSHIP

igman
SINCE 1950

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. Igman 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 Igman.

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.

Ammunition production based on the following standards:

MILITARY AMMUNITION:

- standard
- non-standard

HUNTING & SPORTS AMMUNITION

*Custom made ammunition per customer request is also available

STANDARD

- 9x19
- 5.56x45
- 5.56x45 BLANK M200
- 5.56X45 BLANK M200A1
- 7.62X63
- 7.62X63 BLANK M1999
- 7.62X51
- 7.62X51 BLANK M82
- 7.62X51 MATCH M118
- 7.62X51 SNIPER BULLETS:FMJBT (10.9G I 11.7G) AND HPBT (10.9G)
- 7.62X51 SNIPER HPBT 11,34G (175GR)
- 7.9X57
- 12.7X99
- 12.7X99 BLANK M1A1
- 12.7X99 APEI,MO2
- 12.7X99 SPECIAL BALLS:M33 SNIPER SOLID BALL
- 12.7X99 SPECIAL BALLS SOLID: API, AP

NON -STANDARD

- 7.62x54R
- 7.62x54R BLANK
- 7.62x54R SNIPER
- 7.62x39
- 7,62x39 IGNITION CHARGE FOR RIFLE GRENADE
- 7.62X39 BLANK M68
- 12.7X108
- 12.7X108 SNIPER

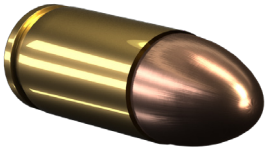
M27, M13, M9

Our ammunition is in accordance with:

STANAG 4383 12.7 mm Ammunition Packed as Linked Belts
Multi Caliber MOPI for 12.7 mm Ammunition - MOPI AC/225(LG/3-G/1)0/11
Multi Caliber MOPI for 5.56 mm, 7.62 mm, 9 mm and 12.7 mm Ammunition- PFP(NAAG-LG/3-SG/1)0(2004)1
STANAG 2310 Manual of proof and Inspection Procedures for NATO 7.62mm Ammunition (MOPI) AC/225(LG3-SG1)09
STANAG 4172 Manual of proof and Inspection Procedures for NATO 5.56mm Ammunition (MOPI) AC/225(LG3-SG1)08
Product quality regulations- PKP 0969/84

CALIBER

Cal. 9x19 mm



CALIBER

Cal. 9x19 mm

BALLISTIC DATA

Used for civilan purposes for 9x19mm caliber weapon				
Cal. 9x19 with bullet	**Energy (J)**	**$V_{4,5}$ (m/s)**	**P_{max} (bar)**	**Accuracy mean radius**
FMJ 124gr (8g)	-	340 ± 15	max. 2 350	Max 7,6cm at 50m
FMJ 115gr (7,45g)	-	340 ± 15	max. 2 350	Max 7,6cm at 50m

Used for military purposes for 9x19mm caliber weapon				
Cal. 9x19 with bullet	**Energy (J)**	**V_{16} (m/s)**	**P_{max} 3Sd (bar)**	**Accuracy mean radius**
FMJ 124gr (8g)	491-713	370 ± 10	max. 2 850	Sdx/Sdy Max 5cm at 50m
FMJ 115gr (7,45g)	491-713	370 ± 10	max. 2 850	Sdx/Sdy Max 5cm at 50m

Used for competition for 9x19mm caliber weapon		
FMJ 147gr (9,5g) IPSC	Coefficient	$\frac{\mathrm{m(grain)}\ x\ V(^{ft}/_{s})}{1000}$
	≥ 125	

TECHNICAL DATA

ELEMENT		MATERIAL	Weight (g)	Length (mm)
Bullet	Jacket	Tombac CuZn10	FMJ 124gr (8g) FMJ 115gr (7,45g) FMJ 147gr (9,5g) IPSC	15,8 $^{-0.6}$
	Core	Lead antimony		
Cartridge case		Brass CuZn28	~3.9	19,10 $^{-0.2}$
Propelling charge		Smokeless, single base, flake powder	~0,40	-
Primer		Small pistol, Boxer, non corrosive	0,23	3,10
		Cartridge	**Average Q (100)± 0.3g**	**29,69 $^{-0,69}$**

Packaging

Version 1

- 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 wire bound wooden box

Version 2

- 20 rounds in PVC separator
- 1 PVC separator in cardboard box
- 50 cardboard boxes in carton case

Packaging and marking could be done according to the special buyer's request too!

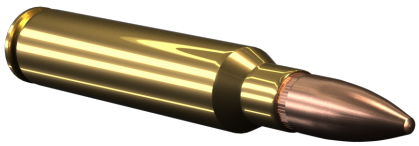
CALIBER

Cal. 5.56x45mm

WITH BULLET M855, M856 Tracer, M193, M196 Tracer

BLANK AMMUNITION

M200, M200A1



CALIBER

Cal. 5.56x45 mm

BALLISTIC DATA

Cal. 5.56 with bullet	Energy (J)	$V_{23.77}$ (m/s)	P_{max} (bar)	Accuracy Rs	Tracer visibility
M 193	-	964,7 ± 12	Max. 3 792	Max 5.08 cm at 180 m	-
M 196	-	949,5 ± 12	Max. 3 792	Max 12.7 cm at 183 m	Visible trace from min 69 m to max 457 m from the muzzle of the weapon
Used for 5.56x45mm caliber weapon with a 1:12" twist barrel					
Cal. 5.56 with bullet	**Energy (J)**	**$V_{23.77}$ (m/s)**	**P_{max} 3Sd (bar)**	**Accuracy Rs**	**Tracer visibility**
M 855 (SS109)	at 24(J)	920,5 ± 12	Max. 4 450	Sdx/Sdy Max 20 cm at 550 m	-
M 856	at 24(J)	917,4 ± 12	Max. 4 450	Sdx/Sdy Max 30 cm at 550 m	Dim trace to min 13 m from the muzzle of the weapon, visible from max 140 m to min 600 m from the muzzle of the weapon
Used for 5.56x45mm caliber weapon with a 1:7" twist barrel					

Penetration (M855/SS109): Min. 80% Bullets shall completely perforate the mild seel plate 3,5mm nominal (10 gauge) thickness, defined in SAE 1010 or SAE 1020, Rockwell hardness, minimum B 55, maximum B 70. The plate shall be placed 570m from the muzzle at 0 degree obliguity (normal to the line of fire).

TECHNICAL DATA

ELEMENT		MATERIAL			
		M 193	M 196	M 855/ SS109	M 856
Bullet	Jacket	Tombac	Tombac plated steel strip or copper washer steel strip	Tombac	Tombac plated steel strip or copper washer steel strip
	Core	Lead antimony			
	Core	-	-	Steel	-
	Tracer	-	Tracer compos.	-	Tracer compos.
Cartridge case		Brass			
Propelling charge		Spherical powder			
Primer		Boxer non corrosive			
Cartridge					

Ball, M 193

Ball, M 855 (SS109)

Tracer, M 196

Tracer, M 856

Weight (g)				Length (mm)			
M 193	M 196	M 855	M 856	M 193	M 196	M 855	M 856
~3,56 g 55 gr	~3,5 g 54 gr	~4,00 g 62 gr	~3,92 g 61 gr	19,17	23,2	23,4	28,45
6,10				44,70			
1,64	1,69	1,60	1,36	-			
0,23				3,10			
Average Q (100)± 0.4g				**57,40**			

Packaging

Version 1	Version 2	Version 3	Version 4
• 20 rounds in cardboard box • 50 cardboard boxes in metalbox M2A1 • 2 metal boxes (2000 rounds) in wire bound wooden box	• 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC (1000 rounds) bags in wooden case	• 200 rounds in metal link belt (M27) • 4 metal link belts in metal box M2A1 (800 rounds) • 2 metal boxes wire bourd wooden box (1600 rounds)	• 20 rds in a clip • 5 clips in a cardboard box • 20 cardboard boxes in a metal box M2A1 • 2 metal boxes in a wooden crate

Packaging and marking could be done according to the special buyer's request too!

CALIBER

Cal. 5.56x45mm
HP (High Pressure)
bullet weight 5,5g (85gr)

BALLISTIC DATA

P max (bar)
4 836 ±207
Used only for proof testing 5.56x45mm caliber weapon

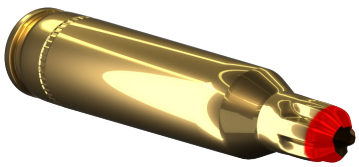
TECHNICAL DATA

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

Packaging

Version 1	Version 2
• 20 rounds in cardboard box • 50 cardboard boxes in metal box M2A1 • 2 metal boxes (2000 rounds) in wire bound wooden box	• 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 10 PVC (2000 rounds) bags in wooden case

Packaging and marking could be done according to the special buyer's request too!



CALIBER

Cal. 5.56 mm
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			

TECHNICAL DATA

ELEMENT	MATERIAL	Weight (g)	Length (mm)
Cartridge case	Brass	~6,20	48,6
Propelling charge	For blank ammunition	0,50	-
Primer	Boxer non corrosive	0,23	3,10
	Cartridge	**Average Q (100) ± 0.4g**	**48,2**

Packaging

Version 1

- 20 rounds in cardboard box
- 50 cardboard boxes in metal box M2A1
- 2 metal boxes (2000 rounds) in wire bound wooden box

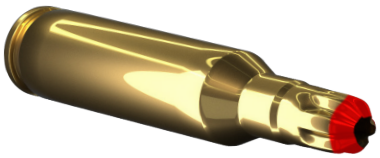
Version 2

- 20 rounds in cardboard box
- 10 cardboard boxes (200 rounds) in PVC bag
- 5 PVC bags (1000 rounds) in carton case

Version 3

- 200 rounds in metal link belt (M27)
- 4 metal link belts in metal box M2A1 (800 rounds)
- 2 metal boxes wire bound wooden box (1600 rounds)

Packaging and marking could be done according to the special buyer's request too!



CALIBER

Cal. 5.56 mm
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			

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) ± 0.4g**	**53,5**

Packaging

Version 1

- 20 rounds in cardboard box
- 50 cardboard boxes in metal box M2A1
- 2 metal boxes (2000 rounds) in wire bound wooden box

Version 2

- 20 rounds in cardboard box
- 10 cardboard boxes (200 rounds) in PVC bag
- 5 PVC bags (1000 rounds) in carton case

Version 3

- 200 rounds in metal link belt (M27)
- 4 metal link belts (800 rounds) in metal box M2A1
- 2 metal boxes (1600 rounds) in wire bound wooden box

Packaging and marking could be done according to the special buyer's request too!

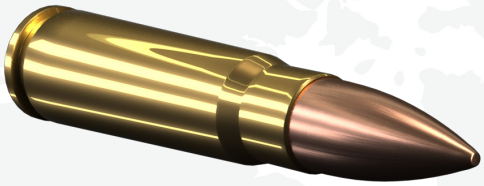
CALIBER

Cal. 7.62x39mm

M67 Ball, M78 Tracer, Blank M68, AP,

BLANK AMMUNITION

Blank M68, Ignition charge for Rifle grenade



CALIBER

Cal. 7.62x39 mm

BALLISTIC DATA

Cal. 7.62 with bullet	V_{25} (m/s)	P_{max} (bar)	Accuracy Rs	Tracer visibility
M 67	733 ± 8	2 550	⩽ 15cm at 300m (PM M72)	-
M 78	706 ± 8	2 550	⩽ 30cm at 300m (PM M72)	Dim trace to min 15 m from weapon, visible from max 115 m to min 800 m from weapon
API M82	733 ± 8	2 550	⩽ 20cm at 300m (PM M72)	-
AP	733 ± 8	2 550	⩽ 20cm at 300m (PM M72)	-
Used for 7.62x39 mm weapon caliber				

Penetration (API M82, AP): The bullet of the sample cartridgees shall demonstrate complete penetration of 6 mm thick nickel-chromium steel plate target located 100 meters from the weapon.

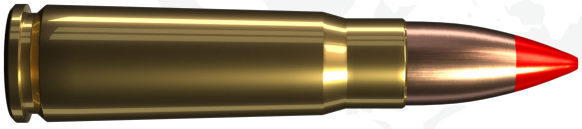
Incendiary (API): At 100 m, the incendiary composition of bullets shall ignite cloth soaked in petrol located behind the armor plate.

TECHNICAL DATA

ELEMENT		MATERIAL					
		M 67	M 78	API M 82		AP	
Bullet	Jacket	Tombac		Copper washer steel strip		Tombac	
	Core	Lead antimony		Steel	Lead antimony	Steel	Lead antimony
	Tracer	-	Tracer compos.	-		-	
	Tube	-	Tombac	Tombac		-	
	Incend. comp	-	-	Thermite comps.		-	
Cartridge case		Brass					
Propelling charge		Spherical					
Primer		Boxer non corrosive					

Cartridge

Ball, M 67



Tracer, M 78

Armor piercing incendiary M 82

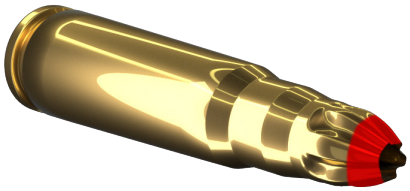
AP

Weight (g)				Length (mm)			
M 67	M 78	API M 82	AP	M 67	M 78	API M 82	AP
~8,00 g 123 gr	~7,7 g 119 gr	~7,55 g 116 gr	~8,00 g 123 gr	23,9	27,8	26,4	25,3
7,4				38,65			
1,67	1,62	1,70	1,70	-			
0,34				3,30			
Average Q (100) ± 1g				**55,80**			

Packaging

Version 1	Version 2
• 15 rounds in cardboard box • 54 cardboard boxes (810 rounds) in metal box M2A1 • 2 metal boxes (1620 rounds) in wire bound wooden box	• 15 rounds in cardboard box • 8 cardboard boxes (120 rounds) in PVC bag • 6 PVC bags (720 rounds) in carton case

Packaging and marking could be done according to the special buyer's request too!



CALIBER

Cal. 7.62 mm
M 68 BLANK

BALLISTIC DATA

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

TECHNICAL DATA

ELEMENT	MATERIAL	Weight (g)	Length (mm)
Cartridge case	Brass	~8,1	49,5
Propelling charge	For blank ammunition	~0,8	-
Primer	Boxer non corrosive	0,34	3,30
	Cartridge	**Average Q (100) ± 0.4g**	**49,3**

Packaging

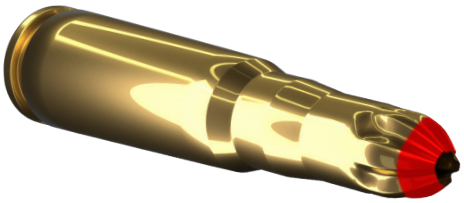
Version 1

- 15 rounds in cardboard box
- 69 cardboard boxes (1035 rounds) in metal box M2A1
- 2 metal boxes (2070 rounds) in wire bound wooden box

Version 2

- 15 rounds in cardboard box
- 8 cardboard boxes (120 rounds) in PVC bag
- 6 PVC bags (720 rounds) in carton case

Packaging and marking could be done according to the special buyer's request too!



CALIBER

Cal. 7.62 mm
Ignition charge for Rifle Grenade

BALLISTIC DATA

P_{max} (bar)	V_6 (m/s)
1 570	59.5 ± 0.5

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) ± 0.4g**	**55,5**

Packaging
Version 1
• 15 rounds in cardboard box • 10 cardboard boxes in PVC foil

Packaging and marking could be done according to the special buyer's request too!

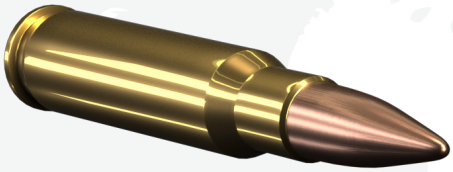
CALIBER

Cal. 7.62x51mm

M80 Ball, M62 Tracer , M61 AP, API, APT,
SNIPER BULLET: FMJBT(10.8g; 11.7g) and HPBT(10.9g)

BLANK AMMUNITION

M 82 BLANK



CALIBER

Cal. 7.62x51 mm

BALLISTIC DATA

Cal. 7.62 with bullet	Energy (J)	$V_{23.77}$ (m/s)	P_{max} 3Sd (bar)	Accuracy Rs	Tracer visibility
M 80 Ball	at 24 m[J]	833,6 ± 9.14	max. 4 450	Sdx/Sdy Max 20 cm at 550 m	-
M 62 Tracer	at 24 m[J]	812,3 ± 9.14	max. 4 450	Sdx/Sdy Max 30 cm at 550 m	Dim tracer to min13m from the muzzle of the weapon, visible from max 140 to min. 775m from the muzzle of the weapon
M 61 AP	at 24 m[J]	833,6 ± 9.14	max. 4 450	Sdx/Sdy Max 20 cm at 550 m	-
Used for 7.62x51mm weapon caliber					

Penetration (AP M61): The bullet of the sample cartridgees shall demonstrate complete penetration of 3,5 mm thick nickel-chromium steel plate target located 1100 meters from the weapon.

TECHNICAL DATA

ELEMENT		MATERIAL		
		M 80 BALL	M 62 Tracer	M 61 AP
Bullet	Jacket	Tombac	Tombac	Tombac
	Core	Lead antimony	Lead antimony	Steel
	Tracer	-	Tracer compos.	-
	Core	-	-	Lead antimony
Cartridge case		Brass		
Propelling charge		Spherical powder		
Primer		Boxer non corrosive		

Cartridge

Packaging

Version 1	Version 2	Version 3	Version 4
• 20 rounds in cardboard box • 28 cardboard boxes (560 rounds) in metal box M2A1 • 2 metal boxes M2A1(1120 rounds) in wire bound wooden box	• 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC bags (1000 rounds) in carton case	• 250 rounds in metal link belt M13 • 2 metal link belts in metal box M2A1 • 2 metal boxes M2A1(1000 rounds) in wire bound wooden box	• 250 rounds in metal link belt (M13) • 1 metal link belts in metal box M19A1 • 4 metal boxes (1000 rounds) in wire bound wooden box

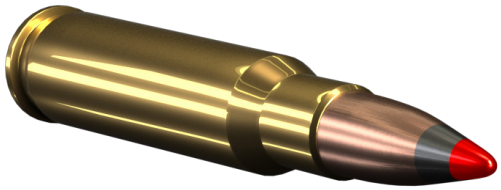
Packaging and marking could be done according to the special buyer's request too!

Weight (g)			Length (mm)		
M 80	M 62	AP M 61	M 80	M 62	AP M 61
~9,67 g 149 gr	~9,46 g 146 gr	~9,55 g 147 gr	29,46	34,29	32,20
11,50	11,50	11,50	51,18		
2,85	2,80	2,82	-		
0,34			3,30		
Average Q (100) ± 1g			**71,12**		

Ball, M 80

Tracer, M 62

Armor piercing M 61



CALIBER

Cal. 7.62x51 mm
API, APT

BALLISTIC DATA

Cal. 7.62 with bullet	Energy (J)	$V_{23.77}$ (m/s)	P_{max} 3Sd (bar)	Accuracy Rs	Tracer visibility
API	at 24 m[J]	833,6 ± 9.14	max. 4 450	Max 30 cm at 550 m Sdx/Sdy	-
APT	at 24 m[J]	812,3 ± 9.14	max. 4 450	Max 30 cm at 550 m Sdx/Sdy	Dim tracer to min13m from the muzzle of the weapon, visible from max 140 to min. 775m from the muzzle of the weapon
Used for 7.62x51mm weapon caliber					

Penetration (API,APT): The bullet of the sample cartridgees shall demonstrate complete penetration of 6 mm thick nickel-chromium steel plate target 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 armor plate.

TECHNICAL DATA

ELEMENT		MATERIAL	
		API	APT
Bullet	Jacket	Tombac	Tombac
	Core	Steel	Steel
	Tracer	-	Tracer compos.
	Core	Lead antimony	-
Cartridge case		Brass	
Propelling charge		Spherical powder	
Primer		Boxer non corrosive	
Cartridge			

Packaging

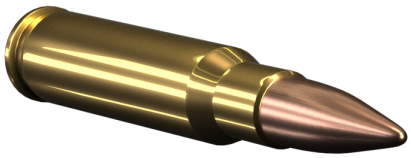
Version 1	Version 2
• 20 rounds in cardboard box • 28 cardboard boxes (560 rounds) in metal box M2A1 • 2 metal boxes (1120 rounds) in wire bound wooden box	• 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC bags (1000 rounds) in carton case

Packaging and marking could be done according to the special buyer's request too!

Weight (g)		Length (mm)	
API	APT	API	APT
~8,75 g 135 gr	~8,70 g 134 gr	32,20	35
11,50	11,50	51,18	
2,80	2,80	-	
0,34		3,30	
Average Q (100) ± 1g		**71,12**	

API

APT



CALIBER

Cal. 7.62x51 mm
SNIPER BULLET:
FMJBT(10.9g; 11.7g) and
HPBT(10.9g)

BALLISTIC DATA

Cal. 7.62 with bullet	P_{max} (bar)	Mean radius
FMJBT (10.9g)	Corrected mean case mouth pressure +3Sd for 21 C: Max. 4 450 bar	Max 0.6 cm MOA 2)*
FMJBT (11.7g)		
HPBT (10.9g)		
Used for Sinper RIFLES Caliber 7.62mm		

2)*

Distance (m)	100	200	300	400	500	550	600
Accurancy (cm)	*)	3.5	5.24	6.98	8.73	9.6	10.48

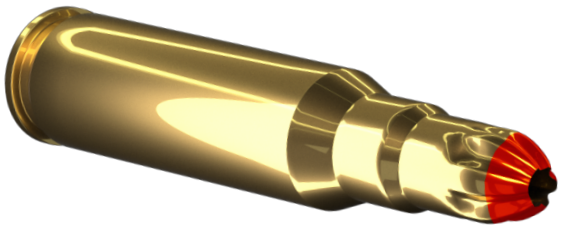
TECHNICAL DATA

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

Packaging

Version 1	Version 2
• 20 rounds in cardboard box • 28 cardboard boxes (560 rounds) in metal box M2A1 • 2 metal boxes (1120 rounds) in wire bound wooden box	• 20 rounds in cardboard box • 10 cardboard boxes (200 rounds) in PVC bag • 5 PVC bags (1000 rounds) in carton case

Packaging and marking could be done according to the special buyer's request too!



CALIBER

Cal. 7.62 mm, M 82 BLANK

BALLISTIC DATA

Cyclic rate
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.
Used for 7.62x51mm weapon caliber

TECHNICAL DATA

ELEMENT	MATERIAL	Weight (g)	Length (mm)
Cartridge case	Brass	~11,80	64,50
Propelling charge	For blank ammunition	~0,85	-
Primer	Boxer non corrosive	0,34	-
	Cartridge	**Average Q (100) ± 0.4g**	**63,15**

Packaging

Version 1

- 20 rounds in cardboard box
- 28 cardboard boxes (560 rounds) in metal box M2A1
- 2 metal boxes (1120 rounds) in wire bound wooden box

Version 2

- 20 rounds in cardboard box
- 10 cardboard boxes (200 rounds) in PVC bag
- 5 PVC bags (1000 rounds) in carton case

Version 3

- 250 rounds in metal link belt (M13)
- 2 metal link belts (500 rounds) in metal box M2A1
- 2 metal boxes (1000 rounds) in wire bound wooden box

Version 4

- 250 rounds in metal link belt (M13)
- 1 metal link belts in metal box M19A1
- 4 metal boxes (1000 rounds) in wire bound wooden box

Packaging and marking could be done according to the special buyer's request too!

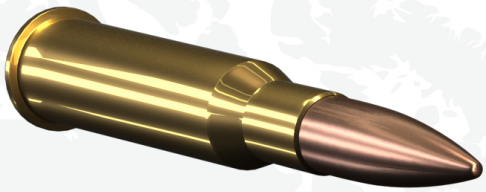
CALIBER

Cal. 7.62x54 R

M 30 Ball, M87 Tracer, API

BLANK AMMUNITION

BLANK



CALIBER

Cal. 7.62x54 R, M 30 Ball, M 87 Tracer, API

BALLISTIC DATA

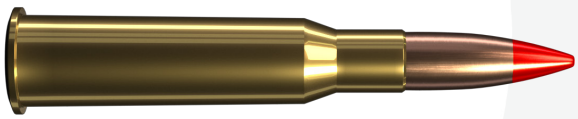
Cal. 7.62 with bullet	$V_{23.77}$ (m/s)	P_{max} (bar)	Accuracy Rs	Tracer visibility
M 30 Ball	785 ± 10	2 800	Max 18 cm at 300 m	-
M 87	810 ± 10	2 800	Max 36 cm at 300 m	Visible trace 1000 m from the muzzle of the weapon
M 90 API	830 ± 10	2 800	Max 20 cm at 300 m	-

Penetration: The bullet core or bullet of the cartridge shall completely perforate 10mm of armor plate placed at 200 m from the muzzle of the weapon.

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

Ball, M 30

API, M 90



Tracer, M 87

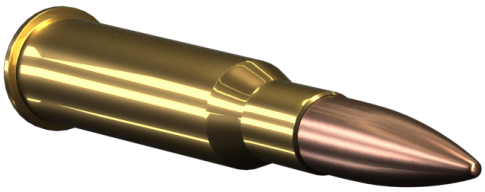
TECHNICAL DATA

ELEMENT		MATERIAL			Weight (g)			Length (mm)		
		M 30 Ball	M 87	M 90 API	M 30 Ball	M 87	M 90 API	M 30 Ball	M 87	M 90 API
Bullet	Jacket	Tombac	Copper washer steel strip	Tombac	~11 g 170 gr	~9,65 g 149 gr	~10,3 g 159 gr	30,5	36,6	36
	Core	Lead antimony	Lead antimony	Steel						
	Tracer	-	Tracer compos.	-						
	Incend.	-	-	Thermit Compos.						
	Foil	-	-	Lead						
Cartridge case		Brass			10			53,65		
Propelling charge		NC powder			3,00	3,17	~3,20	-		
Primer		Boxer non corrosive			0,34			3,30		
Cartridge					**Average Q (100) ± 0.5g**			**77,16**		

Packaging

Version 1	Version 2
• 15 rounds in cardboard box • 28 cardboard boxes (420 rounds) in metal box M2A1 • 2 metal boxes (840 rounds) in wire bound wooden box	• 15 rounds in cardboard box • 10 cardboard boxes (150 rounds) in PVC bag • 5 PVC bags (750 rounds) in carton case

Packaging and marking could be done according to the special buyer's request too!



CALIBER

Cal. 7.62x54 R, SNIPER

BALLISTIC DATA

Cal. 7.62 with bullet	V_{25} (m/s)	P_{max} (bar)	Accuracy Rs
SNIPER	785 ± 10	2 800	Max 12,6 cm at 300 m

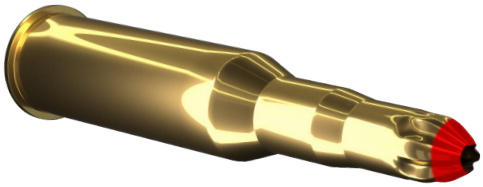
TECHNICAL DATA

ELEMENT		MATERIAL	Weight (g)	Length (mm)
Bullet	Jacket	Tombac	~11,8 g 182 gr	32,9
	Core	Lead antimony		
Cartridge case		Brass	10	53,65
Propelling charge		NCD powder	3,00	-
Primer		Boxer non corrosive	0,34	3,30
		Cartridge	**Average Q (100) ± 0.5g**	**77,16**

Packaging

Version 1	Version 2
• 15 rounds in cardboard box • 28 cardboard boxes (420 rounds) in metal box M2A1 • 2 metal boxes (840 rounds) in wire bound wooden box	• 15 rounds in cardboard box • 10 cardboard boxes (150 rounds) in PVC bag • 5 PVC bags (750 rounds) in carton case

Packaging and marking could be done according to the special buyer's request too!



CALIBER

Cal. 7.62 R, BLANK

BALLISTIC DATA

Cyclic rate
The cartridges shall operate the M84 Machine Gun at a cyclic rate of not less than 600 cartridges per minute.
Used for M84 Machine Gun

TECHNICAL DATA

ELEMENT	MATERIAL	Weight (g)	Length (mm)
Cartridge case	Brass	~11,90	72
Propelling charge	For blank ammunition	Approx. 0,85	-
Primer	Boxer non corrosive	0,34	-
	Cartridge	**Average Q (100) ± 0.4g**	**72,50**

Packaging

Version 1	Version 2
• 15 rounds in cardboard box • 28 cardboard boxes (420 rounds) in metal box M2A1 • 2 metal boxes (840 rounds) in wire bound wooden box	• 15 rounds in cardboard box • 10 cardboard boxes (150 rounds) in PVC bag • 6 PVC bags (900 rounds) in carton case

Packaging and marking could be done according to the special buyer's request too!

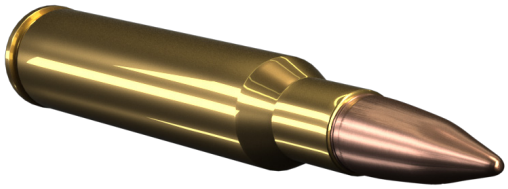
CALIBER

Cal. 7.62x63 mm

M2 Ball, M25 Tracer

BLANK AMMUNITION

M 199 BLANK



CALIBER

Cal. 7.62x63 mm

BALLISTIC DATA

Cal. 7.62 with bullet	$V_{23.77}$ (m/s)	P_{max} (bar)	Accuracy Rs	Tracer visibility
M 2	835 ± 9,1	3 447	Max 19,05 cm at 549 m	-
M 25	812 ± 9,1	3 447	Max 45,7 cm at 549 m	Dim tracer to min 13 m from the muzzle of the weapon, visible from max 92 m to min 823 m from the muzzle of the weapon

Ball, M 2

Tracer, M 25

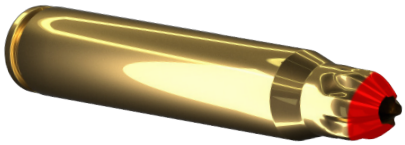
TECHNICAL DATA

ELEMENT		MATERIAL		Weight (g)		Length (mm)	
		M 2	M 25	M 2	M 25	M 2	M 25
Bullet	Jacket	Tombac		~9,85 g 152 gr	~9,35 g 144 gr	28,882	36,50
	Core	Lead antimony					
	Tracer	-	Tracer compos.				
Cartridge case		Brass		12,9		63,35	
Propelling charge		NCD powder		3,10	3,0	-	
Primer		Boxer non corrosive		0,34		3,30	
			Cartridge	**~26,2**	**~25,6**	**84,8**	

Packaging

Version 1	Version 2
• 15 rounds in cardboard box • 10 cardboard boxes in PVC bag • 8 PVC bags (1200 rounds) in wooden case	• 250 rounds in metal link belt M1 • 1 metal link belt in metal box M19A1 • 4 metal boxes (1000 rounds) in wooden crate

Packaging and marking could be done according to the special buyer's request too!



CALIBER

Cal. 7.62
BLANK, M1999

TECHNICAL DATA

ELEMENT	MATERIAL	Weight (g)	Length (mm)
Cartridge case	Brass	~12,95	63,7
Propelling charge	For blank ammunition	0,70	-
Primer	Boxer non corrosive	0,34	3,30
	Cartridge	**~14,0**	**63,3**

Packaging

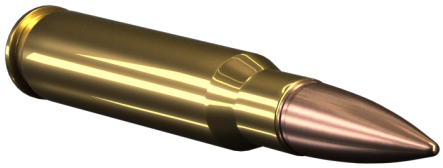
Version 1	Version 2
• 15 rounds in cardboard box • 10 cardboard boxes in PVC bag • 8 PVC bags (1200 rounds) in wooden case	• 250 rounds in metal link belt M1 • 1 metal link belt in metal box M19A1 • 4 metal boxes in wooden crate (1000 rounds)

Packaging and marking could be done according to the special buyer's request too!

CALIBER

Cal. 7.9x57 mm

M 49 Ball, M 70 tracer



CALIBER

Cal. 7.9x57 mm, M 49 Ball, M 70 Tracer

BALLISTIC DATA

Cal. 7.9 with bullet	V_{25} (m/s)	P_{max} (bar)	Accuracy Rs	Tracer visibility
M 49	720 ± 10	2 940	Max 9 cm at 300 m	-
M 70	705 ± 10	2 940	Max 15 cm at 300 m	Dim trace to min 13.7 m from weapon, visible from max 115 m to min 900 m from weapon.

* from heavy rifle

Ball, M 49

Tracer, M 70

TECHNICAL DATA

ELEMENT		MATERIAL		Weight (g)		Length (mm)	
		M 49	M 70	M 49	M 70	M 49	M 70
Bullet	Jacket	Tombac		~12,85 g 198 gr	~12,55 g 194 gr	34,00	38,80
	Core	Lead antimony					
	Tracer	-	Tracer compos.				
	Foil	-	Tombac				
Cartridge case		Brass		11		57	
Propelling charge		NCD powder		3,00	2,90	-	
Primer		Boxer non corrosive		0,34		3,30	
			Cartridge	**~27,2**	**~26,8**	**80,6**	

Packaging

Version 1	Version 2
• 15 rounds in cardboard box • 10 cardboard boxes in PVC bag • 8 PVC bags (1200 rounds) in wooden case	• 15 rounds in cardboard box • 36 cardboard boxes in metal box M2A1 (540 rounds) • 2 metal boxes in wooden crate (1080 rounds)

Packaging and marking could be done according to the special buyer's request too!

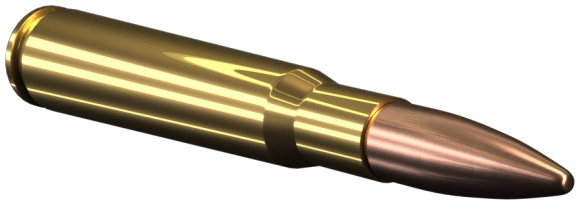
CALIBER

Cal. 12.7x99 mm

M 33 Ball, M 17 Tracer, M 8 API, M 20 APIT, M 2 AP

BLANK AMMUNITION

M1A1 BLANK



CALIBER

12.7x99 mm M 33 Ball,
M 17 Tracer, M 8 API,
M 20 APIT, M 2 AP

BALLISTIC DATA

Cal. 12.7 with bullet	$V_{23.77}$ (m/s)	P_{max} 3Sd (bar)	Accuracy Rs	Tracer visibility
M 33 Ball	885,4 ± 9,14	Max. 4 450	Max 30 cm at 550 m Sdx/Sdy	-
M 17 Tracer	885,4 ± 9,14	Max. 4 450	Max 40 cm at 550 m Sdx/Sdy	Visible trace of full luminosity from a point not greater than 200m from the muzzle of the weapon to a point not less than 1500 m from the muzzle.
M 8 API	885,4 ± 9,14	Max. 4 450	Max 30 cm at 550 m Sdx/Sdy	-
M 20 APIT	885,4 ± 9,14	Max. 4 450	Max 40 cm at 550 m Sdx/Sdy	Visible trace of full luminosity from a point not greater than 200m from the muzzle of the weapon to a point not less than 1000m from the muzzle.
M 2 AP	885,4 ± 9,14	Max. 4 450	Max 40 cm at 550 m Sdx/Sdy	-

Penetration (M8 & M2 & M20): The bullet core or bullet of the cartridge shall completely perforate 22 mm of armor plate, hardness 321-375 HB, place at 100 m from the muzzle of the weapon.

Incendiary flash (M8 API): The incendiary composition of bullets shall ignite produce an incandescent flash when fired against an Al- target at 160 m.

TECHNICAL DATA

ELEMENT		MATERIAL				
		M 33	M 17	M 8	M 20	M 2
Bullet	Jacket	Tombac				
	Core	Steel	Steel	Steel	Steel	Steel
	Tracer	-	Tracer compos.	-	Tracer compos.	-
	Foil	Lead	Tombac	Lead	Tombac	Lead
	Inced. Compo.	-	-	Thermit compos.	Thermit compos.	-
Cartridge case		Brass				
Propelling charge		NCD powder				
Primer		Boxer non corrosive				

Cartridge

Ball, M 33

Tracer, M 17

Armor piercing incendiary, M 8

Armor piercing incendiary tracer, M 20

Armor piercing, M 2

Weight (g)					Length (mm)				
M 33	M 17	M 8	M 20	M 2	M 33	M 17	M 8	M 20	M 2
~42,31 g 653 gr	~40,05 g 618 gr	~42,80 g 661 gr	~40,20 g 620 gr	~42,50 g 656 gr	58,67	58,67	58,67	58,67	58,67
55,10					99,31				
15,10	14,90	15,10	14,90	15,10	-				
1,23					5,54				
Average Q (100) ± 2g					**138,43**				

Packaging

Version 1

- 140 rounds in metal box M2A1
- 2 metal boxes (280 rounds) in wire bound wooden box

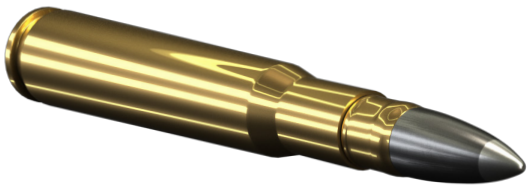
Version 2

- 10 rounds in cardboard box
- 5 cardboard boxes (50 rounds) in PVC bag
- 2 PVC bags (100 rounds) in carton case

Version 3

- 100 rounds in metal link belt (M9)
- 1 metal link belts in metal box M2A1
- 2 metal boxes in wire bound wooden box (200 rounds)

Packaging and marking could be done according to the special buyer's request too!



CALIBER

12.7x99 mm SPECIAL bullets(SOLID): BALL, AP, API

BALLISTIC DATA

Cal. 12.7 with bullet	P_{max} 3Sd (bar)	Accuracy mean radius
BALL	Average P_{max} $_{cor}$ $\pm 3Sd \leq$ 4500 bara	$R_{mean} \leq 1MOA$ $R_{mean} \leq 32.01$ at 1100 m (1200 yards)
AP		$R_{mean} \leq 1.05$ MOA $R_{mean} \leq 33.61$ at 1100 m (1200 yards)
API		$R_{mean} \leq 1.1$ MOA $R_{mean} \leq 35.21$ at 1100 m (1200 yards)
Used for Sniper RIFLES Caliber 12.7mm (.50)		

Penetration (AP i API): The bullet core or bullet of the cartridge shall completely perforate 20mm of armor plate (hardness 302-341 HB) placed at 500 m from the muzzle of the weapon.

Incendiary (API): At 500 m, the incendiary composition of bullets shall ignite cloth soaked in petrol located behind the armor plate (80%).

TECHNICAL DATA

ELEMENT		MATERIAL			Weight (g)			Length (mm)		
		API	AP	Ball	API	AP	Ball	API	AP	Ball
Bullet	Jacket	Brass	Brass	CuZn 39 Pb3	~46 g 710 gr	~47,1 g 727 gr	~52,6	59,31	59,31	67,03
	Core	Steel tungsten	Steel tungsten							
	Foil	Thermit	-							
Cartridge case		Brass			55,10			99,31		
Propelling charge		NCD powder			~15,10			-		
Primer		Boxer non corrosive			1,23			5,54		
		Cartridge			**Average 100 pcs ±2g**			**138,43**		

Packaging

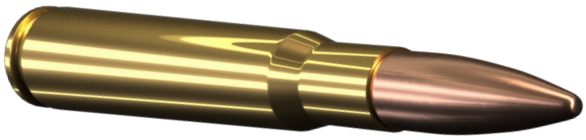
Version 1	Version 2
• 10 round in cardboard box • 10 cardboard boxes (100 rounds) in metal box M2A1 • 2 metal boxes (200 rounds) in wire bound wooden box	• 10 rounds in cardboard box • 5 cardboard boxes (50 rounds) in PVC bag • 2 PVC bags (100 rounds) in carton case

Packaging and marking could be done according to the special buyer's request too!

BALL

API

AP



CALIBER

12.7x99 mm M33 SNIPER

BALLISTIC DATA

Cal. 12.7 with bullet	P_{max} (bar)	Accuracy Rs
M 33 SNIPER	*Average* $P_{max\ cor} \pm 3Sd \leq$ *4500 bara*	$R_{mean} \leq 1.2$ *MOA* $R_{mean} \leq 19.2$ *at550 m (600 yards)*

Used for Sniper RIFLES Caliber 12.7mm (.50)

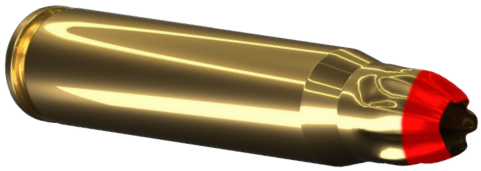
TECHNICAL DATA

ELEMENT		MATERIAL
Bullet	Jacket	Tombac
	Core	Steel
	Foil	Borax
Cartridge case		Brass
Propelling charge		NCD powder
Primer		Boxer non corrosive
Cartridge		

Packaging

Version 1	Version 2
• 140 rounds in metal box M2A1 • 2 metal boxes (280 rounds) in wire bound wooden box	• 10 rounds in cardboard box • 5 cardboard boxes (50 rounds) in PVC bag • 2 PVC bags (100 rounds) in carton case

Packaging and marking could be done according to the special buyer's request too!



CALIBER

12.7 mm
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 that 600 cartridges per minute at -18°C to +52°C.
Used for 12.7 x 99 mm caliber weapon

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		**99,30**

Packaging

Version 1

- 140 rounds in metal box M2A1
- 2 metal boxes (280 rounds) in wire bound wooden box

Version 2

- 10 rounds in cardboard box
- 5 cardboard boxes (50 rounds) in PVC bag
- 2 PVC bags (100 rounds) in carton case

Version 3

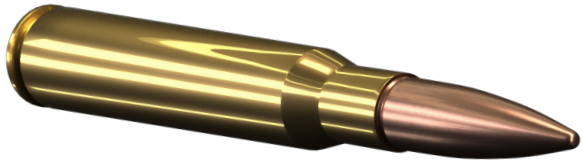
- 100 rounds in metal link belt (M9)
- 1 metal link belts in metal box M2A1
- 2 metal boxes in wire bound wooden box (200 rounds)

Packaging and marking could be done according to the special buyer's request too!

CALIBER

Cal. 12.7x108 mm

B 32 API, BZT 44 API-T, BALL, AP, Tracer



CALIBER

12.7x108 mm
B 32 API, BZT 44 API-T, BALL, AP, Tracer

BALLISTIC DATA

Cal. 12.7 with bullet	$V_{23.77}$ (m/s)	P_{max} (bar)	Accuracy Rs	Tracer visibility
B 32 API	810 - 825	Max. 3 040	Max 20 cm at 300 m	-
BZT 44 API-T	810 - 825	Max. 3 040	Max 20 cm at 300 m	Visible trace to 1000 m from muzzle of the weapon.
BALL	810 - 825	Max. 3 040	Max 20 cm at 300 m	-
AP	810 - 825	Max. 3 040	Max 20 cm at 300 m	-
TRACER	810 - 825	Max. 3 040	Max 20 cm at 300 m	Visible trace to 1000 m from muzzle of the weapon.
Used for 12.7 x 108 mm caliber weapon				

Penetration B32&AP: The bullet of the sample cartridges shall demonstrate penetration 22mm armour-plate (321-375 HB) at 100 meters from the weapon.

Penetration BZT 44: The bullet of the sample cartridges shall demonstrate penetration 15mm armour-plate (321-375 HB) at 100 meters from the weapon.

Incendiary B32&BZT44: At 70m, the incendiary composition of bullets shall ignite cloth soaked in petrol located behind the armor plate 15mm (321-375 HB)

TECHNICAL DATA

ELEMENT		MATERIAL				
		B 32	BZT 44	BALL	AP	Tracer
Bullet	Jacket	Copper washer steel strip				
	Core	Steel	Steel	Steel	Steel	Steel
	Incend. compos.	Tracer composition		Borax		
	Liner	Lead antimony				
	Tracer	-	Tracer compos.	-	-	Tracer compos.
Cartridge case		Brass				
Propelling charge		NC powder				
Primer		Berdan				
						Cartridge

B 32 API

BZT 44 APIT

BALL

AP

Tracer

Weight (g)					Length (mm)				
B32	BZT 44	BALL	AP	Tracer	B32	BZT 44	BALL	AP	Tracer
~48,00 g 740 gr	~44,00 g 679 gr	~48,00 g 740 gr	~48,00 g 740 gr	~44,00 g 679 gr	64	64,50	64,60	64,60	-
67					108				
16,50	16,50	16,50	16,50	16,50	-				
1,10					4,15				
Average 100 pcs ±2g					**147**				

Packaging

Version 1

- 104 rounds in sheet metal box
- 2 sheet metal boxes (208 rounds) in wire bound wooden box

Version 2

- 10 rounds in cardboard box
- 5 cardboard boxes (50 rounds) in PVC bag
- 2 PVC bags (100 rounds) in carton case

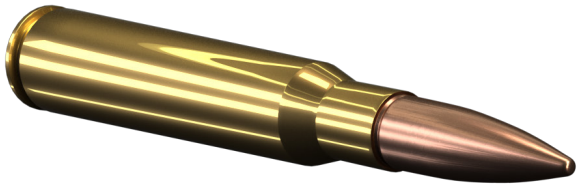
Version 3

- 50 rounds in one DShK belt
- 1 DShK belts in one metal box (50 rounds)
- 2 metal boxes in wirebound wooden box (100 rounds)

Version 4

- 60 rounds in one DShK belt
- 1 DShK belts in one DShK metal box (60 rounds)
- 3 DShK metal boxes in wooden box (180 rounds)

Packaging and marking could be done according to the special buyer's request too!



CALIBER

12.7x108 mm SNIPER

BALLISTIC DATA

Cal. 12.7 with bullet	$V_{23.77}$ (m/s)	P_{max} (bar)	Accuracy Rs
SNIPER	810 - 825	3 040	Max 15 cm at 300 m

Used for 12.7 x 108 mm caliber weapon

TECHNICAL DATA

ELEMENT		MATERIAL	Weight (g)	Length (mm)
Bullet	Jacket	Copper washer steel strip	~49 g 755 gr	64
	Core	Steel		
	Liner	Lead antimony		
Cartridge case		Brass	67	108
Propelling charge		NC powder	17	-
Primer		Berdan	1,10	4,15
		Cartridge	**Average 100 pcs ±2g**	147

Packaging

Version 1	Version 2
• 104 rounds in sheet metal box • 2 sheet metal boxes (208 rounds) in wire bound wooden box	• 10 rounds in cardboard box • 5 cardboard boxes (50 rounds) in PVC bag • 2 PVC bags (100 rounds) in carton case

Packaging and marking could be done according to the special buyer's request too!

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)

100 Largest in Bosnia and Herzegovina; 1st place for 2020 in the Large Company category – military industry.

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.

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