

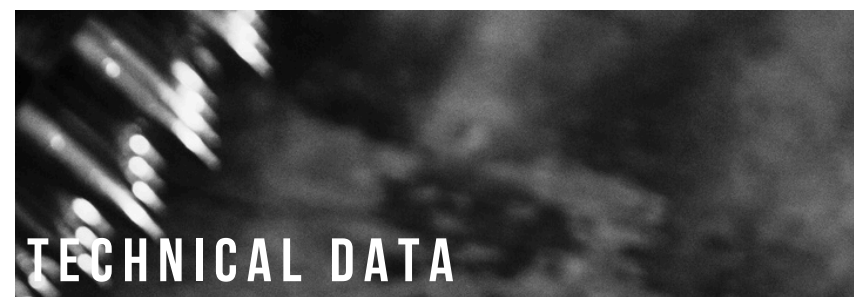


12.7 X 99



Cal. 12.7x99 mm

M33 BALL
M17 TRACER
M8 API
M20 APIT
M2 AP



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	42, 31 (653 gr)	40, 05 (618 gr)	42, 65 (661 gr)	40, 12 (620 gr)	42, 56 (656 gr)	58, 67	58, 67	58, 67	58, 67	58, 67	
	Core	Steel	Steel	Steel	Steel											
	Tracer mix.	-	Tracer compos.	-	Tracer compos.											
	Cup, closure	Lead antim.	Tombac	Lead antimony	Tombac											Lead antim.
	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					

BALISTIC DATA

Cal. 12.7x99 mm 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 armor 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 an target at 160 m.

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 wire bound wooden box 	<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 wire bound wooden box (200 rounds)



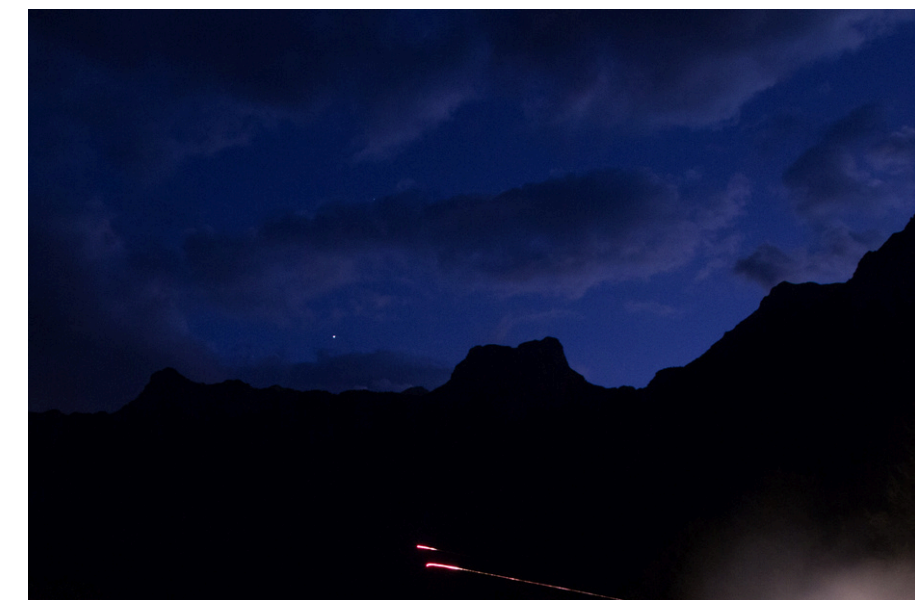
12.7X99 APEI, APT

Cal. 12.7x99 mm



M02 APEI

APT



Element		Material		Weight (g)		Length (mm)	
		M02 APEI	APT	M02 APEI	APT	M02 APEI	APT
Bullet	Jacket	Tombac	Tombac	42, 65 (661 gr)	40, 05 (618 gr)	58, 67	58, 67
	Core	Steel	Steel				
	Filler, point	Thermit - explosive comp.	Borax				
	Cup, closure	Lead antimony	Tombac				
Cartridge case		Brass		~55,10		99, 31	
Propelling charge		NCD powder		~15,10	~14,90	-	
Primer		Boxer non-corrosive		1, 23		5, 54	
Cartridge				Average Q (100) ± 2g		138, 43	

BALISTIC DATA

Cal. 12.7x99 mm with bullet	V _{23,77} (m/s)	P+3Sd (bar)	Accuracy Sdx/Sdy (cm) at 550 m	Tracer visibility
M02 APEI	885,4 ± 9,1	max. 4500	max. 30	-
APT	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

Penetration M02 APEI, APT: The bullet core or bullet of the cartridge shall completely perforate 22 mm of armor plate (Hardness 321-375 HB) placed at 100 m from the muzzle of the weapon.

Inciendiary flash M02 APEI: The incendiary bullets shall ignite and produce an incendiary flash in less than 600 mm behind an steel plate 3,5 mm placed at 160 m from the muzzle at zero (0°) degrees of obliquity (normal to the line of fire).

Explosive effect M02 APEI: Explosive bullets shall function and produce at least 8 perforations in a 0.5 mm aluminum witness plate located 1200 mm behind an steel target plate of 3,5 mm nominal thickness placed not less than 160 meters from the muzzle at zero degrees obliquity (normal to the line of fire).

PACKAGING

Version 1	Version 2
<ul style="list-style-type: none"> • 140 rounds in metal box M2A1 • 2 metal boxes (280 rounds) in wire bound wooden box 	<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 wire bound wooden box (200 rounds)

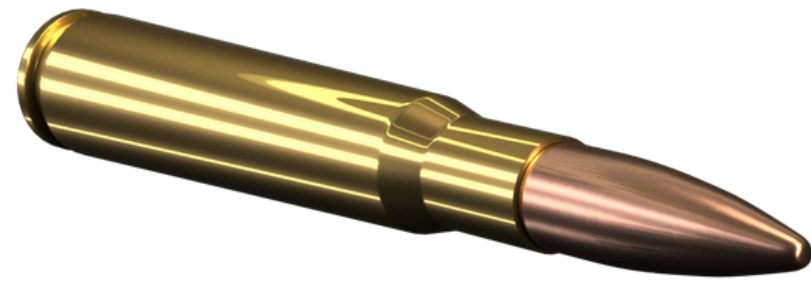


1 2 . 7 X 9 9 S N I P E R



Cal. 12.7x99 mm

M33 SNIPER



BALISTIC DATA

Cal. 12.7x99 mm 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)

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	

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



1 2 . 7 X 9 9 S P E C I A L B U L L E T S



Cal. 12.7x99 mm

SPECIAL BULLETS

Solid Ball

Solid AP

Solid API



BALISTIC DATA

Cal. 12.7x99 mm 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	$R_{mean} \leq 1,1 \text{ MOA}$ $R_{mean} \leq 35,2 \text{ cm at } 1100 \text{ m}$ (1200 yards)
Solid API	max. 4500	$R_{mean} \leq 1,2 \text{ MOA}$ $R_{mean} \leq 38,4 \text{ cm at } 1100 \text{ m}$ (1200 yards)

TECHNICAL DATA

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

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 wire bound 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

Used for Sniper Rifles caliber 12.7mm (.50)

Penetration Solid AP, Solid API: The bullet shall completely perforate 20mm thick armor 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 armor plate.



1 2 . 7 X 9 9 B L A N K

Cal. 12.7x99 mm

M1A1 BLANK



BALISTIC 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 12.7x99 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		Average Q (100) ± 1 g	99, 30

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 wire wooden crate (200 rounds)



1 2 . 7 X 1 0 8

Cal. 12.7x108 mm



B32 API

BZT44 APIT

BALL

AP

TRACER

TECHNICAL DATA

Element	Material					Weight (g)					Length (mm)						
	B32 API	BZT44 APIT	Ball	AP	Tracer	B32 API	BZT44 APIT	Ball	AP	Tracer	B32 API	BZT44 APIT	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											
	Core	Steel	Steel	Steel	Steel	Steel	48,00	44,00	48,00	48,00	44,00						
	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						

BALISTIC DATA

Cal. 12.7x108 mm with bullet	V _{23,77} (m/s)	P (bar)	Accuracy mean radius (cm) at 300 m	Tracer visibility
B32 API	min. 810	max. 3114	max. 20	-
BZT44 APIT	min. 810	max. 3114	max. 20	Visible trace not less than 1000 m from the weapon
Ball	min. 810	max. 3114	max. 20	-
AP	min. 810	max. 3114	max. 20	-
Tracer	min. 810	max. 3114	max. 20	Visible trace not less than 1000 m from the weapon

Used for 12.7 x 108 mm caliber weapons

Penetration B32 API, AP: The bullet shall demonstrate penetration 22 mm thick armor plate (321-375 HB) at 100 meters from the weapon.
 Penetration BZT44 APIT: The bullet shall demonstrate penetration 15 mm thick armor plate (321-375 HB) at 100 meters from the weapon.
 Incendiary B32 API, BZT 44 APIT: At 160 m, the incendiary composition of bullets shall ignite and produce an incendiary flash in less than 600 mm behind an steel target plate of 3,5 mm nominal thickness, 55-70 HRB.

PACKAGING

Version 1	Version 2	Version 3	Version 4
<ul style="list-style-type: none"> • 104 rounds in sheet metal • 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 metal box (60 rounds) • 3 DShK metal boxes in wooden crate (180 rounds)

A black and white photograph showing a large quantity of 12.7x108mm sniper bullets. The bullets are piled together in a metal container, with some showing their distinctive pointed tips and others showing their base. The lighting creates strong highlights and shadows, emphasizing the metallic texture and sharp points of the ammunition.

12.7 X 108 S N I P E R



Cal. 12.7x108 mm

SNIPER



BALISTIC DATA

Cal. 12.7x108 mm with bullet	V _{23,77} (m/s)	P (bar)	Accuracy mean radius (cm) at 300 m
SNIPER	min. 810	max. 3114	max. 15

TECHNICAL DATA

Element	Material	Weight (g)	Length (mm)	
Bullet	Jacket	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	

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