

# Magnum Rifle Ammunition

Covers the stats of magnum rifle cartridges.

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# .45-70 Government

## Overview

The **.45-70**, also known as **.45-70 Government** or **.45-70 Govt.** is an extremely powerful cartridge developed in the 1870's. It is primarily used for big game hunting out of lever action rifles or big bore revolvers such as the Magnum Research BFR. Even today it still competes with newer "ultra magnum" cartridges such as .500 Smith & Wesson Magnum, this is mostly due to its large case that can accomodate extremely large and heavy projectiles along with enough powder to sling them at high velocities - this thing is a monster, anything that ends up on the wrong end of it doesn't live to tell the tale.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Armor Piercing
SB 405gr Soft Point	64.56	460	32.62	6
TSX 300gr Flat Nose	53.35	587	12.45	6
305gr Xtreme Penetrator	54.6	609	13.2	8
Buffalo Bore 500gr	69.6	495	23.17	8
Grand Slam 500gr Tungsten Core	81.3	495	50.2	90
Dragon 1000gr Tungsten Flat Nose	122.6	195	100.2	180
Grand Slam 600gr Tungsten Core	96.5	420	70.6	104
Garrett Hammerhead 540gr JHP	76.5	470	23.6	6
SBR 100gr Aluminium HP	32	915	1.1	5.37
Lehigh 6X 100gr Multiball	26 x 6	427	1.1	4

SBR 147gr SLAP	32	762	60	130
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# .470 Nitro Express

## Overview

The **.470 Nitro Express** is a rifle cartridge developed by Joseph Lang in England for dangerous game hunting in Africa and India. This cartridge is used almost exclusively in double barrel rifles. It is in wide use in the Southern and Central-East African region, favoured by hunting guides, primarily while out for hunting buffalo and elephant.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Armor Piercing
500gr Soft Point	186	660	3.8	3
585gr FMJ	113	503	8	3
550gr Lead Solid	122.7	450	6.5	10
660gr API	122.7	400	30.5	330
700gr Hollowpoint	199	391	0.5	1

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# 9.3x62MM Mauser

## Overview

9.3x62mm Mauser is a big game hunting round capable of taking out elephants and other big game. The round has been fitted to fire from the HK121 MMG from 100 round belts. Its use in Medium Machine Guns was bred from the desire for a cheaper competitor to the .338 Norma Magnum.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Armor Piercing
Norma 230gr Big Bear	44.3	450	6.6	8
Norma 232gr Little Hippo	44.5	430	6.67	8
Norma 285gr Big Hippo	45.2	390	6.9	8
Norma 275gr Mammoth	43.7	580	7.4	10
Norma 300gr Dino Slayer	46	330	6.6	9
Norma 325gr Dragon Slayer	49.5	360	6	6

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# .510 Beck

## Overview

.510 Beck is a specialised cartridge designed for the AR-10 rifle platform that offers loadings from 200gr to 1050gr super heavy loads. It offers everything from accurate precision loads for longer range shooting all the way to short range cartridges for punching through tough animals and even body armor.

While typically a civilian cartridge with nothing particularly 'different' about it, SynTech Arms recently partnered up with Knight Armament Company to create their Special Airbursting Rifle System and decided on using a KAC SR-25 as a basis for the design. While looking for a cartridge that offered both reliability in an AR-10 and payload potential, SynTech came upon the .510 Beck and used it as the basis for their specialised RDX and LXT experimental munitions.

RDX Nanoexplosives and LXT Nanoexplosives were tested to see which yielded better payload efficiency, LXT Nanoexplosives were determined to yield the best blast radius and were used in SynTechs patented airbursting .510 Beck munition. However these projectiles proved to be too heavy for 'traditional' propulsion methods to be effective without making the projectiles entirely useless so SynTech paired a magnetic rail accelerator to the weapon platform to magnetically propel the projectiles at high velocities as well as gives a velocity boost to other more traditional projectiles.

## Stats

Ammunition Type	Damage	Bullet Velocity, Standard <sup>(Railgun)</sup> (m/s)	Barrier Penetration, Standard <sup>(Railgun)</sup>	Armor Piercing
900gr AP	82	240 <sup>(522)</sup>	8.7 <sup>(12.2)</sup>	265
1050gr AP	83	144 <sup>(313)</sup>	10 <sup>(14)</sup>	290
200gr SLAP	41.5	940 <sup>(2046)</sup>	11 <sup>(15.4)</sup>	340
300gr SLAP	45	740 <sup>(1610)</sup>	14.5 <sup>(20.3)</sup>	380
492gr RDX-HE	60 + 0.4 Indirect@3m	354 <sup>(771)</sup>	3.3 <sup>(4.6)</sup>	140
650gr Hollowpoint	101	648 <sup>(1410)</sup>	4.6 <sup>(6.4)</sup>	8
LXT Bursting Munition	48.4 + 13.2 Indirect@6.77m	530 <sup>(1155)</sup>	0	0

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

Additional note: The ratio of standard cartridge speed to railgun-accelerated speed is 2.177. The ratio of standard cartridge barrier penetration to railgun-accelerated barrier penetration is 1.4.

# .50 Beowulf

## Overview

The **.50 Beowulf** is a 12mm magnum rifle cartridge designed to greatly increase the lethality of the AR-15 platform at close to medium ranges. It is advertised as a great cartridge for civilians wanting to hunt large game or for military/police conducting CQB or even checkpoint duty, with the round be almost etirely undisturbed by most common barriers such as windscreens and body panels.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration
200gr Frangible	47	782	1.4
335gr Jacketed Hollowpoint	86	580	1.77
400gr Flatpoint	57	550	3.4
500gr Tungsten-core AP	73	488	47
700gr Tungsten-core AP	88	320	69
1000gr High Explosive Frangible	26	240	0

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.



# .458 SOCOM

## Overview

The **.458 SOCOM (11.63x40mm)** is a moderately large round designed for a specialized upper receiver that can be mounted on any AR-15 pattern lower receiver. The 300-grain (19 g) round offers a supersonic muzzle velocity of 1,900 ft/s (580 m/s) and 2,405 ftlbf (3,261 J), similar to a light [.45-70](#) but with a much smaller case. Prompted by the lack of power offered by the 5.56 NATO cartridge used in the M4 carbine and the M16 rifle, the .458 SOCOM came about from informal discussion of members of the special operations command, specifically Task Force Ranger's experience that multiple shots were required to incapacitate members of the opposing force in Mogadishu during Operation Gothic Serpent. Many Somalis would chew the drug Khat all day and the effects of the drug would both curb their appetite (in a country plagued by famine) and increase their pain tolerance.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Armor Piercing
255gr Match	78	580	2.3	8
300gr Match	89	540	2.3	8
100gr CQB	68	914	1.75	7
500gr Subsonic	93.4	320	2.5	5
Lehigh CF	106.7	299	1.2	5
High Velocity SLAP	36	762	90	300
Incendiary Spotter	31	490	1.4	7

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# .45 Raptor

## Overview

The **.45 Raptor** is a rimless centerfire cartridge developed for medium and large game hunting. Compared to similar big bore cartridges designed for the AR-15 - such as the .450 Bushmaster, .458 SOCOM, and .50 Beowulf - the 45 Raptor offers higher velocity bullets, a flatter shooting trajectory and the ability to reliably feed hollow point ammunition. It is able to fit into 7.62x51 magazines with some modification, making it easy for companies to make rifles capable of firing the cartridge without the need to design and develop a specialised magazine.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Armor Piercing
240gr XTP	74.5	810	6.1	8
160gr TACXP	53.4	910	2.89	6
180gr JHP	65	850	1.74	6
300gr XTP	88.2	700	2.3	4
500gr HE-I	95	100	0	0

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# .408 Cheytac

## Overview

The **.408 Cheyenne Tactical** designated **408 Chey Tac (10.36x77mm)** is a specialized cartridge for long-range sniper rifles. The round was designed for anti-personnel, anti-sniper and anti-materiel roles with a (supersonic) precision range of 2,200 yards (2,000 m). It is offered as a competitor to the most common military NATO long-range service cartridges such as .338 Lapua Magnum and the .50 BMG.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Armor Piercing
CheyCorey	113	945	6.6	320
Lehigh APWU	112	873	8.4	400
WC 370gr	111.8	952	7.2	310
Match 419gr	136	914	3	20
Match 305gr	115	1067	2.8	18
Lutz Viking 463gr	115	847	2.9	21
SniperExtreme	111.7	910	5.7	80
Armor Piercing Incendiary	112.5	918	27.4	360
XM2 305gr	114	1090	2.9	18
ELR 446gr	115.3	852	3	17
Subsonic 751gr	195	312	4	15

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# .40 Lobaev Whisper

## Overview

The .40 Lobaev Whisper is a specialty subsonic cartridge designed specifically for the DVL-10 Saboteur rifle. It was created from .338LM casings by shortening the casing by 25mm and utilising .408 Cheytac projectiles. It is meant for covert precision shooting for distances of up to 600m and has seen use by Russian Special forces in recent conflicts.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Armor Piercing
Lobaev FMJ	103	310	4.6	110
Lehigh APWU	102	440	6.4	200
WC 370gr	101.8	332	5.2	80
Match 419gr	106	297	3	20
Match 305gr	98	530	1.8	8
Lutz Viking 463gr	100	423	0.9	1
SniperExtreme	100.7	380	1.7	40
Armor Piercing Incendiary	102.5	400	14.4	260
XM2 305gr	104	540	1	2.2
ELR 446gr	110.88	300	1.5	7

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# .338 TVCM

## Overview

.338TVCM is heavily based on the battle tested .338 Norma Magnum, however it offers slightly varied loadings requested by the British Armed forces. The ammunition is primarily produced by the UK under license by Radway Green, however the round is produced in smaller numbers by TrueVelocity in Germany for smaller contracts.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Armor Piercing
L320A1 Enhanced Ball	30	977	4.5	26
L321A1 Match	29	948	7	23
L322A1 Training (Frangible)	28	1108	0	0
L323A1 Subsonic (585gr)	86	343.2	58	115
L323A2 Subsonic AP (777gr)	100	290	140	144
L324A1 Anti-materiel	22.34 + 4 Indirect@1.16m	910	18.2	20

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# .338 Lapua Magnum

## Overview

The **.338 Lapua Magnum** (8.6×70mm) is a rimless, bottlenecked, centerfire rifle cartridge. It was developed during the 1980s as a high-powered, long-range cartridge for military snipers. It was used in the War in Afghanistan and the Iraq War. As a result of this, it became more widely available.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Armor Piercing
.338 Ball	36	826	8.585	250
250gr Naturalis	33	880	0.85	250
300gr Scenar	34.5	826	2	250
300gr Berger	34.5	850	4	8
API526	66	870	22.3	248
AP-RE	63	997	25.9	240
520gr Tungsten Penetrator	71	765	49.4	330
70gr High-velocity Glider	31	1400	20	7
680gr Subsonics	107.5	320	60	122
310gr Stiletto AP	49	900	45	325
MK330 Mod0 Match	54.2	880	3.6	9
HVAP	35.5	1999	120	540

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# .338 Norma Magnum

## Overview

.338NM (Norma Magnum) is a medium machine gun calibre designed to bridge the gap between 7.62x51 and .50BMG. It is effective up to 2500m for accurate fire unlike the 7.62x51 which is only good for up 1500m accurately. In addition it retains its velocity and stopping power out to its accurate distance making it a highly effective round at close and far distances. As of 2020 is it currently being pushed as a replacement for .50 BMG in the anti-materiel role, as such a replacement for the MK211 RAUFOSS round has been developed to give the round capabilities similar to that of the .50 BMG.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Armor Piercing
XM1161	33	920	3.45	26
XM1162	31	900	6.4	23
XM1163 LCAP (Low Cost AP)	31.6	920	14.5	45
XM1164 SMK (Sierra Match King)	35	840	2.85	18
XM1165 Frangible	26.97	880	0.77	4
XM1166 SIG WCAP	32.34	1025	38.2	400
MK212 RAUFOSS	22.34 + 4 Indirect@1.16m	910	18.2	20

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# .300 Winchester Magnum

## Overview

7.62x67mmB or .300WM (Winchester Magnum) is a magnum rifle cartridge designed to fit in standard rifle actions. It is a highly popular big game cartridge, Comparable to .338 Lapua Magnum in energy delivered on target, as well as a long range marksmanship round, having taken numerous international 1000m competitions.

Popular amongst hunters, military and police around the world, the .300WM has killed more living things than smallpox.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration	Max Effective Range (Meters)
Mk248 Mod 1 Match	22	955	4.6	1700m
176gr Softpoint	28.1	973	0.5	1550m
150gr Softpoint	25	1000	0.8	1700m
135gr Softpoint	20	1200	1.7	2150m
40gr Velocity Max	10.5	1600	0.22	2500m
220gr SuperMatch	28	876	1.2	
AP	19	923	11	1200m
AP-I	15	896	21	1500m
Subsonic	37	301	1	250m

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

Note: Max effective range assumes 1MOA or better. MOA or worse will lead to greatly reduced effective range.



# 8x57mm Rheinmetall

## Overview

8x57mm Rheinmetall is a experimental cartridge that was developed as part of the Next Generation Soldier Weapon program held in Germany. It was ultimately not adopted due to its immense recoil and the outdated ergonomics of the weapon it was chambered in.

It has been adopted by small wealthy nations however for snipers and anti-vehicle duties.

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration
XM11 Ball	26	1000	5.6
XM51 Match	29.7	1034	1.6
XM31 AP	21	1211	9.6

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# .270 Winchester Short Magnum

## Overview



The **270 Winchester Short Magnum** or **270 WSM** is a short, magnum cartridge created by necking down the .300 Winchester Short Magnum and fitting it with a .277 caliber bullet. The correct name for the cartridge, is 270 WSM, without a decimal point. It is a member of the Winchester Short Magnum family of cartridges.

The 270 WSM is an improvement over the older 270 Winchester providing higher velocity with bullets of the same weight, and thus a flatter trajectory and more energy. Velocities tend to be about 250 ft/s (76 m/s) faster, in a cartridge that is shorter and can therefore be used in a shorter action resulting in a more compact rifle if desired.

Its preferred use case is hunting and long range precision shooting, it has seen little to no military adoption beyond small use cases in special mission units. As such there are no armor penetrating or specialist projectiles, with only factory match and hunting loads available

## Stats

Ammunition Type	Damage	Bullet Velocity (m/s)	Barrier Penetration
90gr Hollowpoint	30	1100	1.55
130gr Softpoint	35	1004	1.96
140gr Softpoint	41	990	2.1
150gr Match	44	956	1.1

Note: Barrier penetration represents the rounds ability to go through walls and barriers. Armor piercing represents the rounds ability to penetrate body armor plates.

# Range Cards

90gr Hollowpoint					130gr Softpoint					140gr Softpoint					150gr Match				
Target	Bullet				Target	Bullet				Target	Bullet				Target	Bullet			
Range (m)				1100	Range (m)				1004	Range (m)				990	Range (m)				956
100				-0.0	100				-0.0	100				-0.0	100				-0.0
150				0.1	150				-0.0	150				-0.0	150				-0.0
200				-0.1	200				-0.1	200				-0.1	200				-0.1
250				-0.3	250				-0.3	250				-0.3	250				-0.3
300				-0.5	300				-0.5	300				-0.5	300				-0.6
350				-0.7	350				-0.7	350				-0.8	350				-0.8
400				-0.9	400				-1.0	400				-1.0	400				-1.1
450				-1.2	450				-1.3	450				-1.3	450				-1.4
500				-1.4	500				-1.5	500				-1.6	500				-1.7
550				-1.7	550				-1.8	550				-1.9	550				-1.9
600				-1.9	600				-2.1	600				-2.2	600				-2.3
650				-2.2	650				-2.4	650				-2.5	650				-2.6
700				-2.5	700				-2.8	700				-2.9	700				-2.9
750				-2.7	750				-3.1	750				-3.2	750				-3.2
800				-3.0	800				-3.4	800				-3.6	800				-3.5
850				-3.3	850				-3.8	850				-3.9	850				-3.9
900				-3.6	900				-4.1	900				-4.3	900				-4.2
950				-3.9	950				-4.5	950				-4.7	950				-4.5
1000				-4.3	1000				-4.9	1000				-5.0	1000				-4.9
1050				-4.6	1050				-5.3	1050				-5.4	1050				-5.2
1100				-4.9	1100				-5.7	1100				-5.8	1100				-5.6
1150				-5.3	1150				-6.1	1150				-6.2	1150				-6.0
1200				-5.6	1200				-6.5	1200				-6.7	1200				-6.3
1250				-6.0	1250				-6.9	1250				-7.1	1250				-6.7
1300				-6.3	1300				-7.3	1300				-7.6	1300				-7.1
1350				-6.7	1350				-7.8	1350				-8.0	1350				-7.5
1400				-7.1	1400				-8.2	1400				-8.5	1400				-7.9
1450				-7.5	1450				-8.7	1450				-9.0	1450				-8.3
1500				-7.9	1500				-9.2	1500				-9.4	1500				-8.7
1550				-8.3	1550				-9.6	1550				-9.9	1550				-9.1
1600				-8.7	1600				-10.1	1600				-10.5	1600				-9.5
1650				-9.2	1650				-10.7	1650				-11.0	1650				-10.0
1700				-9.6	1700				-11.2	1700				-11.5	1700				-10.4
1750				-10.1	1750				-11.7	1750				-12.1	1750				-10.8
1800				-10.6	1800				-12.3	1800				-12.6	1800				-11.3
1850				-11.0	1850				-12.8	1850				-13.2	1850				-11.7
1900				-11.5	1900				-13.4	1900				-13.8	1900				-12.2
1950				-12.0	1950				-14.0	1950				-14.4	1950				-12.7
2000				-12.6	2000				-14.6	2000				-15.0	2000				-13.1
2050				-13.1	2050				-15.2	2050				-15.7	2050				-13.6
2100				-13.6	2100				-15.9	2100				-16.3	2100				-14.1
2150				-14.2	2150				-16.5	2150				-17.0	2150				-14.6
2200				-14.8	2200				-17.2	2200				-17.7	2200				-15.1
2250				-15.3	2250				-17.9	2250				-18.4	2250				-15.6
2300				-15.9	2300				-18.6	2300				-19.1	2300				-16.1
2350				-16.6	2350				-19.3	2350				-19.9	2350				-16.7
2400				-17.2	2400				-20.0	2400				-20.6	2400				-17.2
2450				-17.8	2450				-20.8	2450				-21.4	2450				-17.7
2500				-18.5	2500				-21.6	2500				-22.2	2500				-18.3
2550					2550				-22.4	2550				-23.0	2550				-18.9