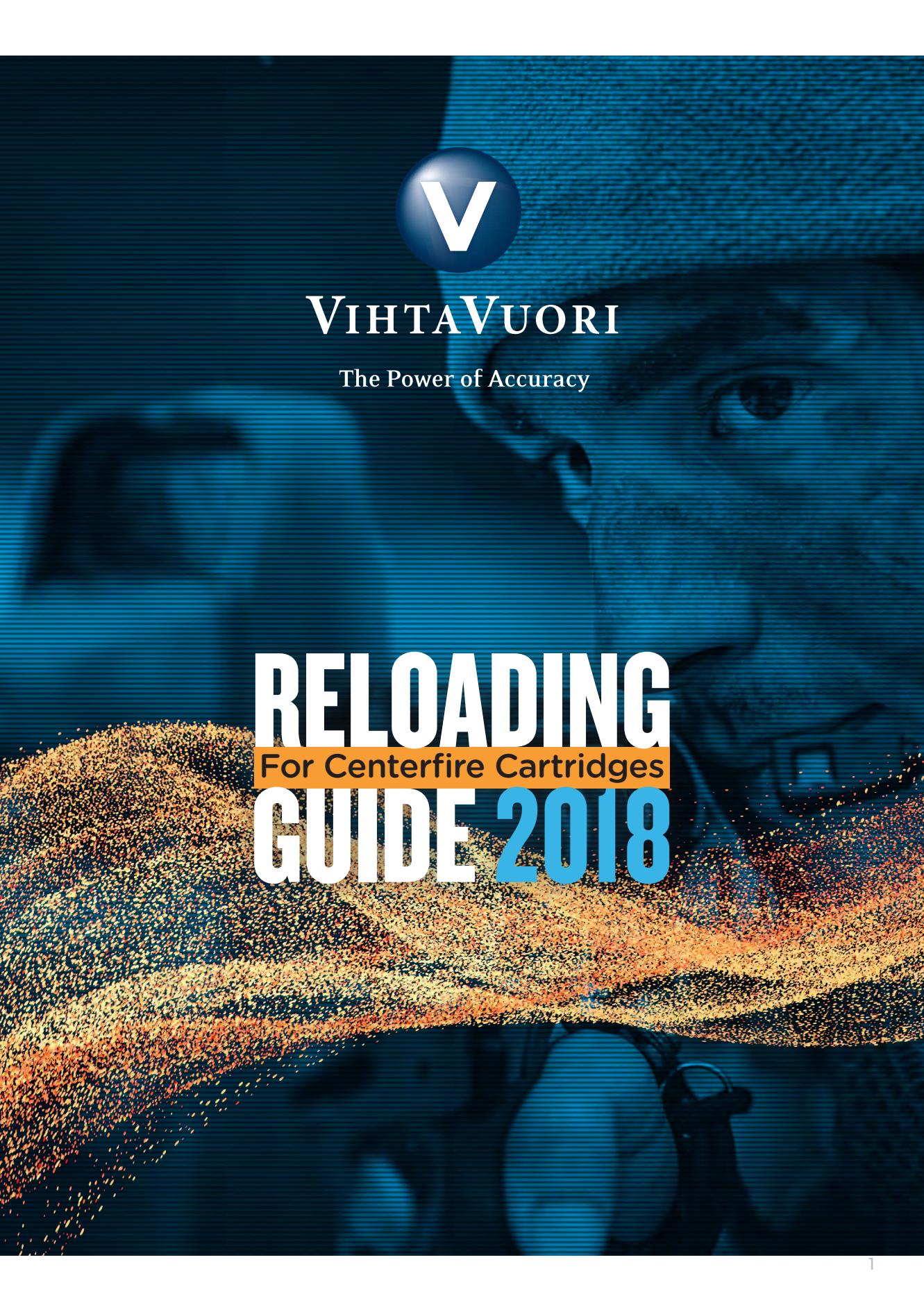




V

VIHTAVUORI

The Power of Accuracy



RELOADING For Centerfire Cartridges GUIDE 2018

THE POWER OF ACCURACY

For almost a hundred years, Vihtavuori powders have formed the heart of many of the world's most renowned cartridges. Reloaders know they can trust in Vihtavuori powder's performance and uniform high quality – cartridge after cartridge – to create a perfect product for successful shooting. When choosing Vihtavuori powders you know your ammo is up to the task, even in the toughest conditions.

Go ahead, take Vihtavuori and make the perfect shot.



TOE: 0.7g
549m
2.2m/s
L 5.6clc
U 2.7clc
BC-01

Clean burning

Our use of only the finest of raw materials is a renowned characteristic of all Vihtavuori powders. We take great pride in producing a very pure and clean burning powder which allows longer shooting sessions between cleanings. The clean-burning characteristics of our powders result in greatly reduced carbon build-up and powder fouling, ultimately giving longer barrel life.

Decoppering agent

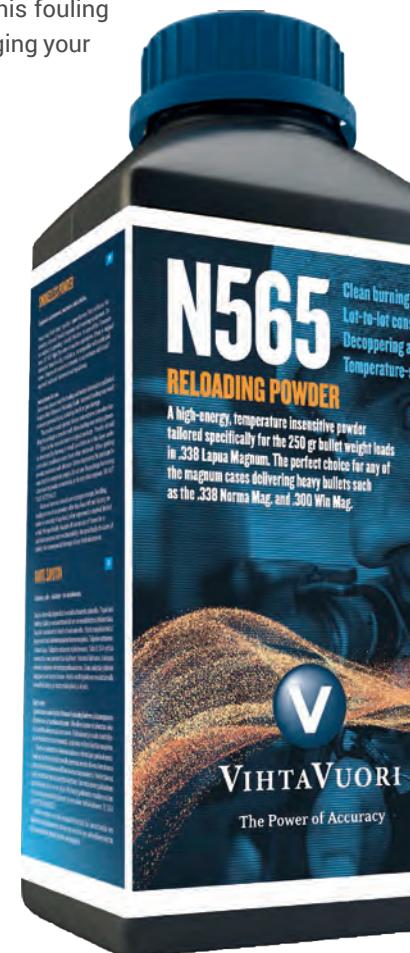
After extensive testing and development, we've begun adding a decoppering agent to all of our powders. This additive deters the adhesion and build-up of copper fouling in the bore. Excessive jacket material fouling is a well-known and established cause of accuracy loss. This fouling must be removed from time to time to keep a rifle performing at its peak potential. Our new decoppering agent prevents much of this fouling from building up in the first place, greatly prolonging your shooting sessions, and extending barrel life.

Temperature stable

Temperature stability in powders has always been a consideration, but with the recent improvements in Long Range shooting, it has become a factor of major concern to shooters. Firing at long ranges places greater demands on ammo, equipment and the shooter himself. Enabling a shooter to meet these demands means refining the process, and eliminating those variables which reduce hit probability. The production of increasingly temperature insensitive propellants allows for greatly reduced Extreme Spreads and Standard Deviation, which translates directly to less vertical dispersion on target.

Lot-to-lot consistency

Smokeless propellants are an organic compound of many closely monitored base materials. Every production run must be closely matched to very specific standards regarding grain geometry, chemistry and performance as compared to previous runs of that propellant. This demanding process requires constant testing, verification and adjustment to ensure that each run is perfectly compatible with those before and after. This is a guiding principle of our production philosophy. We require extreme accuracy and quality at every step of our production process.



PREMIUM N100 POWDERS

N110

Our fastest burning powder suitable for small rifle cartridges such as the .22 Hornet and .30 Carbine, but also well suited to many of the more powerful Magnum handgun rounds. It is particularly applicable for the .44 Rem Magnum, .454 Casull, .500 S&W Mag and similar high-performance revolver cartridges.

N120

A well-balanced powder specifically for some of the intermediate cases such as the .300 Blackout and 7.62x39. It operates best at a somewhat higher pressure than the faster N110, and gives good results in a variety of the small to mid-capacity cases such as the .221 Rem. Fireball and .30-30 Win.

N130

A fast-burning rifle powder well suited to both small cases like the .22 calibers and 6 mm PPCs, and large straight-walled cases such as the .45-70 Govt and .458 Win Mag. N130 is also an excellent choice for lighter bullets in such cartridges as the .222 and .223 Rems. Exceptional accuracy combined with the benefits of our anti-coppering technology.

N133

The preferred choice of most leading benchrest competitors and standard rifle shooters, and the powder used to set an incredible number of the current benchrest rifle records. Ideally suited to the 6mm PPC, but it's also versatile enough to serve in a wide variety of cartridges. Especially where a relatively fast-burning powder is called for, ranging from the .222 Rem to the .45-70 Govt.

N135

N135 is a relatively fast powder that delivers outstanding accuracy, velocity and consistent performance. An excellent choice for .308 Win loads with bullet weight less than 155 grains. Well suited to cartridges like the 6 mm BR Norma, .222 and .223 Rem, as well as large straight-walled cases such as the .458 Win. Mag.

N140

An incredibly versatile powder, well suited to a wide range of cartridges and bullet weights. From the .223 Rem with heavy bullets, to full sized powerhouses like the .375 H&H Magnum, our N140 is an ideal choice. Giving good velocities, clean performance and exceptional stability, this is the standard go-to powder for a wide variety of cases.

The N100 series powders are primarily rifle powders with different burning rates to optimize your loads.

N165

N165 is a very slow burning powder, making it a superior choice for the same range of cartridges as our N160 when using heavier bullets. Delivering slightly higher velocities with these projectiles makes N165 a wise choice when long-range performance is the goal. It delivers superb accuracy with heavy bullets in calibers ranging from 6,5x55 SE all the way to .416 Rigby, and is a top choice for the .338 Lapua Magnum.

N170

Our slowest burning N100 series powder, recommended for the very large capacity cases such as the .300 Weatherby Mag. and the .300 Rem Ultra Mag. Good performances in most of the belted Magnum cartridges. N170 is one of the slowest canister-grade powders readily available from any manufacturer.

24N41 / 20N29

Vihtavuori offers two powders specifically for the .50 BMG case; 24N41 and 20N29. These are single-based treated powders, having very large grain size and extremely slow burning rates ideally suited to the .50 BMG. They also have some application in a few other very large capacity cases, such as the .338 Lapua Magnum and the .30-378 Weatherby Magnums. Of the two, 24N41 is slightly faster than 20N29, with renewed relative burning rates 39 for the 24N41 and 36 for the 20N29, when N110 is given the index 100.

Strict quality acceptance limits have helped reloaders and cartridge manufacturers to achieve similar loads regardless of the production lot for almost 100 years.



PREMIUM N300 HANDGUN POWDERS



N310

N310 is an extremely fast-burning pistol powder, ideally suited to light, target type loads. It gives outstanding accuracy in a wide range of cartridges from the .32 S&W Long to the .45 ACP wadcutter loadings. Clean burning, consistent and easy to load, N310 is the top choice for the competitive Bullseye pistol shooter.

N320

A fast-burning powder for use in light to mid-range target loads, in cartridges ranging from the 9 mm and .38 Special, up to the .44 Special and .45 ACP. Capable of producing higher velocities at acceptable pressures than our N310, N320 provides the handloader a bit more versatility at the loading bench.

N32C (TIN STAR)

This is a specialized powder intended to provide low bulk density for cartridges that were originally designed for Cowboy Action Shooters shooting lead bullets with single-action revolvers and lever-action rifles. The use of more conventional powder results in poor load density, and fails to adequately fill the case. Our N32C corrects this problem, and is ideally suited to many of the older cartridges used in Cowboy Action shooting, such as the .38 Special, .44 Special and .45 Colt.

N330

N330 provides a wide range of latitude for the handgun shooter, serving well for everything from light target to heavier high-velocity loadings. This is a versatile powder suitable for an exceptionally broad range of applications, especially designed for 9 mm Luger but also suitable for .38 Special, .40 S&W, .44 S&W Special and .45 Colt.

The N300 series powders are ideal for handgun and shotgun loads.

N105 SUPER MAGNUM

N105 Super Magnum is our slowest burning pistol powder, intended for the most powerful handgun cartridges in use today, particularly with heavy bullets and/or large case volume. Many of these specialized rounds operate at rifle pressures. Delivering this type of performance is precisely what prompted the development of N105. For such powerhouses as the .454 Casull or .500 S&W, N105 is an excellent powder choice.

N340

A flexible powder that serves well in medium to heavy high-velocity loadings. N340 is a good performer in high intensity rounds like the .357 and .44 Magnums, the .40 S&W and the .357 SIG cartridges.

N350

Our N350 is the slowest in the N300 series of handgun powders, and is ideal for very heavy loadings, and top end velocities and energies from a broad range of pistol and revolver cartridges. It is very well suited to loading powerful rounds for example in calibers 9 mm Luger, 10 mm AUTO and .45 ACP.

3N37

Originally developed as a powder for loading .22 rimfire cartridges, 3N37 has a burn rate very similar to N350, and can be used for many of the same applications. As handgun shooters began to experiment with 3N37, they found that this fine-grained powder loaded evenly through a measure and gave excellent results from a range of competitive cartridges used for USPSA and IPSC shooting.

3N38

The 3N38 is a specialized powder designed specifically for competitive handgun shooting with high-velocity loads in the 9mm and .40 S&W cartridges. A relatively slow-burning powder, 3N38 is a perfect choice for making Major with good accuracy and the clean-burning characteristics for which Vihtavuori is renowned.

PREMIUM N500 HIGH ENERGY POWDERS



The N500 series of Vihtavuori propellants provide the utmost in performance for added velocity and range with heavy bullets. Nitroglycerine has been added to the traditional single base powder to get better energy content. The series offers five different reloading powders with different burning rates.

N530

The fastest of our N500 High Energy series, N530 is an ideal for many of the smaller bottlenecked cases like the .223/5.56, or large straight-walled cases such as the .45-70 Springfield. It is also a useful powder for medium capacity cases like the .308 Win, when using lighter weight bullets of 155 grains or less.

N540

N540 is a mid-range powder in the N500 series, and an excellent choice for cartridges running from the .223/5.56mm, .308 Win and .30-06 Springfield with appropriate bullet weights. This is also a great powder for 6,5x47 Lapua and 6,5 Creedmoor as well as the .223 when using heavy bullets from 69 to 82 grains. It is exceptionally clean-burning and delivers outstanding accuracy.

N550

A slower burning powder very well suited to a wide range of medium to large cartridges, especially with heavier bullet weights. An ideal fit for many of the 30 caliber magnums with lighter bullets, but useful across a wide range of bore sizes. Particularly well matched to heavy bullet loadings in the 6.5x55 and .30-06 Springfield cartridges.

N560

A very slow-burning powder for large, magnum style cases, particularly when heavy bullets and high velocities are required. A perfect selection for the .270 Win, 7 mm Remington or Weatherby Magnums, .300 Winchester, RUM or Weatherby Magnums. A very good choice for the .338 Lapua Magnum when using lighter bullets of 250 grains or less.

N565

A new N500 series powder developed specially for the 250 gr bullet weight loads in .338 Lapua Magnum. N565 roughly splits the difference in burn-rate between N560 and N570, but is a bit closer to N570. It will cover many of the same cartridges and bullets as the first two, but allows the loader another option in fine tuning a load to the perfect combination. While N565 was tailored specifically for military sniping applications, it also has a wide range of sporting uses, particularly within long range shooting. The N565 will prove to be an ideal choice for calibers such as the 7mm Rem Magnum, the .30-06, .300 Win Mag, .300 Norma Mag as well as the .338 Norma Mag.

N570

The slowest burning member of the N500 line, N570 is the perfect choice for those tasks requiring heavy bullets and the largest capacity cases. Its burn rate is very close to that of our N170, but will generally provide a bit more velocity in the same cartridges, and using the same bullet weights. The burn-rate characteristics of N570 allow it to deliver the very best possible performance from such cartridges as the 6.5x284, .300 Rem Ultra Mag, and .338 Lapua Magnum.



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PREFACE

Dear Vihtavuori customer,

The new Vihtavuori Reloading Guide 2018 is an updated version of the previous Vihtavuori Reloading Guides.

The contents of this updated issue has been revised with loading data for the following calibres:

Centerfire rifle

New calibers: 7x65R, .300 Norma Magnum and 8x68S

Updated data: 7x57R, 7x64, 7 mm Rem Mag., .308 Win., .30-06, .300 Win Mag., 8x57 IS, .338 Lapua Magnum.

Centerfire handgun

Updated data: 9 mm Luger, .38 Special

The now published new rifle and pistol reloading data is expanding and revising the powder selection for existing bullets.

As a courtesy to the reloader the load tables contain notes of compressed loads and loads to fill the case up. For flexible usage this guide features data in metric and imperial dimension systems i.e. charge weight in grams and grains as well as muzzle velocity in meters and feet per second. This reloading guide also includes the accuracy loads noted in the load tables. These loads utilize worldwide well-known Lapua cartridge components and are factory tested either for even pressure / muzzle velocity and accuracy. These loads are highlighted in the load tables with dark grey shadowing.

All the loads in this guide are pressure tested according to the C.I.P. method. The maximum loads given in the tables are determined according to the C.I.P. and SAAMI maximum pressure specifications. The listed maximum loads should never be exceeded. Due to the differences in the cartridge components, individual weapons, shooting temperatures etc., always start developing your load by using the starting load according to the loading data. If there is no indication of the starting load, use 15 % lower charge than the listed maximum load as your starting load.

The Vihtavuori powders are manufactured by Nammo Vihtavuori Oy at the Vihtavuori plants. Sales and marketing of the reloading powders is carried out by Nammo Lapua Oy and Nammo Vihtavuori Oy. The contact details of Vihtavuori customer service and a listing of Vihtavuori Distributors can be found at the end of this guide. For latest updates of data and distributors check also www.vihtavuori.com, where this guide can also be downloaded in PDF format. Check also Apple App Store and Google Play store for the **Vihtavuori RELOAD mobile app**. Latest reloading information and the possibility to save your own reloading recipes, at hand everywhere you go.

We wish you successful reloading with Vihtavuori powders.



VIHTAVUORI

ABOUT THE DATA

Disclaimer

As Nammo Vihtavuori Oy has no control over improper storage, handling, loading or use of our powders after they have left the factory, we make no warranty of any kind, either expressed or implied, limited or full. We specifically disclaim all warranties of fitness for a particular purpose and merchantability. We specifically disclaim all liability for consequential damages of any kind whatsoever, whether or not due to seller's negligence or based on strict product liability or principle of indemnity or contribution, Nammo Vihtavuori Oy neither assumes nor authorizes any person to assume for it any liability in connection with the use of this product.

How to Use the Data

Our rifle and handgun data listings generally contain maximum charges which are not to be exceeded. In some instances starting loads are also listed. Currently this booklet contains all of the data we can supply. Be certain you use the correct data and the specific bullet weight shown.

By staying 5 % below the maximum powder charge weight, pressures will be reduced by about 10 % while velocities will be only about 3 % lower than listed.

Caution: When loading handgun cartridges it is vital to maintain the minimum cartridge overall length (C.O.L.) listed in the tables. Shorter overall lengths may double chamber pressures. Longer lengths are permissible so long as the functioning of the handgun will not be impaired.

The data in the loading tables were obtained at an ambient temperature of 68 degrees Fahrenheit and relative humidity of 55 %. The values obtained were under carefully controlled conditions and may vary from those obtained with your firearm, specific component lots, loading dimensions, and loading procedures. The maximum charges must NEVER be exceeded. **Start loading with the starting load according to the loading data. If there is no indication of the starting load, use 15 % lower charge than the listed maximum.** When loading cartridges for which the listed charge is 10 grains or less, after firing 10 rounds at the minimum weight (15 % below maximum), increase charge weights by 0.2 grains and fire another 10 rounds. Repeat this procedure, if necessary, until you reach, but do not exceed,

the maximum listed charge. The same process is followed for heavier charges except that charge weights from 11 to 25 grains use increments of 0.5 grains. For charges over 25 grains increments of 1.0 grains will be correct.

If even a single test round shows signs of excessive pressure discontinue the use of the load. Do not fire even a single additional cartridge. Seek qualified help before proceeding! The traditional sign of overpressure is a flattened primer. When flattened primers start to occur, it is a definite warning that the charge should be reduced, quickly. Brass getting into the ejector and extractor cavities is a worse case. Blown out primers are worse still. If a case ruptures it may be a sign of a defective case or a truly lethal chamber pressure.

In case of overpressure signs it is wiser to back off, to be safe rather than sorry. Why risk potentially fatal injury? Better to stop shooting and immediately discard all such reloads.

Read also the Reloading Safety Rules on pages 16 and 17.

Pressure

There are numerous factors which can change the ballistic performance of a load even when the data is followed exactly. For example: The internal dimensions of a firearm can vary greatly even between two of the same make and model. Pressures can vary to extremes as different firearms are used. Each change in brand and even within different lots of a specific brand component can cause notable ballistic changes. Too, changes in ambient temperature can also cause ballistic altering pressures. Not every bullet of a given diameter and weight will produce alike pressure. Changes in case brand can also effect ballistics. There are numerous other causes of varying pressure levels.

Therefore it is essential that the reloader be well versed in the methods of carefully working up a reload powder charge in small increments as outlined in the various reloading handbooks that are available from reliable sources. The data in this book is not intended for use by persons not thoroughly versed in such procedures.

This guide should be supplemented by a good recognized reloading handbook that offers all appropriate information.

PROPERTIES AND STORAGE OF SMOKELESS POWDER

Properties of Smokeless Powder

Smokeless powders, or propellants, are essentially mixtures of chemicals designed to burn under controlled conditions at the proper rate to propel a projectile from a gun.

Smokeless powders are made in three forms:

1. Thin, circular flakes or wafers
2. Small cylinders
3. Small spheres

Single-base smokeless powders derive their main source of energy from nitrocellulose.

The energy released from double-base smokeless powders is derived from both nitrocellulose and nitroglycerine.

All smokeless powders are extremely flammable by design, they are intended to burn rapidly and vigorously when ignited.

Oxygen from the air is not necessary for the combustion of smokeless powders since they contain sufficient built-in oxygen to burn completely, even in an enclosed space such as the chamber of a firearm.

In effect, ignition occurs when the powder granules are heated above their ignition temperature. This can occur by exposing powder to:

1. A flame such as a match or primer flash.
2. An electrical spark or the sparks from welding, grinding, etc..
3. Heat from an electric hot plate or a fire directed or near a closed container even if the powder itself is not exposed to the flame.

When smokeless powder burns, a great deal of gas at high temperature is formed. If the powder is confined, this gas will create pressure in the surrounding structure. The rate of gas generation is such, however, that the pressure can be kept at a low level if sufficient space is available or if the gas can escape.

In this respect smokeless powder differs from blasting agents or high explosives such as dynamite or blasting gelatin,

although smokeless powder may contain chemical ingredients common to some of these products.

High explosives such as dynamite are made to detonate, that is, to change from solid state to gaseous state with evolution of intense heat at such a rapid rate that shock waves are propagated through any medium in contact with them. Such shock waves exert pressure on anything they contact, and, as a matter of practical consideration, it is almost impossible to satisfactorily vent away the effects of a detonation involving any appreciable quantity of dynamite.

Smokeless powder differs considerably in its burning characteristics from common "black powder".

Black powder burns essentially at the same rate out in the open (unconfined) as when in a gun.

When ignited in an unconfined state, smokeless powder burns inefficiently with an orange-colored flame. It produces a considerable amount of light brown noxious smelling smoke. It leaves a residue of ash and partially burned powder. The flame is hot enough to cause severe burns.

The opposite is true when it burns under pressure as in a cartridge fired in a gun. Then it produces very little smoke, a small glow, and leaves very little or no residue. The burning rate of smokeless powder increases with increased pressure.

If burning smokeless powder is confined, gas pressure will rise and eventually can cause the container to burst. Under such circumstances, the bursting of a strong container creates effects similar to an explosion.

For this reason, the Department of Transportation (formerly Interstate Commerce Commission) sets specifications for shipping containers for propellants and requires tests for loaded containers - under actual fire conditions - before approving them for use.

When smokeless powder in D.O.T. approved containers is ignited during such tests, container seams split open or lids pop off - to release gases and powder from confinement at low pressure.

PROPERTIES AND STORAGE OF SMOKELESS POWDER

How to Check Smokeless Powder for Deterioration

Although modern smokeless powders are basically free from deterioration under proper storage conditions, safe practices require a recognition of the signs of deterioration and its possible effects.

Powder deterioration can be checked by opening the cap on the container and smelling the contents.

Powder undergoing deterioration has an irritating acidic odor. (Don't confuse this with common solvent odors such as alcohol, ether and acetone).

Check to make certain that powder is not exposed to extreme heat as this may cause deterioration. Such exposure produces an acidity which accelerates further reaction and has been known, because of the heat generated by the reaction, to cause spontaneous combustion.

Never salvage powder from old cartridges and do not attempt to blend salvaged powder with new powder. Don't accumulate old powder stocks. The best way to dispose of deteriorated smokeless powder is to burn it out in the open at an isolated location in small shallow piles (not over 1" deep). The quantity burned in any one pile should never exceed one pound. Use an ignition train of slow burning combustible material so that the person may retreat to a safe distance before powder is ignited.

Considerations for Storage of Smokeless Powder

Smokeless powder is intended to function by burning, so it must be protected against accidental exposure to flame, sparks or high temperatures.

For these reasons, it is desirable that storage enclosures be made of insulating materials to protect the powder from external heat sources.

Once smokeless powder begins to burn, it will normally continue to burn (and generate gas pressure) until it is consumed.

D.O.T. approved containers are constructed to open up at low internal pressures to avoid the effects normally produced by the rupture or bursting of a strong container.

Storage enclosures for smokeless powder should be constructed in a similar manner:

1. Of fire-resistant and heat-insulating materials to protect contents from external heat.
2. Sufficiently large to satisfactorily vent the gaseous products of combustion which would result if the quantity of smokeless powder within the enclosure accidentally ignited.

If a small, tightly enclosed storage enclosure is loaded to capacity with containers of smokeless powder, the walls of the enclosure will expand or move outwards to release the gas pressure - if the powder in storage is accidentally ignited.

Under such conditions, the effects of the release of gas pressure are similar or identical to the effects produced by an explosion.

Hence only the smallest practical quantities of smokeless powder should be kept in storage, and then in strict compliance with all applicable regulations and recommendations of the National Fire Protection Association.

PROPERTIES AND STORAGE OF SMOKELESS POWDER

Recommendations for Storage of Smokeless Powder

DO NOT SMOKE IN AREAS WHERE POWDER IS STORED OR USED. Place appropriate "NO SMOKING" signs in these areas. THE STORAGE CABINETS SHOULD BE CONSTRUCTED OF INSULATING MATERIALS AND WITH A WEAK WALL, SEAMS OR JOINTS TO PROVIDE AN EASY MEANS OF SELFVENTING.

DO NOT KEEP OLD OR SALVAGED POWDERS. Check old powders for deterioration regularly. Destroy deteriorated powders immediately.

OBEY ALL REGULATIONS REGARDING QUANTITY AND METHODS OF STORING. Do not store all your powders in one place. If you can, maintain separate storage locations. Many small containers are safer than one or more large containers.

KEEP YOUR STORAGE AND USE AREA CLEAN. Clean up spilled powder promptly. Make sure the surrounding area is free of trash or other readily combustible materials.

The above information has been provided with permission from SAAMI: SPORTING ARMS AND AMMUNITION MANUFACTURERS' INSTITUTE, INC. P.O. Box 838, Branford, CT 06405.

RELOADING SAFETY

Reloading is an enjoyable and rewarding hobby that is easily conducted with safety. But like many other human endeavours, carelessness or negligence can make reloading hazardous. The essence of reloading safety is proper handling and storage of primers and powder. As important is strict following of the instructions given by the manufacturers of the reloading equipment as well as the reloading components.

Before you get started, read the safety rules below and keep them in mind whenever reloading. Attention paid to detail and patience ensures safety and quality!

■ Reload only when you can give it your undivided attention. **Do not reload**, when fatigued or ill. Develop your own reloading routine to avoid mistakes. Avoid haste, load at a leisurely place and keep in mind that **absolutely no reloading under the influence of alcohol or drugs!**

■ Always wear proper eye protection. It is an unnecessary risk to reload without safety glasses.

■ Store powder and primers out of reach of children and away from heat and open fire. **Follow the manufacturer's instructions on your powder canister. Never smoke during a reloading session!**

■ Keep no more powder than needed available. Immediately return the unused powder to its original factory container to preserve its identity and usable life time.

■ Do not use any powder unless its identity is positively known. Scrap all unidentified powders according to the manufacturer's instructions on your powder canister. **Keep in mind that the trial-and-error method may lead to serious injury!**

■ **Do not store primers in bulk! Doing so will create a bomb!** Bulk primers will very likely mass detonate. The blast of a few hundred primers corresponds to a hand grenade in a room! Do not force primers in any circumstances. Take special care when filling and handling auto primer feed tubes. Keep primers in their original factory packing until used. Return unused primers to their original packing.

■ Do not use primers if their identity is lost. Discard them according to the manufacturer's instructions.

■ Start loading with the starting load according to the loading data. If there is no indication of the starting load, use 15 % lower charge than the listed maximum load. Increase the charge using small steps watching for overpressure signs from the primer and the case head at each step. **If you detect overpressures immediately stop shooting and reduce the charge.** Immediately disassemble the defective cartridges. **NEVER EXCEED THE MAXIMUM LOADS!**

■ Check visually the powder level in the cases so you are absolutely sure that you have no double powder charge. When a double powder charge is fired it may result in a gun damage, personal injury, even death.

■ If you change the lot of any component or if you change any of the components of your reload, you must develop your load from the starting load again. A different component as well as a component from a different manufacturing lot may cause changes in cartridge pressure.

■ You must absolutely follow the given cartridge overall lengths (C.O.L.) according to the reloading tables. The change in the bullet seating depth has a significant influence on the cartridge pressure.

■ Never reduce loads under the listed starting load.

■ Keep your reloading bench in good order. Clean up spilled powder and primers promptly and completely. Remember that the reloading bench is not a temporary store for other tools, used car spare parts etc.

■ Use your reloading equipment according to the manufacturer's recommendations. Study the instructions carefully and don't hesitate to ask, if you don't understand everything.

■ Be safe, be conscientious!

RELOADING SAFETY

■ **WASH YOUR HANDS** thoroughly with warm water and soap after shooting or reloading.

■ **DO NOT EAT OR DRINK** during a reloading session. When handling fired cartridge cases the residual containing lead most likely gets to your hands. Therefore eating something requiring a straight hand contact during a reloading session hazards the reloader to lead exposure. Keep your hands away from your nose or your mouth during a reloading session.

■ **KEEP GOOD HOUSEHOLD AT YOUR RELOADING SITE.** Regular cleaning prevents the accumulation of residuals. Use a damp cloth or mop to clean up the reloading bench as well as the floor underneath. **DO NOT USE A VACUUM CLEANER!** The use of it poses a potential risk of exposure due to the spilled powder it collects up. Furthermore, an ordinary vacuum cleaner more spreads than collects the dust containing residuals.. Do not use any carpet at your reloading site. Carpet is hard to keep dust-free and it can create static electricity that can accidentally fire a primer.

■ **PROTECT YOUR BREATHING AGAINST THE DUST IN THE RELOADING AREA.** When using a dry tumbling media in cleaning the cartridge cases, keep in mind that the lead residue from the fired cases moves to the tumbling media, where it accumulates by use. Wear always a dust mask when pouring the dry cleaning media out of the tumbler and be careful not to spill the media on your reloading bench.

RIFLE RELOADING DATA

Disclaimer

All of this reloading information has been provided by Nammo Lapua Oy and Nammo Vihtavuori Oy. The data given here were obtained in laboratory conditions following strictly the CIP (Commission International Permanente) June 13, 1990 and November 9, 1993 rules. The listed maximum loads have been determined according to the respective CIP/SAAMI maximum pressure specification, whichever is lower.

These test methods have been deemed to be safe throughout the world. Pressure is measured at the case mouth or from inside the case according to the CIP.

DO NOT ATTEMPT ANY EXTRAPOLATIONS. PLEASE FOLLOW THE DATA AS WRITTEN.

IT IS A MUST FOR EVERY RELOADER TO READ THE RELOADING SAFETY RULES ON THE PAGES 16 AND 17 OF THIS GUIDE.

.204 Ruger

Test barrel: 630 mm (24¾"), 1 in 12" twist
Primers: Small Rifle
Cases: Hornady, trim-to length 46,80 mm (1.843")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|------------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] |
| 2,1 | 32 | Blitz King | Sierra | N130 | 1,48 | 22.8 | 1106 | 3629 | 1,62 | 25.0 |
| | | | | N135 | 1,59 | 24.5 | 1112 | 3648 | 1,75 | 27.0 |
| | | | | N530 | 1,56 | 24.1 | 1070 | 3510 | 1,75 | 27.0 |
| 2,6 | 40 | V-Max | Hornady | N133 | 1,50 | 23.1 | 1011 | 3317 | 1,64 | 25.3 |
| | | | | N530 | 1,50 | 23.1 | 1013 | 3323 | 1,67 | 25.8 |
| | | | | N140 | 1,70 | 26.2 | 1027 | 3369 | 1,82 | 28.1 |
| 3,2 | 50 | HPBT | Berger | N133 | 1,40 | 21.6 | 857 | 2812 | 1,54 | 23.6 |
| | | | | N530 | 1,43 | 22.1 | 866 | 2841 | 1,56 | 24.1 |
| | | | | N140 | 1,57 | 24.2 | 884 | 2900 | 1,76 | 27.2 |

.22 Hornet

Test barrel: 600 mm (23½"), 1 in 16" twist
Primers: Small Rifle
Cases: Sako, trim-to length 35,40 mm (1.394")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|-------------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] |
| 2,6 | 40 | Spire Point | Speer | N110 | 0,52 | 8.0 | 713 | 2338 | 0,65 | 10.1 |
| | | | | N110 | 0,48 | 7.3 | 654 | 2144 | 0,60 | 9.3 |
| | | | | N120 | 0,47 | 7.3 | 609 | 1997 | 0,56 | 8.7 |
| 2,9 | 45 | Spitzer | Speer | N110 | 0,62 | 9.5 | 612 | 2008 | 0,74 | 11.3 |
| | | | | N120 | 0,62 | 9.5 | 612 | 2008 | 0,74 | 11.3 |
| | | | | N120 | 0,41 | 6.4 | 561 | 1841 | 0,53F | 8.2F |
| 3,2 | 50 | Spitzer | Speer | N110 | 0,58 | 9.0 | 574 | 1884 | 0,69 | 10.6 |
| | | | | N120 | 0,58 | 9.0 | 574 | 1884 | 0,69 | 10.6 |
| | | | | N120 | 0,58 | 9.0 | 574 | 1884 | 0,69 | 10.6 |
| 3,6 | 55 | Spitzer | Speer | N110 | 1,06 | 16.4 | 876 | 2874 | 1,12 | 17.3 |
| | | | | N130 | 1,18 | 18.2 | 879 | 2884 | 1,25F | 19.3F |
| | | | | N130 | 0,96 | 14.8 | 775 | 2543 | 1,05 | 16.2 |

F = Case full

.221 Remington Fireball

Test barrel: 356 mm (14"), 1 in 12" twist
Primers: Small Rifle
Cases: Lapua, trim-to length 35,40 mm (1.394")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|------------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] |
| 2,6 | 40 | Blitz King | Sierra | N120 | 1,06 | 16.4 | 876 | 2874 | 1,12 | 17.3 |
| | | | | N130 | 1,18 | 18.2 | 879 | 2884 | 1,25F | 19.3F |
| | | | | N130 | 1,00 | 15.4 | 713 | 2339 | 1,12 | 17.3 |
| 3,4 | 52 | Match King | Sierra | N120 | 1,20 | 18.5 | 793 | 2602 | 1,25F | 19.3F |
| | | | | N130 | 1,00 | 15.4 | 713 | 2339 | 1,12 | 17.3 |
| | | | | N133 | 1,20 | 18.5 | 793 | 2602 | 1,25F | 19.3F |

.221 Remington Fireball

cont.

| Bullet | Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Powder | Starting load | Maximum load |
|--------|------------|------------|-------|-------------|-------|--------|---------------|--------------|
| | [grs] | | | [in.] | | | Weight [g] | Weight [g] |
| 3,6 | 55 | FMJ | Lapua | 46,5 | 1.831 | N120 | 0,92 | 14.2 |
| | | | | | | N130 | 1,00 | 15.4 |
| | | | | | | N133 | 1,18 | 18.2 |
| 3,6 | 55 | Soft Point | Lapua | 46,5 | 1.831 | N120 | 0,86 | 13.3 |
| | | | | | | N130 | 1,06 | 16.4 |
| | | | | | | N133 | 1,18 | 18.2 |

F = Case full

.222 Remington

Test barrel: 580 mm (23"), 1 in 14" twist

Primers: Small Rifle

Cases: Lapua, trim-to length 43,00 mm (1.693")

| Bullet | Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Powder | Starting load | Maximum load |
|--------|------------|------------|---------|-------------|-------|--------|---------------|--------------|
| | [grs] | | | [in.] | | | Weight [g] | Weight [g] |
| 2,3 | 35 | V-Max | Hornady | 52,0 | 2.047 | N110 | 0,93 | 14.4 |
| | | | | | | N120 | 1,31 | 20.2 |
| | | | | | | N130 | 1,44 | 22.2 |
| 2,6 | 40 | Blitz King | Sierra | 54,0 | 2.126 | N110 | 0,92 | 14.2 |
| | | | | | | N120 | 1,32 | 20.4 |
| | | | | | | N130 | 1,38 | 21.3 |
| 2,9 | 45 | Soft Point | Sierra | 54,0 | 2.126 | N120 | 1,22 | 18.8 |
| | | | | | | N130 | 1,34 | 20.7 |
| | | | | | | N133 | 1,43 | 22.1 |
| 3,2 | 50 | SPSX | Hornady | 53,0 | 2.087 | N120 | 1,20 | 18.5 |
| | | | | | | N130 | 1,30 | 20.1 |
| | | | | | | N133 | 1,38 | 21.3 |
| 3,3 | 51 | HPCE | Lapua | 54,0 | 2.126 | N120 | 1,18 | 18.2 |
| | | | | | | N130 | 1,28 | 19.8 |
| | | | | | | N133 | 1,37 | 21.1 |
| 3,4 | 52 | HPBT | Sierra | 54,0 | 2.126 | N120 | 1,16 | 17.9 |
| | | | | | | N130 | 1,28 | 19.8 |
| | | | | | | N133 | 1,37 | 21.1 |
| 3,6 | 55 | Soft Point | Lapua | 53,5 | 2.106 | N120 | 1,19 | 18.4 |
| | | | | | | N130 | 1,26 | 19.4 |
| | | | | | | N133 | 1,36 | 21.0 |
| 3,9 | 60 | HP | Hornady | 54,0 | 2.126 | N120 | 1,07 | 16.5 |
| | | | | | | | | |

.223 Remington

cont.

| Bullet | | | Powder | | Starting load | | | Maximum load | | | | | | |
|------------|-----------|----------------------|-------------|-------|---------------|------------|----------------|----------------|------------|----------------|----------------|-------|------|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 3,2 | 50 | TNT-HP | Speer | 57,0 | 2.244 | N120 | 1,25 | 19.3 | 911 | 2989 | 1,47 | 22.7 | 1036 | 3399 |
| | | | | | | N130 | 1,43 | 22.1 | 947 | 3107 | 1,59 | 24.5 | 1046 | 3432 |
| | | | | | | N133 | 1,56 | 24.1 | 990 | 3248 | 1,68F | 25.9F | 1077 | 3533 |
| | | | | | | N135 | 1,65 | 25.5 | 999 | 3278 | 1,68F | 25.9F | 1018 | 3340 |
| 3,3 | 51 | HPCE | Lapua | 57,0 | 2.244 | N120 | 1,23 | 19.0 | 909 | 2982 | 1,37 | 21.1 | 991 | 3251 |
| | | | | | | N130 | 1,35 | 20.8 | 930 | 3051 | 1,51 | 23.3 | 1018 | 3340 |
| | | | | | | N530 | 1,53 | 23.6 | 963 | 3159 | 1,66 | 25.6 | 1052 | 3451 |
| | | | | | | N133 | 1,45 | 22.4 | 943 | 3094 | 1,61A | 24.8A | 1033 | 3389 |
| | | | | | | N135 | 1,54 | 23.8 | 957 | 3140 | 1,68F | 25.9 | 1034 | 3392 |
| 3,4 | 52 | HPBT | Sierra | 57,0 | 2.244 | N130 | 1,37 | 21.1 | 936 | 3071 | 1,54 | 23.8 | 1028 | 3373 |
| | | | | | | N133 | 1,46 | 22.5 | 948 | 3110 | 1,62 | 25.0 | 1033 | 3389 |
| | | | | | | N135 | 1,54 | 23.8 | 808 | 2651 | 1,66F | 25.6F | 1039 | 3409 |
| 3,6 | 55 | Soft Point | Lapua | 56,5 | 2.224 | N120 | 1,09 | 16.8 | 820 | 2690 | 1,31 | 20.2 | 939 | 3081 |
| | | | | | | N130 | 1,21 | 18.7 | 857 | 2812 | 1,42 | 21.9 | 959 | 3146 |
| | | | | | | N133 | 1,36 | 21.0 | 876 | 2874 | 1,56 | 24.1 | 980 | 3215 |
| | | | | | | N530 | 1,44 | 22.2 | 891 | 2923 | 1,61 | 24.8 | 995 | 3264 |
| | | | | | | N135 | 1,43 | 22.1 | 899 | 2949 | 1,64F | 25.3F | 1004 | 3294 |
| | | | | | | N140 | 1,57 | 24.2 | 915 | 3002 | 1,74F | 26.9F | 1014 | 3327 |
| 3,6 | 55 | FMJBT | Hornady | 57,0 | 2.244 | N120 | 1,21 | 18.7 | 889 | 2917 | 1,34 | 20.7 | 960 | 3150 |
| | | | | | | N130 | 1,41 | 21.8 | 956 | 3136 | 1,52 | 23.5 | 1013 | 3323 |
| | | | | | | N530 | 1,50 | 23.1 | 941 | 3087 | 1,62 | 25.0 | 1022 | 3353 |
| | | | | | | N133 | 1,43 | 22.1 | 928 | 3045 | 1,59 | 24.5 | 1006 | 3301 |
| | | | | | | N135 | 1,51 | 23.3 | 938 | 3077 | 1,66 | 25.6 | 1017 | 3337 |
| | | | | | | N140 | 1,60 | 24.7 | 930 | 3051 | 1,74 | 26.8 | 1019 | 3343 |
| 3,6 | 55 | FMJ | Lapua | 57,0 | 2.244 | N120 | 1,21 | 18.7 | 876 | 2874 | 1,35 | 20.8 | 953 | 3127 |
| | | | | | | N130 | 1,33 | 20.5 | 895 | 2936 | 1,50 | 23.1 | 985 | 3232 |
| | | | | | | N530 | 1,51 | 23.3 | 931 | 3054 | 1,64 | 25.3 | 1015 | 3330 |
| | | | | | | N133 | 1,43 | 22.1 | 911 | 2989 | 1,59 | 24.5 | 999 | 3278 |
| | | | | | | N135 | 1,51 | 23.3 | 927 | 3041 | 1,68F | 25.9F | 999 | 3278 |
| | | | | | | N140 | 1,61 | 24.8 | 917 | 3009 | 1,77F | 27.3F | 1004 | 3294 |
| 3,9 | 60 | HP | Hornady | 57,0 | 2.244 | N130 | 1,33 | 20.5 | 874 | 2867 | 1,50 | 23.1 | 967 | 3173 |
| | | | | | | N133 | 1,43 | 22.1 | 888 | 2913 | 1,60 | 24.7 | 978 | 3209 |
| | | | | | | N135 | 1,50 | 23.1 | 893 | 2930 | 1,67 | 25.8 | 976 | 3202 |
| | | | | | | N140 | 1,62 | 25.0 | 895 | 2936 | 1,74F | 26.8F | 965 | 3166 |
| 4,0 | 62 | FMJBT | Speer | 57,4 | 2.260 | N530 | 1,43 | 22.1 | 861 | 2825 | 1,56 | 24.1 | 953 | 3127 |
| | | | | | | N135 | 1,43 | 22.1 | 852 | 2795 | 1,60 | 24.7 | 942 | 3091 |
| | | | | | | N140 | 1,62 | 25.0 | 901 | 2956 | 1,70F | 26.2F | 943 | 3094 |
| 4,5 | 69 | HPBT ¹⁾ | Sierra | 57,0 | 2.244 | N133 | 1,34 | 20.7 | 792 | 2598 | 1,48 | 22.8 | 867 | 2844 |
| | | | | | | N135 | 1,40 | 21.6 | 804 | 2638 | 1,54 | 23.8 | 875 | 2871 |
| | | | | | | N140 | 1,53 | 23.6 | 820 | 2690 | 1,68 | 25.9 | 897 | 2943 |
| | | | | | | N540 | 1,56 | 24.1 | 824 | 2703 | 1,71 | 26.4 | 910 | 2986 |
| 4,5 | 69 | Scenar ¹⁾ | Lapua | 57,4 | 2.260 | N530 | 1,37 | 21.1 | 809 | 2654 | 1,47 | 22.7 | 869 | 2851 |
| | | | | | | N133 | 1,31 | 20.2 | 789 | 2589 | 1,42 | 21.9 | 849 | 2785 |
| | | | | | | N135 | 1,37 | 21.1 | 796 | 2612 | 1,49 | 23.0 | 862 | 2828 |
| | | | | | | N140 | 1,48 | 22.8 | 823 | 2700 | 1,60 | 24.7 | 879 | 2884 |
| | | | | | | N540 | 1,50 | 23.1 | 807 | 2648 | 1,65 | 25.5 | 895 | 2936 |
| 4,9 | 75 | BTHP ²⁾ | Hornady | 57,4 | 2.260 | N135 | 1,34 | 20.7 | 752 | 2467 | 1,51 | 23.3 | 830 | 2723 |
| | | | | | | N140 | 1,43 | 22.1 | 754 | 2474 | 1,62 | 25.0 | 843 | 2766 |
| | | | | | | N540 | 1,50 | 23.1 | 773 | 2536 | 1,67 | 25.8 | 863 | 2831 |
| 5,0 | 77 | Scenar | Lapua | 57,4 | 2.260 | N530 | 1,25 | 19.3 | 712 | 2336 | 1,44 | 22.2 | 812 | 2664 |
| | | | | | | N135 | 1,22 | 18.8 | 701 | 2300 | 1,39 | 21.5 | 803 | 2635 |
| | | | | | | N140 | 1,35 | 20.8 | 704 | 2310 | 1,57 | 24.2 | 801 | 2628 |
| | | | | | | N540 | 1,41 | 21.8 | 720 | 2362 | 1,59 | 24.5 | 814 | 2671 |
| 5,0 | 77 | HPBT ²⁾ | Sierra | 57,4 | 2.260 | N530 | 1,28 | 19.8 | 712 | 2336 | 1,43 | 22.1 | 795 | 2608 |
| | | | | | | N135 | 1,27 | 19.6 | 706 | 2316 | 1,46 | 22.5 | 791 | 2595 |
| | | | | | | N140 | 1,36 | 21.0 | 712 | 2336 | 1,60 | 24.7 | 810 | 2657 |
| | | | | | | N540 | 1,47 | 22.7 | 740 | 2428 | 1,64 | 25.3 | 828 | 2717 |
| 5,2 | 80 | HPBT ³⁾ | Sierra | 64,8 | 2.551 | N530 | 1,30 | 20.0 | 713 | 2339 | 1,50 | 23.1 | 801 | 2630 |
| | | | | | | N135 | 1,22 | 18.8 | 711 | 2333 | 1,40 | 21.6 | 788 | 2587 |
| | | | | | | N140 | 1,34 | 20.7 | 730 | 2395 | 1,49 | 23.0 | 807 | 2646 |
| | | | | | | N540 | 1,39 | 21.4 | 730 | 2395 | 1,53 | 23.7 | 808 | 2652 |

.223 Remington

cont.

| Bullet | | | Powder | | Starting load | | | Maximum load | | | | | | |
|------------|-----------|------|-------------|-------|---------------|------------|----------------|----------------|------------|----------------|----------------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 5,8 | 90 | HPBT | Sierra | 59,8 | 2.354 | N140 | 1,25 | 19.3 | 640 | 2100 | 1,44 | 22.2 | 742 | 2434 |
| | | | | | | N150 | 1,24 | 19.1 | 648 | 2126 | 1,48 | 22.8 | 748 | 2454 |
| 5,8 | 90 | HPBT | Berger | 62,4 | 2.457 | N140 | 1,25 | 19.3 | 646 | 2119 | 1,41 | 21.8 | 735 | 2411 |
| | | | | | | N150 | 1,26 | 19.4 | 651 | 2136 | 1,46 | 22.5 | 741 | 2431 |
| | | | | | | N540 | 1,34 | 20.7 | 682 | 2238 | 1,49 | 23.0 | 759 | 2490 |

A = Accuracy load F = Case full

¹⁾ 1 in 10" twist ²⁾ 1 in 7" twist ³⁾ Test barrel with a long throat to accept the C.O.L. of 65 mm (2,559")**.223 WSSM**

Test barrel: 640 mm (25"), 1 in 8" twist

Primers: Large Rifle

Cases: Winchester, trim-to length 42,20 mm (1.661")

| Bullet | | | Powder | | Starting load | | | Maximum load | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
</tbl_info

.22-250 Remington

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|--------------------|--------|-------------|---------------|------|------------|--------------|----------------|-------|------------|-------|----------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| 3,6 | 55 | FMJ | Lapua | 59,6 | 2.346 | N135 | 1,75 | 27.0 | 936 | 3071 | 1,98 | 30.6 | 1040 | 3412 |
| | | | | | | N140 | 1,94 | 29.9 | 959 | 3146 | 2,17 | 33.5 | 1050 | 3445 |
| | | | | | | N540 | 2,03 | 31.3 | 972 | 3189 | 2,29 | 35.3 | 1085 | 3560 |
| | | | | | | N150 | 1,98 | 30.6 | 968 | 3176 | 2,25 | 34.7 | 1057 | 3468 |
| | | | | | | N135 | 1,62 | 25.0 | 902 | 2959 | 1,82 | 28.1 | 990 | 3248 |
| 3,6 | 55 | Soft Point | Lapua | 59,5 | 2.343 | N140 | 1,81 | 27.9 | 932 | 3058 | 2,04 | 31.5 | 1017 | 3337 |
| | | | | | | N540 | 2,09 | 32.3 | 981 | 3219 | 2,29 | 35.3 | 1075 | 3527 |
| | | | | | | N150 | 1,83 | 28.2 | 903 | 2963 | 2,08 | 32.1 | 1019 | 3343 |
| | | | | | | N135 | 1,62 | 25.0 | 845 | 2772 | 1,86 | 28.7 | 955 | 3133 |
| | | | | | | N140 | 1,81 | 27.9 | 887 | 2910 | 2,10 | 32.4 | 989 | 3245 |
| 4,0 | 62 | TSX | Barnes | 59,7 | 2.350 | N140 | 1,67 | 25.8 | 831 | 2726 | 1,90 | 29.3 | 930 | 3051 |
| | | | | | | N540 | 1,82 | 28.1 | 865 | 2838 | 2,09 | 32.3 | 974 | 3196 |
| | | | | | | N150 | 1,72 | 26.5 | 843 | 2766 | 1,98 | 30.6 | 943 | 3094 |
| | | | | | | N140 | 1,71 | 26.4 | 820 | 2690 | 1,98 | 30.6 | 914 | 2999 |
| | | | | | | N540 | 1,85 | 28.5 | 843 | 2766 | 2,10 | 32.4 | 939 | 3081 |
| 4,5 | 69 | HPBT ¹⁾ | Lapua | 59,6 | 2.346 | N150 | 1,77 | 27.3 | 836 | 2743 | 2,05 | 31.6 | 921 | 3022 |
| | | | | | | N550 | 1,98 | 30.6 | 854 | 2802 | 2,24 | 34.6 | 953 | 3127 |

¹⁾ 1 in 10" twist**6 mm PPC-USA**

Test barrel: 580 mm (23"), 1 in 14" twist

Primers: Small Rifle

Cases: Sako, trim-to length 38,30 mm (1.508")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|---------------------|-------|-----------|-------|-------------|---------------|------|------------|--------------|----------------|-------|------------|-------|----------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| 4,4 | 68 | HPFB | Euber | 53,6 | 2.110 | N130 | 1,52 | 23,4 | 843 | 2766 | 1,68 | 25,9 | 928 | 3045 |
| | | | | | | N133 | 1,63 | 25,2 | 840 | 2756 | 1,83C | 28,2C | 951 | 3120 |
| | | | | | | N120 | 1,39 | 21,5 | 809 | 2654 | 1,55 | 23,9 | 901 | 2956 |
| | | | | | | N130 | 1,47 | 22,7 | 820 | 2690 | 1,69 | 26,1 | 934 | 3064 |
| | | | | | | N133 | 1,59 | 24,6 | 826 | 2710 | 1,79C | 27,6C | 935 | 3068 |
| C = Compressed load | | | | | | | | | | | | | | |

6 mm BR Norma

Test barrel: 650 mm (25½"), 1 in 8" twist

Primers: Small Rifle

Cases: Lapua, trim-to length 39,40 mm (1.551")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|-----------|--------|-------------|---------------|------|------------|--------------|----------------|-------|------------|-------|----------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| 4,5 | 70 | HPBT | Sierra | 57,0 | 2.244 | N133 | 1,64 | 25,3 | 864 | 2834 | 1,86 | 28,7 | 957 | 3140 |
| | | | | | | N135 | 1,88 | 29,0 | 901 | 2956 | 2,20 | 33,9 | 1009 | 3310 |
| | | | | | | N140 | 1,94 | 29,9 | 882 | 2894 | 2,01 | 31,0 | 957 | 3140 |
| | | | | | | N540 | 2,00 | 30,9 | 888 | 2913 | 2,18 | 33,6 | 980 | 3215 |
| | | | | | | N140 | 2,05 | 31,6 | 900 | 2953 | 2,22 | 34,3 | 982 | 3222 |
| 5,0 | 77 | HP SJ | Lapua | 60,0 | 2.362 | N133 | 1,85 | 28,5 | 884 | 2900 | 2,01A | 31,0A | 964 | 3163 |
| | | | | | | N140 | 2,05 | 31,6 | 900 | 2953 | 2,22 | 34,3 | 982 | 3222 |
| | | | | | | N540 | 2,14 | 33,0 | 914 | 2999 | 2,31 | 35,6 | 999 | 3278 |
| | | | | | | N540 | 1,72 | 26,5 | 803 | 2635 | 1,97 | 30,4 | 908 | 2979 |
| | | | | | | N150 | 1,63 | 25,2 | 776 | 2546 | 1,90 | 29,3 | 874 | 2867 |
| 5,0 | 77 | HP SJ | Lapua | 60,0 | 2.362 | N140 | 1,62 | 25,0 | 775 | 2543 | 1,88 | 29,0 | 877 | 2877 |
| | | | | | | N540 | 1,72 | 26,5 | 803 | 2635 | 1,97 | 30,4 | 908 | 2979 |
| | | | | | | N150 | 1,63 | 25,2 | 776 | 2546 | 1,90 | 29,3 | 874 | 2867 |
| | | | | | | N140 | 1,62 | 25,0 | 775 | 2543 | 1,88 | 29,0 | 877 | 2877 |
| | | | | | | N540 | 1,72 | 26,5 | 803 | 2635 | 1,97 | 30,4 | 908 | 2979 |
| 5,5 | 85 | TSX | Barnes | 58,5 | 2.303 | N140 | 1,62 | 25,0 | 775 | 2543 | 1,88 | 29,0 | 877 | 2877 |
| | | | | | | N540 | 1,72 | 26,5 | 803 | 2635 | 1,97 | 30,4 | 908 | 2979 |
| | | | | | | N150 | 1,63 | 25,2 | 776 | 2546 | 1,90 | 29,3 | 874 | 2867 |
| | | | | | | N140 | 1,62 | 25,0 | 775 | 2543 | 1,88 | 29,0 | 877 | 2877 |
| | | | | | | N540 | 1,72 | 26,5 | 803 | 2635 | 1,97 | 30,4 | 908 | 2979 |
| 5,8 | 90 | Naturalis | Lapua | 54,7 | 2.154 | N140 | 1,75 | 27,0 | 790 | 2592 | 2,03 | 31,3 | 879 | 2884 |
| | | | | | | N540 | 1,89 | 29,2 | 816 | 2677 | 2,11 | 32,6 | 915 | 3002 |
| | | | | | | N150 | 1,81 | 27,9 | 795 | 2608 | 2,10 | 32,4 | 887 | 2910 |
| | | | | | | N140 | 1,68 | 26,0 | 788 | 2584 | 1,93 | 29,8 | 871 | 2858 |
| | | | | | | N540 | 1,69 | 26,1 | 757 | 2484 | 2,20 | 33,9 | 952 | 3123 |
| 5,8 | 90 | Scenar | | | | | | | | | | | | |

.243 Winchester

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|----------------------|----------|-------------|---------------|------|------------|----------------|----------------|------------|-------|----------------|-------|------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] | |
| 5,8 | 90 | Scenar | Lapua | 68,3 | 2.689 | N540 | 2,27 | 35.0 | 860 | 2822 | 2,54 | 39.2 | 962 | 3156 |
| | | | | | | N150 | 2,08 | 32.1 | 817 | 2680 | 2,44 | 37.7 | 914 | 2999 |
| | | | | | | N550 | 2,46 | 38.0 | 865 | 2838 | 2,68 | 41.4 | 967 | 3173 |
| | | | | | | N160 | 2,52 | 38.9 | 847 | 2779 | 2,83 | 43.7 | 952 | 3123 |
| | | | | | | N540 | 2,15 | 33.2 | 820 | 2690 | 2,50 | 38.6 | 928 | 3045 |
| | | | | | | N550 | 2,46 | 38.0 | 843 | 2766 | 2,68 | 41.4 | 939 | 3081 |
| 6,2 | 96 | TOG | Brenneke | 67,0 | 2.638 | N540 | 2,15 | 33.2 | 820 | 2690 | 2,50 | 38.6 | 928 | 3045 |
| | | | | | | N550 | 2,46 | 38.0 | 843 | 2766 | 2,68 | 41.4 | 939 | 3081 |
| | | | | | | N160 | 2,60 | 40.1 | 824 | 2703 | 2,93 | 45.2 | 929 | 3048 |
| | | | | | | N540 | 1,97 | 30.4 | 770 | 2526 | 2,33 | 36.0 | 878 | 2881 |
| | | | | | | N150 | 1,86 | 28.7 | 722 | 2369 | 2,23 | 34.4 | 839 | 2753 |
| | | | | | | N550 | 2,21 | 34.1 | 787 | 2582 | 2,48 | 38.3 | 885 | 2904 |
| 6,8 | 105 | Scenar ¹⁾ | Lapua | 68,3 | 2.689 | N150 | 1,95 | 30.1 | 729 | 2392 | 2,27 | 35.0 | 821 | 2694 |
| | | | | | | N550 | 2,34 | 36.1 | 782 | 2566 | 2,59 | 40.0 | 890 | 2920 |
| | | | | | | N160 | 2,43 | 37.5 | 766 | 2513 | 2,70 | 41.7 | 869 | 2851 |
| | | | | | | N165 | 2,62 | 40.4 | 783 | 2569 | 3,00 | 46.3 | 894 | 2933 |

¹⁾ The test barrel rifle twist 1 in 8"**6 XC**

Test barrel: 620 mm (24"), 1 in 8" twist

Primers: Large Rifle

Cases: Norma, trim-to length 48,20 mm (1.898")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|------------|---------|-------------|---------------|------|------------|----------------|----------------|------------|-------|----------------|-------|------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] | |
| 3,4 | 52 | V-Max | Hornady | 62,0 | 2.441 | N135 | 2,26 | 34.9 | 1045 | 3428 | 2,55 | 39.4 | 1162 | 3812 |
| | | | | | | N140 | 2,48 | 38.3 | 1056 | 3465 | 2,77 | 42.7 | 1175 | 3855 |
| | | | | | | N550 | 2,54 | 39.2 | 1079 | 3540 | 2,82 | 43.5 | 1214 | 3983 |
| | | | | | | N150 | 2,21 | 34.1 | 939 | 3081 | 2,62 | 40.4 | 1066 | 3497 |
| | | | | | | N540 | 2,41 | 37.2 | 998 | 3274 | 2,66 | 41.1 | 1110 | 3642 |
| | | | | | | N550 | 2,05 | 31.6 | 768 | 2520 | 2,82 | 43.5 | 1109 | 3638 |
| 4,5 | 70 | Match King | Sierra | 63,0 | 2.480 | N150 | 2,21 | 34.1 | 939 | 3081 | 2,62 | 40.4 | 1066 | 3497 |
| | | | | | | N540 | 2,41 | 37.2 | 998 | 3274 | 2,66 | 41.1 | 1110 | 3642 |
| | | | | | | N550 | 2,05 | 31.6 | 768 | 2520 | 2,82 | 43.5 | 1109 | 3638 |
| | | | | | | N150 | 2,26 | 34.9 | 911 | 2989 | 2,59 | 40.0 | 1028 | 3373 |
| | | | | | | N540 | 2,29 | 35.3 | 927 | 3041 | 2,58 | 39.8 | 1063 | 3488 |
| | | | | | | N550 | 2,45 | 37.8 | 940 | 3084 | 2,74 | 42.3 | 1069 | 3507 |
| 5,8 | 90 | Naturalis | Lapua | 63,8 | 2.512 | N150 | 2,01 | 31.0 | 812 | 2664 | 2,38 | 36.7 | 921 | 3022 |
| | | | | | | N540 | 2,08 | 32.1 | 846 | 2776 | 2,47 | 38.1 | 969 | 3179 |
| | | | | | | N550 | 2,24 | 34.6 | 851 | 2792 | 2,61 | 40.3 | 972 | 3189 |
| | | | | | | N150 | 2,09 | 32.3 | 859 | 2818 | 2,43 | 37.5 | 988 | 3241 |
| | | | | | | N550 | 1,94 | 29.9 | 817 | 2680 | 2,35 | 36.3 | 942 | 3091 |
| | | | | | | N150 | 2,23 | 34.4 | 867 | 2844 | 2,60 | 40.1 | 993 | 3258 |
| 6,8 | 105 | Scenar | Lapua | 69,0 | 2.717 | N540 | 1,88 | 29.0 | 780 | 2559 | 2,20 | 34.0 | 882 | 2894 |
| | | | | | | N550 | 2,07 | 31.9 | 796 | 2612 | 2,37 | 36.6 | 895 | 2936 |
| | | | | | | N160 | 2,05 | 31.6 | 767 | 2516 | 2,43 | 37.5 | 875 | 2871 |

6 mm Remington

Test barrel: 660 mm (26"), 1 in 10" twist

Primers: Large Rifle

Cases: Remington, trim-to length 56,60 mm (2.228")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|-----------|---------|-------------|---------------|------|------------|----------------|----------------|------------|-------|----------------|-------|------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] | |
| 3,8 | 58 | V-Max | Hornady | 70,4 | 2.772 | N140 | 2,47 | 38.1 | 1053 | 3455 | 2,80 | 43.2 | 1173 | 3848 |
| | | | | | | N540 | 2,68 | 41.4 | 1084 | 3556 | 3,01 | 46.5 | 1207 | 3960 |
| | | | | | | N150 | 2,50 | 38.6 | 1055 | 3461 | 2,91 | 44.9 | 1176 | 3858 |
| | | | | | | N140 | 1,97 | 30.4 | 858 | 2815 | 2,49 | 38.4 | 983 | 3225 |
| | | | | | | N150 | 2,11 | 32.6 | 868 | 2848 | 2,47 | 38.1 | 973 | 3192 |
| | | | | | | N540 | 2,25 | 34.7 | 899 | 2949 | 2,65 | 40.9 | 1012 | 3320 |
| 5,0 | 77 | HP | Lapua | 70,4 | 2.772 | N140 | 2,38 | 36.7 | 933 | 3061 | 2,71 | 41.8 | 1046 | 3432 |
| | | | | | | N540 | 2,55 | 39.4 | 971 | 3186 | 2,84 | 43.8 | 1073 | 3520 |
| | | | | | | N150 | 2,50 | 38.6 | 950 | 3117 | 2,80 | 43.2 | 1051 | 3448 |
| | | | | | | N550 | 2,73 | 42.1 | 972 | 3189 | 3,01 | 46.5 | 1093 | 3586 |

6 mm Remington

cont.

| Bullet | Powder | Starting load | | | Maximum load | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L |

6,5 mm Grendel

Test barrel: 610 mm (24"), 1 in 10" twist
 Primers: Small Rifle
 Cases: Lapua, trim-to length 38,50 mm (1.516")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|----------------|-------|-----------|--------|-------------|---------------|------|------------|----------------|----------------|------------|----------------|----------------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 6,5 | 100 | FMJ | Lapua | 53,0 | 2.087 | N130 | 1,32 | 20,4 | 705 | 2313 | 1,54 | 23,8 |
| | | | | N133 | | | 1,51 | 23,3 | 728 | 2388 | 1,72 | 26,5 |
| | | | | N530 | | | 1,56 | 24,1 | 729 | 2392 | 1,79 | 27,6 |
| 6,5 | 100 | Scenar | Lapua | 57,1 | 2.248 | N130 | 1,40 | 21,6 | 674 | 2211 | 1,76 | 27,2 |
| | | | | N530 | | | 1,60 | 24,7 | 729 | 2392 | 1,90 | 29,3 |
| | | | | N133 | | | 1,57 | 24,2 | 728 | 2388 | 1,90 | 29,3 |
| 7,0 | 108 | Scenar | Lapua | 57,1 | 2.248 | N130 | 1,40 | 21,6 | 671 | 2201 | 1,69 | 26,1 |
| | | | | N530 | | | 1,44 | 22,2 | 690 | 2264 | 1,73 | 26,7 |
| | | | | N133 | | | 1,51 | 23,3 | 689 | 2260 | 1,80 | 27,8 |
| 7,8 | 120 | TSX | Barnes | 53,0 | 2.087 | N530 | 1,34 | 20,7 | 592 | 1942 | 1,62 | 25,0 |
| | | | | N133 | | | 1,17 | 18,1 | 578 | 1896 | 1,58 | 24,4 |
| | | | | N540 | | | 1,58 | 24,4 | 631 | 2070 | 1,88 | 29,0 |
| 8,0 | 123 | Scenar | Lapua | 57,1 | 2.248 | N530 | 1,47 | 22,7 | 635 | 2083 | 1,73 | 26,7 |
| | | | | N133 | | | 1,36 | 21,0 | 609 | 1998 | 1,73 | 26,7 |
| | | | | N135 | | | 1,29 | 19,9 | 593 | 1946 | 1,75 | 27,0 |
| 8,8 | 136 | Scenar-L | Lapua | 57,1 | 2.248 | N530 | 1,47 | 22,7 | 644 | 2113 | 1,65 | 25,5 |
| | | | | N135 | | | 1,33 | 20,5 | 597 | 1959 | 1,65 | 25,5 |
| | | | | N140 | | | 1,59 | 24,5 | 655 | 2149 | 1,83 | 28,2 |
| 9,0 | 139 | Scenar | Lapua | 57,1 | 2.248 | N530 | 1,40 | 21,6 | 606 | 1988 | 1,60 | 24,7 |
| | | | | N135 | | | 1,23 | 19,0 | 547 | 1795 | 1,55 | 23,9 |
| | | | | N140 | | | 1,57 | 24,2 | 620 | 2034 | 1,78 | 27,5 |
| 9,1 | 140 | Naturalis | Lapua | 57,5 | 2.264 | N530 | 1,41 | 21,8 | 595 | 1952 | 1,65 | 25,5 |
| | | | | N140 | | | 1,42 | 21,9 | 579 | 1900 | 1,74 | 26,9 |
| | | | | N540 | | | 1,59 | 24,5 | 616 | 2021 | 1,86 | 28,7 |
| 9,3 | 144 | FMJBT | Lapua | 57,1 | 2.248 | N530 | 1,40 | 21,6 | 610 | 2001 | 1,57 | 24,2 |
| | | | | N135 | | | 1,19 | 18,4 | 553 | 1814 | 1,37 | 21,1 |
| | | | | N140 | | | 1,49 | 23,0 | 640 | 2100 | 1,77 | 27,3 |
| 10,1 | 156 | Mega | Lapua | 57,4 | 2.260 | N530 | 1,28 | 19,8 | 539 | 1768 | 1,50 | 23,1 |
| | | | | N140 | | | 1,31 | 20,2 | 513 | 1683 | 1,62 | 25,0 |
| | | | | N540 | | | 1,38 | 21,3 | 537 | 1762 | 1,67 | 25,8 |
| 6,5 x 47 Lapua | | | | N150 | | | 1,30 | 20,1 | 511 | 1677 | 1,62 | 25,0 |

6,5 x 47 Lapua

Test barrel: 700 mm (27 1/2"), 1 in 8 1/2" twist
 Primers: Small Rifle
 Cases: Lapua, trim-to length 46,80 mm (1.843")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-------|-----------|-------|-------------|---------------|------|------------|----------------|----------------|------------|----------------|----------------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 6,5 | 100 | FMJ | Lapua | 62,5 | 2.461 | N133 | 1,91 | 29,5 | 778 | 2552 | 2,20 | 34,0 |
| | | | | N135 | | | 1,91 | 29,5 | 765 | 2510 | 2,20 | 34,0 |
| | | | | N140 | | | 2,15 | 33,2 | 801 | 2628 | 2,48 | 38,3 |
| 6,5 | 100 | Scenar | Lapua | 69,5 | 2.736 | N133 | 2,10 | 32,4 | 870 | 2854 | 2,26 | 34,9 |
| | | | | N135 | | | 2,20 | 34,0 | 890 | 2920 | 2,31 | 35,6 |
| | | | | N140 | | | 2,40 | 37,0 | 900 | 2953 | 2,56 | 39,5 |
| 6,5 | 108 | Scenar | Lapua | 69,5 | 2.736 | N133 | 2,17 | 33,5 | 831 | 2726 | 2,53 | 39,0 |
| | | | | N135 | | | 2,04 | 31,5 | 814 | 2671 | 2,23 | 34,4 |
| | | | | N140 | | | 2,23 | 34,4 | 828 | 2717 | 2,51 | 38,7 |
| 7,0 | 108 | Scenar | Lapua | 69,5 | 2.736 | N133 | 1,96 | 30,2 | 807 | 2648 | 2,20 | 33,9 |
| | | | | N135 | | | 2,04 | 31,5 | 814 | 2671 | 2,23 | 34,4 |
| | | | | N140 | | | 2,23 | 34,4 | 828 | 2717 | 2,51 | 38,7 |
| 7,0 | 108 | Scenar | Lapua | 69,5 | 2.736 | N133 | 2,27 | 35,0 | 839 | 2753 | 2,55 | 39,4 |
| | | | | N150 | | | 2,35 | 36,3 | 849 | 2785 | 2,63 | 40,6 |
| | | | | N550 | | | 2,39 | 36,9 | 836 | 2743 | 2,68 | 41,4 |

6,5 x 47 Lapua

cont.

| Bullet | Powder | Starting load | | Maximum load | | | | | | | | | |
|------------|--------|---------------|----------------|----------------|------------|----------------|----------------|------|------|------|------|------|-----|
| Weight [g] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | | | |
| 7,8 | 120 | Scenar-L | Lapua | 69,5 | 2,736 | N140 | 1,80 | 27,8 | 731 | 2398 | 2,35 | 36,3 | |
| | | | | N540 | | 2,14 | 33,0 | 772 | 2533 | 2,45 | 37,8 | 889 | |
| | | | | N150 | | 2,06 | 31,8 | 744 | 2441 | 2,43 | 37,5 | 859 | |
| | | | | N550 | | 2,31 | 35,6 | 776 | 2546 | 2,62 | 40,4 | 895 | |
| 7,8 | 120 | TSX | Barnes | 64,5 | 2,539 | N150 | 1,99 | 30,7 | 690 | 2264 | 2,43 | 37,5 | 830 |
| | | | | N540 | | 2,20 | 34,0 | 748 | 2454 | 2,48 | 38,3 | 846 | |
| | | | | N550 | | 2,35 | 36,3 | 750 | 2461 | 2,70 | 41,7 | 872 | |
| 8,0 | 123 | Scenar | Lapua | 69,5 | 2,736 | N140 | 2,15 | 33,2 | 768 | 2520 | 2,36 | 36,4 | 840 |
| | | | | N540 | | 2,31 | 35,7 | 818 | 2685 | 2,57 | 39,7 | 907 | |
| | | | | N150 | | 2,23 | 34,4 | 788 | 2585 | 2,45 | 37,8 | 855 | |
| | | | | N550 | | 2,26 | 34,9 | 780 | 2559 | 2,57 | 39,7 | 878 | |
| 8,1 | 125 | Partition | Nosler | 65,0 | 2,559 | N140 | 1,95 | 30,1 | 715 | 2346 | 2,35 | 36,3 | 820 |
| | | | | N540 | | 2,01 | 31,0 | 727 | 2385 | 2,40 | 37,0 | 829 | |
| | | | | N150 | | 2,18 | 33,6 | 760 | 2493 | 2,44 | 37,7 | 858 | |
| 8,4 | 130 | TSX | Barnes | 64,5 | 2,539 | N150 | 1,81 | 27,9 | 597 | 1959 | 2,31 | 35,6 | 765 |
| | | | | N540 | | 2,08 | 32,1 | 691 | 2267 | 2,42 | 37,3 | 819 | |
| | | | | N550 | | 2,23 | 34 | | | | | | |

6.5 Creedmoor

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 9,0 | 139 | Scenar | Lapua | 69,0 | 2.717 | N150 | 1,90 | 29.3 | 690 | 2264 | 2,30 | 35.5 | 793 | 2602 |
| | | | | | | N540 | 2,00 | 30.9 | 713 | 2339 | 2,38 | 36.7 | 817 | 2680 |
| | | | | | | N550 | 2,20 | 34.0 | 735 | 2411 | 2,57 | 39.7 | 841 | 2759 |
| | | | | | | N160 | 2,14 | 33.0 | 700 | 2297 | 2,73 | 42.1 | 833 | 2733 |
| | | | | | | N150 | 1,67 | 25.8 | 605 | 1985 | 2,05 | 31.6 | 713 | 2339 |
| 9,1 | 140 | Naturalis | Lapua | 69,2 | 2.724 | N540 | 1,88 | 29.0 | 671 | 2201 | 2,20 | 34.0 | 769 | 2523 |
| | | | | | | N550 | 1,98 | 30.6 | 678 | 2224 | 2,33 | 36.0 | 776 | 2546 |
| | | | | | | N550 | 2,08 | 32.1 | 697 | 2287 | 2,48 | 38.3 | 808 | 2651 |
| 9,3 | 144 | FMJBT | Lapua | 69,0 | 2.717 | N150 | 1,79 | 27.6 | 662 | 2172 | 2,29 | 35.3 | 781 | 2562 |
| | | | | | | N540 | 1,85 | 28.5 | 674 | 2211 | 2,26 | 34.9 | 788 | 2585 |
| | | | | | | N550 | 2,03 | 31.3 | 695 | 2280 | 2,44 | 37.7 | 812 | 2664 |
| | | | | | | N150 | 1,71 | 26.4 | 603 | 1978 | 2,17 | 33.5 | 727 | 2385 |
| | | | | | | N540 | 1,83 | 28.2 | 635 | 2083 | 2,20 | 34.0 | 739 | 2425 |
| 10,1 | 156 | Mega | Lapua | 68,5 | 2.697 | N550 | 1,99 | 30.7 | 656 | 2152 | 2,37 | 36.6 | 763 | 2503 |
| | | | | | | N160 | 1,93 | 29.8 | 625 | 2051 | 2,48 | 38.3 | 754 | 2474 |

.260 Remington

Test barrel: 475 mm (18¾"), 1 in 9" twist *Test barrel 600 mm (23½")
Primers: Large Rifle
Cases: Lapua .260 Remington, trim-to length 51,50mm (2.028")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|----------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|-------|-------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 6,5 | 100 | FMJ | Lapua | 66,0 | 2.598 | N140 | 2,08 | 32.1 | 765 | 2510 | 2,44 | 37.7 | 862 | 2828 |
| | | | | | | N540 | 2,32 | 35.8 | 797 | 2615 | 2,63 | 40.6 | 891 | 2923 |
| | | | | | | N150 | 2,12 | 32.7 | 769 | 2523 | 2,51 | 38.7 | 861 | 2825 |
| | | | | | | N140 | 2,30 | 35.5 | 825 | 2708 | 2,59 | 39.9 | 906 | 2973 |
| | | | | | | N150 | 2,31 | 35.7 | 813 | 2669 | 2,61 | 40.3 | 892 | 2926 |
| 6,5 | 100 | HPFB | Sierra | 67,5 | 2.657 | N540 | 2,39 | 36.9 | 831 | 2725 | 2,67 | 41.2 | 912 | 2992 |
| | | | | | | N140 | 2,33 | 36.0 | 816 | 2677 | 2,62 | 40.4 | 904 | 2966 |
| | | | | | | N540 | 2,49 | 38.4 | 823 | 2700 | 2,78 | 42.9 | 931 | 3054 |
| | | | | | | N150 | 2,43 | 37.5 | 819 | 2687 | 2,70 | 41.7 | 904 | 2966 |
| | | | | | | N160 | 2,66 | 41.0 | 814 | 2670 | 2,92 | 45.0 | 898 | 2947 |
| 7,0 | 108 | Scenar | Lapua | 71,0 | 2.795 | N150 | 2,28 | 35.1 | 791 | 2594 | 2,54 | 39.1 | 865 | 2837 |
| | | | | | | N540 | 2,35 | 36.2 | 802 | 2631 | 2,58 | 39.9 | 877 | 2876 |
| | | | | | | N160 | 2,66 | 41.0 | 814 | 2670 | 2,92 | 45.0 | 898 | 2947 |
| | | | | | | N150 | 2,32 | 35.8 | 761 | 2497 | 2,55 | 39.4 | 834 | 2736 |
| | | | | | | N540 | 2,29 | 35.3 | 739 | 2425 | 2,58 | 39.8 | 855 | 2805 |
| 7,8* | 120 | Scenar-L | Lapua | 71,0 | 2.795 | N550 | 2,54 | 39.2 | 788 | 2585 | 2,73 | 42.1 | 859 | 2818 |
| | | | | | | N160 | 2,71 | 41.8 | 771 | 2530 | 2,94 | 45.4 | 851 | 2792 |
| | | | | | | N140 | 2,22 | 34.2 | 749 | 2456 | 2,48 | 38.2 | 825 | 2706 |
| | | | | | | N550 | 2,36 | 36.5 | 765 | 2511 | 2,64 | 40.7 | 835 | 2741 |
| | | | | | | N160 | 2,47 | 38.2 | 755 | 2478 | 2,80 | 43.2 | 838 | 2750 |
| 8,0 | 123 | Scenar | Lapua | 71,0 | 2.795 | N150 | 2,15 | 33.2 | 733 | 2405 | 2,50 | 38.6 | 816 | 2677 |
| | | | | | | N550 | 2,43 | 37.5 | 697 | 2287 | 2,69 | 41.5 | 837 | 2746 |
| | | | | | | N160 | 2,67 | 41.2 | 767 | 2516 | 2,89 | 44.6 | 841 | 2759 |
| | | | | | | N540 | 2,17 | 33.5 | 720 | 2362 | 2,44 | 37.7 | 810 | 2657 |
| | | | | | | N160 | 2,32 | 35.8 | 702 | 2303 | 2,75 | 42.4 | 808 | 2651 |
| 8,8* | 136 | Scenar-L | Lapua | 71,0 | 2.795 | N550 | 2,47 | 38.1 | 755 | 2477 | 2,70 | 41.7 | 835 | 2740 |
| | | | | | | N160 | 2,71 | 41.8 | 758 | 2487 | 2,99 | 46.1 | 841 | 2759 |
| | | | | | | N560 | 2,82 | 43.5 | 762 | 2500 | 3,10 | 47.8 | 843 | 2766 |
| | | | | | | N160 | 2,34 | 36.1 | 720 | 2362 | 2,65 | 40.9 | 811 | 2661 |
| | | | | | | N560 | 2,43 | 37.5 | 714 | 2343 | 2,85C | 44.0C | 796 | 2612 |
| 9,0* | 139 | Scenar | Lapua | 71,0 | 2.795 | N550 | 2,40 | 37.0 | 756 | 2480 | 2,56 | 39.5 | 810 | 2657 |
| | | | | | | N160 | 2,60 | 40.1 | 756 | 2480 | 2,81 | 43.4 | 815 | 2674 |
| | | | | | | N560 | 2,72 | 42.0 | 750 | 2461 | 2,99 | 46.1 | 830 | 2723 |
| | | | | | | N160 | 2,56 | 39.5 | 736 | 2415 | 2,90C | 44.8C | 823 | 2700 |
| | | | | | | N560 | 2,97 | 45.8 | 825 | 2707 | 3,29 | 50.7 | 907 | 2975 |
| 9,1* | 140 | Accubond | Nosler | 70,0 | 2.756 | N550 | 2,34 | 36.1 | 720 | 2362 | 2,65 | 40.9 | 811 | 2661 |
| | | | | | | N160 | 2,43 | 37.5 | 714 | 2343 | 2,85C | 44.0C | 796 | 2612 |
| | | | | | | N560 | 2,56 | 39.5 | 736 | 2415 | 2,90C | 44.8C | 823 | 2700 |

.260 Remington

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|------|-----|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 9,1 | 140 | Naturalis | Lapua | 70,0 | 2.756 | N150 | 1,90 | 29.3 | 667 | 2188 | 2,20 | 34.0 | 747 |

6,5 x 55 Swedish Mauser

cont.

| Bullet | | | Powder | Starting load | | | Maximum load | | | | | | | |
|------------|-----------|-----------|-------------|---------------|-------|------------|----------------|-------|------------|----------------|-------|-------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | |
| 7,8 | 120 | Scenar-L | Lapua | 77,0 | 3.031 | N135 | 2,08 | 32.1 | 763 | 2503 | 2,31 | 35.6 | 820 | 2690 |
| | | | | | | N140 | 2,18 | 33.6 | 786 | 2579 | 2,42 | 37.3 | 822 | 2697 |
| | | | | | | N150 | 2,31 | 35.6 | 800 | 2625 | 2,52 | 38.9 | 855 | 2805 |
| | | | | | | N160 | 2,84 | 43.8 | 842 | 2762 | 2,96 | 45.7 | 880 | 2887 |
| | | | | | | N560 | 3,03 | 46.8 | 847 | 2779 | 3,23 | 49.8 | 907 | 2976 |
| | | | | | | N165 | 3,24 | 50.0 | 862 | 2828 | 3,40C | 52.5C | 909 | 2982 |
| 7,8 | 120 | TSX | Barnes | 71,2 | 2.803 | N160 | 2,72 | 42.0 | 815 | 2674 | 2,99 | 46.1 | 886 | 2907 |
| | | | | | | N560 | 3,06 | 47.2 | 838 | 2749 | 3,25 | 50.2 | 902 | 2959 |
| | | | | | | N165 | 3,24 | 50.0 | 862 | 2828 | 3,40C | 52.5C | 909 | 2982 |
| | | | | | | N140 | 2,17 | 33.5 | 792 | 2598 | 2,35 | 36.3 | 848 | 2782 |
| | | | | | | N540 | 2,44 | 37.7 | 749 | 2456 | 2,68 | 41.4 | 827 | 2715 |
| | | | | | | N150 | 2,24 | 34.6 | 740 | 2428 | 2,47 | 38.1 | 815 | 2674 |
| 8,0 | 123 | Scenar | Lapua | 78,0 | 3.071 | N530 | 2,17 | 33.5 | 792 | 2598 | 2,35 | 36.3 | 848 | 2782 |
| | | | | | | N140 | 2,20 | 34.0 | 745 | 2444 | 2,40 | 37.0 | 810 | 2657 |
| | | | | | | N540 | 2,44 | 37.7 | 749 | 2456 | 2,68 | 41.4 | 827 | 2715 |
| | | | | | | N150 | 2,24 | 34.6 | 740 | 2428 | 2,47 | 38.1 | 815 | 2674 |
| | | | | | | N550 | 2,67 | 41.2 | 837 | 2746 | 2,88 | 44.4 | 901 | 2956 |
| | | | | | | N160 | 2,69 | 41.5 | 807 | 2648 | 2,92 | 45.1 | 869 | 2851 |
| 8,0 | 123 | Scenar SJ | Lapua | 78,0 | 3.071 | N140 | 2,35 | 36.3 | 787 | 2582 | 2,56 | 39.5 | 842 | 2762 |
| | | | | | | N540 | 2,56 | 39.5 | 825 | 2707 | 2,74 | 42.3 | 883 | 2897 |
| | | | | | | N150 | 2,40 | 37.0 | 780 | 2559 | 2,62 | 40.4 | 834 | 2738 |
| | | | | | | N550 | 2,41 | 37.2 | 768 | 2520 | 2,73A | 42.1A | 857 | 2811 |
| | | | | | | N160 | 2,75 | 42.4 | 792 | 2598 | 2,88 | 44.5 | 831 | 2726 |
| | | | | | | N560 | 3,09 | 47.7 | 845 | 2772 | 3,22 | 49.7 | 901 | 2956 |
| 8,4 | 130 | TSX | Barnes | 74,5 | 2.930 | N160 | 2,29 | 35.3 | 726 | 2382 | 2,72 | 42.0 | 814 | 2671 |
| | | | | | | N560 | 2,92 | 45.1 | 796 | 2612 | 3,14 | 48.5 | 860 | 2822 |
| | | | | | | N165 | 3,08 | 47.5 | 808 | 2651 | 3,32 | 51.2 | 870 | 2854 |
| | | | | | | N140 | 2,29 | 35.3 | 730 | 2395 | 2,64 | 40.7 | 812 | 2663 |
| | | | | | | N540 | 2,32 | 35.8 | 749 | 2457 | 2,57 | 39.6 | 820 | 2690 |
| | | | | | | N150 | 2,32 | 35.8 | 710 | 2329 | 2,60 | 40.1 | 808 | 2651 |
| 8,4 | 130 | HPBT | Norma | 80,0 | 3.150 | N550 | 2,54 | 39.2 | 768 | 2520 | 2,84 | 43.8 | 852 | 2795 |
| | | | | | | N160 | 2,79 | 43.0 | 764 | 2507 | 3,06 | 47.3 | 840 | 2757 |
| | | | | | | N560 | 3,01 | 46.4 | 803 | 2635 | 3,25 | 50.2 | 878 | 2882 |
| | | | | | | N160 | 2,73 | 42.1 | 778 | 2552 | 2,93 | 45.2 | 840 | 2756 |
| | | | | | | N560 | 2,90 | 44.8 | 802 | 2631 | 3,07 | 47.4 | 857 | 2812 |
| | | | | | | N165 | 3,02 | 46.6 | 813 | 2667 | 3,20 | 49.4 | 861 | 2825 |
| 9,0 | 139 | HPBT | Norma | 78,0 | 3.071 | N150 | 2,28 | 35.2 | 704 | 2310 | 2,55 | 39.4 | 779 | 2555 |
| | | | | | | N550 | 2,50 | 38.6 | 743 | 2438 | 2,71 | 41.8 | 813 | 2667 |
| | | | | | | N160 | 2,73 | 42.1 | 738 | 2421 | 2,98 | 46.0 | 810 | 2656 |
| | | | | | | N560 | 2,88 | 44.4 | 753 | 2470 | 3,20 | 49.4 | 846 | 2777 |
| | | | | | | N165 | 3,00 | 46.3 | 765 | 2510 | 3,23 | 49.9 | 833 | 2732 |
| | | | | | | N160 | 2,40 | 37.0 | 732 | 2402 | 2,67 | 41.2 | 790 | 2592 |
| 9,0 | 139 | Scenar | Lapua | 78,0 | 3.071 | N560 | 2,73 | 42.1 | 736 | 2415 | 3,06 | 47.2 | 826 | 2710 |
| | | | | | | N165 | 2,86 | 44.1 | 766 | 2513 | 3,10 | 47.8 | 833 | 2733 |
| | | | | | | N150 | 2,25 | 34.7 | 729 | 2392 | 2,48 | 38.3 | 785 | 2575 |
| | | | | | | N550 | 2,37 | 36.6 | 712 | 2336 | 2,61A | 40.3A | 799 | 2622 |
| | | | | | | N160 | 2,54 | 39.2 | 748 | 2454 | 2,80 | 43.3 | 795 | 2610 |
| | | | | | | N560 | 2,73 | 42.1 | 736 | 2415 | 3,06 | 47.3 | 826 | 2711 |
| 9,1 | 140 | Naturalis | Lapua | 75,0 | 2.953 | N563 | 2,94 | 45.4 | 788 | 2585 | 3,12 | 48.1 | 841 | 2759 |
| | | | | | | N140 | 2,25 | 34.7 | 742 | 2434 | 2,47 | 38.1 | 796 | 2612 |
| | | | | | | N150 | 2,03 | 31.3 | 695 | 2280 | 2,25 | 34.7 | 752 | 2467 |
| | | | | | | N550 | 2,34 | 36.1 | 741 | 2431 | 2,59 | 40.0 | 803 | 2635 |
| | | | | | | N160 | 2,32 | 35.8 | 723 | 2372 | 2,66 | 41.1 | 790 | 2592 |
| | | | | | | N560 | 2,71 | 41.8 | 763 | 2503 | 2,96 | 45.7 | 824 | 2703 |
| 9,1 | 140 | Naturalis | Lapua | 75,0 | 2.953 | N165 | 2,55 | 39.4 | 751 | 2464 | 3,00 | 46.3 | 813 | 2667 |

6,5 x 55 Swedish Mauser

cont.

| Bullet | | | Powder | Starting load | | | Maximum load | | | | | | | |
|------------|-----------|------|-------------|---------------|-------|------------|----------------|-------|------------|----------------|-------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | |
| 9,1 | 140 | HPBT | Sierra | 79,0 | 3.110 | N150 | 2,35 | 36.3 | 703 | 2306 | 2,54 | 39.1 | 765 | 2511 |
| | | | | | | | | | | | | | | |

6,5 x 55 SE / 6,5 x 55 SKAN

cont.

| Bullet | 7,8 g / 120 gr | | | Lapua GB547 Scenar-L | | | C.O.L. 77 mm / 3.031 inch | | | | | | | | | |
|---------------------|----------------|-------------------|---------------------------------------|----------------------|--------------|---------------|---------------------------|---------------------------------------|--------------|--------------|-------|-------|-------|------|-----|------|
| Powder | Starting load | | | | | | | | | | | | | | | |
| Type | Weight [g] | Velocity [m/s] | barrel length [mm] 670 [m/s] | 700 [m/s] | 740 [m/s] | Weight [g] | Velocity [m/s] | barrel length [mm] 670 [m/s] | 700 [m/s] | 740 [m/s] | [fps] | [fps] | [fps] | | | |
| N135 | 2,08 | 32.1 | 739 | 2425 | 744 | 2441 | 752 | 2467 | 2,43 | 37.5 | 829 | 2720 | 834 | 2736 | 842 | 2762 |
| N140 | 2,18 | 33.6 | 761 | 2497 | 767 | 2516 | 774 | 2539 | 2,59 | 40.0 | 844 | 2769 | 849 | 2785 | 856 | 2808 |
| N540 | 2,32 | 35.8 | 800 | 2625 | 801 | 2628 | 807 | 2648 | 2,81 | 43.4 | 890 | 2920 | 898 | 2946 | 907 | 2976 |
| N150 | 2,31 | 35.6 | 751 | 2464 | 754 | 2474 | 761 | 2497 | 2,65 | 40.9 | 841 | 2759 | 848 | 2782 | 856 | 2808 |
| N550 | 2,62 | 40.4 | 816 | 2677 | 820 | 2690 | 827 | 2713 | 2,95 | 45.5 | 894 | 2933 | 904 | 2966 | 917 | 3009 |
| N160 | 2,84 | 43.8 | 772 | 2533 | 784 | 2572 | 791 | 2595 | 3,07 | 47.4 | 857 | 2812 | 874 | 2867 | 899 | 2949 |
| N560 | 3,03 | 46.8 | 810 | 2657 | 820 | 2690 | 828 | 2717 | 3,32 | 51.2 | 901 | 2956 | 916 | 3005 | 932 | 3058 |
| Bullet | 8,0 g / 123 gr | | | Lapua GB489 Scenar | | | C.O.L. 78 mm / 3.071 inch | | | | | | | | | |
| Powder | Starting load | | | | | | | | | | | | | | | |
| Type | Weight [g] | Velocity [m/s] | barrel length [mm] 670 [m/s] | 700 [m/s] | 740 [m/s] | Weight [g] | Velocity [m/s] | barrel length [mm] 670 [m/s] | 700 [m/s] | 740 [m/s] | [fps] | [fps] | [fps] | | | |
| N140 | 2,20 | 34.0 | 750 | 2462 | 755 | 2477 | 761 | 2497 | 2,55 | 39.4 | 833 | 2734 | 838 | 2750 | 845 | 2772 |
| N540 | 2,47 | 38.1 | 788 | 2586 | 795 | 2607 | 803 | 2635 | 2,79 | 43.1 | 881 | 2892 | 889 | 2915 | 898 | 2946 |
| N150 | 2,24 | 34.6 | 741 | 2432 | 748 | 2454 | 757 | 2484 | 2,60 | 40.1 | 830 | 2724 | 838 | 2749 | 848 | 2782 |
| N550 | 2,67 | 41.2 | 805 | 2641 | 816 | 2676 | 830 | 2723 | 2,94 | 45.4 | 883 | 2895 | 894 | 2934 | 910 | 2986 |
| N160 | 2,71 | 41.8 | 763 | 2502 | 779 | 2557 | 802 | 2631 | 3,02 | 46.6 | 845 | 2773 | 864 | 2835 | 889 | 2917 |
| N560 | 3,04 | 46.9 | 801 | 2628 | 814 | 2669 | 830 | 2723 | 3,27 | 50.5 | 888 | 2913 | 902 | 2958 | 920 | 3018 |
| Bullet | 8,8 g / 136 gr | | | Lapua GB546 Scenar-L | | | C.O.L. 78 mm / 3.071 inch | | | | | | | | | |
| Powder | Starting load | | | | | | | | | | | | | | | |
| Type | Weight [g] | Velocity [m/s] | barrel length [mm] 670 [m/s] | 700 [m/s] | 740 [m/s] | Weight [g] | Velocity [m/s] | barrel length [mm] 670 [m/s] | 700 [m/s] | 740 [m/s] | [fps] | [fps] | [fps] | | | |
| N540 | 2,39 | 36.9 | 736 | 2415 | 742 | 2434 | 749 | 2457 | 2,72 | 42,0 | 841 | 2759 | 846 | 2776 | 852 | 2795 |
| N150 | 2,29 | 35.3 | 711 | 2333 | 718 | 2356 | 726 | 2382 | 2,58 | 39,8 | 821 | 2694 | 824 | 2703 | 830 | 2723 |
| N550 | 2,57 | 39.7 | 757 | 2484 | 763 | 2503 | 769 | 2523 | 2,80 | 43,2 | 856 | 2808 | 862 | 2828 | 870 | 2854 |
| N160 | 2,73 | 42.1 | 741 | 2431 | 748 | 2454 | 755 | 2477 | 3,05 | 47,1 | 852 | 2795 | 857 | 2812 | 865 | 2838 |
| N560 | 2,9 | 44.8 | 786 | 2579 | 794 | 2605 | 801 | 2628 | 3,20 | 49,4 | 884 | 2900 | 892 | 2927 | 901 | 2956 |
| N165 | 3,02 | 46.6 | 779 | 2556 | 787 | 2582 | 795 | 2608 | 3,30C | 50,9C | 868 | 2848 | 876 | 2874 | 885 | 2904 |
| Bullet | 9,0 g / 139 gr | | | Lapua GB458 Scenar | | | C.O.L. 78 mm / 3.071 inch | | | | | | | | | |
| Powder | Starting load | | | | | | | | | | | | | | | |
| Type | Weight [g] | Velocity [m/s] | barrel length [mm] 670 [m/s] | 700 [m/s] | 740 [m/s] | Weight [g] | Velocity [m/s] | barrel length [mm] 670 [m/s] | 700 [m/s] | 740 [m/s] | [fps] | [fps] | [fps] | | | |
| N150 | 2,12 | 32.7 | 696 | 2284 | 699 | 2295 | 704 | 2310 | 2,40 | 37,0 | 781 | 2563 | 785 | 2575 | 790 | 2592 |
| N550 | 2,37 | 36.6 | 738 | 2421 | 743 | 2438 | 750 | 2461 | 2,72 | 42,0 | 825 | 2705 | 830 | 2724 | 838 | 2749 |
| N160 | 2,41 | 37.2 | 723 | 2373 | 730 | 2395 | 735 | 2411 | 2,84 | 43,8 | 817 | 2679 | 824 | 2704 | 830 | 2723 |
| N560 | 2,87 | 44.3 | 771 | 2529 | 776 | 2546 | 783 | 2569 | 3,18 | 49,1 | 866 | 2842 | 872 | 2862 | 880 | 2887 |
| N165 | 2,86 | 44.1 | 758 | 2488 | 765 | 2508 | 773 | 2536 | 3,25 | 50,2 | 847 | 2777 | 854 | 2801 | 863 | 2831 |
| C = Compressed load | | | | | | | | | | | | | | | | |

6,5 - 284 Norma

Test barrel: 660 mm (26"), 1 in 9" twist
 Primers: Large Rifle
 Cases: Lapua, trim-to length 54,90 mm (2.161")

| Bullet | Type/Name | Mfg | C.O.L. [mm] | C.O.L. [in.] | Powder | Starting load | Maximum load | | | | | | | |
|---------------|-----------|--------|----------------|-----------------|--------|---------------|-------------------|-------------------|---------------|-------------------|-------------------|------|------|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | C.O.L. [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 6,5 | 100 | FMJ | Lapua | 70 | 2.756 | N150 | 2,71 | 41.8 | 872 | 2861 | 3,22 | 49.7 | 973 | 3192 |
| | | | | | | N550 | 3,09 | 47.7 | 895 | 2936 | 3,48 | 53.7 | 1019 | 3343 |
| | | | | | | N160 | 3,08 | 47.5 | 855 | 2805 | 3,77 | 58.2 | 1002 | 3287 |
| 6,5 | 100 | Scenar | Lapua | 75 | 2.953 | N150 | 2,79 | 43.1 | 910 | 2986 | 3,23 | 49.8 | 999 | 3278 |
| | | | | | | N550 | 3,08 | 47.5 | 892 | 2927 | 3,48 | 53.7 | 1019 | 3343 |
| | | | | | | N160 | 3,10 | 47.8 | 865 | 2838 | 3,77 | 58.2 | 1004 | 3294 |

6,5 - 284 Norma

cont.

| Bullet | Weight [g] | Type/Name | Mfg | C.O.L. [mm] | C.O.L. [in.] | Powder | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Starting load | Maximum load | |
|--------|---------------|-----------|-------|----------------|-----------------|--------|------|---------------|-------------------|-------------------|---------------|---------------|-------------------|
| | [grs] | | | | | | | [grs] | | | | Weight [g] | Velocity [m/s] |
| 7,0 | 108 | Scenar | Lapua | 79,0 | 3.110 | N550 | 2,97 | 45.8 | 920 | 3018 | 3,39 | 52.3 | 1027 |
| | | | | | | N160 | 3,08 | 47.5 | 906 | 2972 | 3,49 | 53.9 | 1008 |
| | | | | | | N560 | 3,47 | 53.5 | 927 | 3041 | 3,81 | 58.9 | 1031 |
| 7,0 | 108 | Scenar SJ | Lapua | 79,0 | 3.110 | N160 | 3,11 | 48.0 | 883 | 2897 | 3,73 | 57.6 | 1042 |
| | | | | | | N560 | 3,51 | 54.2 | 911 | 2989 | 3,85 | 59.5 | 1023 |
| 8,0 | 123 | Scenar | Lapua | 79,0 | 3.110 | N160 | 2,59 | 40.0 | 795 | 2608 | 3,29 | 50.8 | 925 |
| | | | | | | N165 | 3,03 | 46.8 | 830 | 2723 | 3,65 | 56.4 | 947 |
| | | | | | | N560 | 3,28 | 50.6 | 867 | 2844 | 3,65 | 56.3 | 963 |
| 7,8 | 120 | Scenar-L | Lapua | 79,0 | 3.110 | N550 | 2,83 | 43.7 | 822 | 2697 | 3,26 | 50.3 | 940 |

.270 Winchester

Test barrel: 620 mm (24½"), 1 in 10" twist
 Primers: Large Rifle
 Cases: Remington, trim-to length 64,30 mm (2.531")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|---------------|-----------|-------------|---------------|------|------------|--------------|----------------|-------|------------|-------|----------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| 6,5 | 100 | Spitzer | Speer | 80,0 | 3.150 | N150 | 2,88 | 44.5 | 898 | 2945 | 3,42 | 52.8 | 998 | 3273 |
| | | | | N160 | | 3,80 | 58.6 | 953 | 3127 | 4,27C | 65.8C | 1057 | 3468 | |
| | | | | N165 | | 4,00 | 61.7 | 966 | 3170 | 4,53C | 69.9C | 1070 | 3509 | |
| 7,5 | 115 | Match King | Sierra | 83,5 | 3.287 | N150 | 2,56 | 39.5 | 833 | 2733 | 2,94 | 45.4 | 924 | 3031 |
| | | | | N550 | | 2,87 | 44.3 | 871 | 2858 | 3,18 | 49.1 | 954 | 3130 | |
| | | | | N160 | | 2,98 | 46.0 | 844 | 2769 | 3,54 | 54.6 | 958 | 3143 | |
| 8,4 | 130 | SP | Remington | 82,0 | 3.228 | N160 | 3,34 | 51.5 | 847 | 2779 | 3,76 | 58.0 | 940 | 3083 |
| | | | | N560 | | 3,64 | 56.2 | 876 | 2873 | 3,97 | 61.3 | 955 | 3132 | |
| 8,4 | 130 | SPBT | Speer | 83,0 | 3.268 | N165 | 3,54 | 54.6 | 850 | 2787 | 4,02 | 62.0 | 942 | 3089 |
| 8,8 | 135 | HPBT | Sierra | 83,0 | 3.268 | N160 | 2,90 | 44.8 | 822 | 2697 | 3,66 | 56.5 | 929 | 3048 |
| | | | | N165 | | 3,65 | 56.3 | 844 | 2769 | 3,90 | 60.2 | 927 | 3041 | |
| | | | | N560 | | 3,62 | 55.9 | 876 | 2874 | 3,91 | 60.3 | 957 | 3140 | |
| 9,1 | 140 | A-Frame | Swift | 82,0 | 3.228 | N550 | 2,63 | 40.6 | 758 | 2487 | 3,08 | 47.5 | 859 | 2818 |
| | | | | N560 | | 3,12 | 48.1 | 789 | 2589 | 3,60 | 55.6 | 888 | 2913 | |
| | | | | N165 | | 3,05 | 47.1 | 790 | 2592 | 3,59 | 55.4 | 867 | 2844 | |
| 9,1 | 140 | TSX | Barnes | 81,5 | 3.209 | N550 | 2,44 | 37.7 | 737 | 2418 | 3,01 | 46.5 | 860 | 2822 |
| | | | | N560 | | 3,12 | 48.1 | 798 | 2618 | 3,48 | 53.7 | 882 | 2894 | |
| | | | | N165 | | 2,90 | 44.8 | 772 | 2533 | 3,42 | 52.8 | 862 | 2828 | |
| 9,7 | 150 | Ballistic Tip | Nosler | 83,5 | 3.287 | N160 | 2,92 | 45.1 | 730 | 2395 | 3,39 | 52.3 | 842 | 2762 |
| | | | | N560 | | 3,13 | 48.3 | 742 | 2434 | 3,66 | 56.5 | 870 | 2854 | |
| | | | | N165 | | 3,10 | 47.8 | 734 | 2408 | 3,74 | 57.7 | 870 | 2854 | |
| 9,7 | 150 | TSX | Barnes | 82,0 | 3.228 | N550 | 2,44 | 37.7 | 712 | 2336 | 2,93 | 45.2 | 821 | 2694 |
| | | | | N560 | | 2,90 | 44.8 | 746 | 2448 | 3,36 | 51.9 | 847 | 2779 | |
| | | | | N165 | | 2,71 | 41.8 | 713 | 2339 | 3,27 | 50.5 | 819 | 2687 | |
| 10,4 | 160 | Partition | Nosler | 84,6 | 3.331 | N160 | 2,50 | 38.6 | 699 | 2293 | 2,89 | 44.6 | 781 | 2562 |
| | | | | N165 | | 2,88 | 44.4 | 735 | 2411 | 3,31 | 51.1 | 811 | 2661 | |
| | | | | N560 | | 3,01 | 46.5 | 745 | 2444 | 3,42 | 52.8 | 847 | 2779 | |

C = Compressed load

.270 Weatherby Magnum

Test barrel: 650 mm (25½"), 1 in 12 twist
 Primers: Large Rifle Magnum
 Cases: Remington, trim-to length 64,30 mm (2.531")

CAUTION: Loads less than the listed starting loads may cause excessive chamber pressure and must not be used!

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|-----------|-----------|-------------|---------------|------|------------|--------------|----------------|-------|------------|-------|----------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| 6,5 | 100 | PSP | Remington | 79,0 | 3.110 | N550 | 4,33 | 66.8 | 1037 | 3401 | 4,64 | 71.7 | 1117 | 3666 |
| | | | | N160 | | 4,60 | 71.0 | 1043 | 3421 | 4,85 | 74.9 | 1108 | 3634 | |
| | | | | N165 | | 5,08 | 78.4 | 1045 | 3428 | 5,38 | 83.0 | 1115 | 3658 | |
| 8,5 | 130 | PSPCL | Remington | 82,2 | 3.236 | N160 | 4,31 | 66.5 | 939 | 3080 | 4,61 | 71.1 | 1001 | 3284 |
| | | | | N165 | | 4,62 | 71.3 | 931 | 3055 | 4,93 | 76.0 | 997 | 3270 | |
| | | | | N560 | | 4,71 | 72.7 | 947 | 3108 | 4,98 | 76.9 | 1004 | 3294 | |
| 8,7 | 135 | HPBT | Sierra | 83,0 | 3.268 | N160 | 4,21 | 65.0 | 903 | 2964 | 4,43 | 68.3 | 965 | 3167 |
| | | | | N165 | | 4,55 | 70.2 | 923 | 3029 | 4,70 | 72.5 | 989 | 3244 | |
| | | | | N560 | | 4,61 | 71.2 | 956 | 3137 | 4,81 | 74.2 | 1013 | 3323 | |
| 9,7 | 150 | Partition | Nosler | 82,5 | 3.248 | N165 | 4,34 | 67.0 | 877 | 2876 | 4,68 | 72.2 | 936 | 3072 |
| | | | | N560 | | 4,38 | 67.6 | 900 | 2954 | 4,60 | 71.0 | 955 | 3134 | |
| | | | | N170 | | 4,76 | 73.4 | 886 | 2906 | 5,11 | 78.8 | 955 | 3134 | |

7 mm-08 Remington

Test barrel: 610 mm (24"), 1 in 9½" twist
 Primers: Large Rifle
 Cases: Lapua, .308Win. necked down, trim-to length 51,5 mm (2.028")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|---------------|--------|-------------|---------------|------|------------|--------------|----------------|-------|------------|-------|----------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| 7,8 | 120 | SP | Sierra | 69,5 | 2.736 | N135 | 2,33 | 36.0 | 822 | 2697 | 2,66 | 41.1 | 915 | 3002 |
| | | | | N140 | | 2,64 | 40.7 | 865 | 2838 | 2,90 | 44.8 | 934 | 3064 | |
| | | | | N150 | | 2,71 | 41.8 | 861 | 2825 | 2,97 | 45.8 | 936 | 3071 | |
| 8,4 | 130 | HPBT | Sierra | 70,6 | 2.780 | N135 | 2,30 | 35.5 | 796 | 2612 | 2,48 | 38.3 | 855 | 2805 |
| | | | | N140 | | 2,49 | 38.4 | 812 | 2664 | 2,71 | 41.8 | 882 | 2894 | |
| | | | | N150 | | 2,62 | 40.4 | 825 | 2707 | 2,85 | 44.0 | 899 | 2949 | |
| | | | | N540 | | 2,63 | 40.6 | 850 | 2789 | 2,83 | 43.7 | 918 | 3012 | |
| 9,1 | 140 | Ballistic Tip | Nosler | 69,6 | 2.740 | N135 | 2,21 | 34.1 | 759 | 2490 | 2,42 | 37.3 | 826 | 2710 |
| | | | | N140 | | 2,40 | 37.0 | 773 | 2536 | 2,66 | 41.1 | 852 | 2795 | |
| | | | | N150 | | 2,55 | 39.4 | 791 | 2595 | 2,79 | 43.1 | 861 | 2825 | |
| | | | | N540 | | 2,54 | 39.2 | 801 | 2628 | 2,77 | 42.7 | 877 | 2877 | |
| 9,7 | 150 | Scenar-L | Lapua | 71,0 | 2.795 | N140 | 2,22 | 34.3 | 723 | 2372 | 2,44 | 37.7 | 792 | 2598 |
| | | | | N540 | | 2,31 | 35.6 | 750 | 2461 | 2,54 | 39.2 | 823 | 2700 | |
| | | | | N150 | | 2,23 | 34.4 | 731 | 2398 | 2,47 | 38.1 | 794 | 2605 | |
| 9,7 | 150 | TSX | Barnes | 69,5 | 2.736 | N540 | 2,42 | 37.3 | 741 | 2431 | 2,66 | 41.1 | 824 | 2703 |
| | | | | N550 | | 2,60 | 40.1 | 740 | 2428 | 2,88 | 44.4 | 825 | 2707 | |
| 9,7 | 150 | MatchKing | Sierra | 69,5 | 2.736 | N140 | 2,26 | 34.9 | 728 | 2388 | 2,57 | 39.7 | 813 | 2667 |
| | | | | N150 | | 2,36 | 36.4 | 737 | 2418 | 2,69 | 41.5 | 824 | 2703 | |
| | | | | N540 | | 2,44 | 37.7 | 762 | 2500 | 2,69 | 41.5 | 843 | 2766 | |
| | | | | N550 | | 2,65 | 40.9 | 769 | 2523 | 2,88 | 44.4 | 851 | 2792 | |
| 10,1 | 156 | Naturalis | Lapua | 70 | 2.756 | N540 | 2,21 | 34.1 | 694 | 2277 | 2,50 | 38.6 | 776 | 2546 |
| | | | | N150 | | 2,09 | 32.3 | 662 | 2172 | 2,40 | 37.0 | 740 | 2428 | |
| | | | | N550 | | 2,32 | 35.8 | 690 | 2264 | 2,61 | 40.3 | 774 | | |

7 x 57

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|---------------|--------|-------------|---------------|------|------------|--------------|----------------|-------|------------|-------|----------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| 9,1 | 140 | Ballistic Tip | Nosler | 77,5 | 3.051 | N140 | 2,58 | 39.7 | 736 | 2415 | 2,82 | 43.5 | 802 | 2630 |
| | | | | | | N150 | 2,65 | 40.9 | 747 | 2451 | 2,90 | 44.8 | 810 | 2657 |
| 10,4 | 160 | SPBT | Sierra | 77,5 | 3.051 | N150 | 2,50 | 38.6 | 691 | 2267 | 2,76 | 42.7 | 754 | 2474 |
| | | | | | | N160 | 3,04 | 47.0 | 726 | 2381 | 3,26 | 50.3 | 793 | 2603 |
| 11,3 | 175 | Mag-Tip | Speer | 77,0 | 3.031 | N160 | 2,76 | 42.5 | 659 | 2162 | 3,06 | 47.1 | 726 | 2383 |
| | | | | | | N165 | 2,94 | 45.4 | 666 | 2184 | 3,32 | 51.2 | 740 | 2429 |

7 x 57R

Test barrel: 550 mm (22"), 1 in 9½" twist

Primers: Large Rifle

Cases: RWS, trim-to length 56,80 mm (2.236")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|---------------|----------|-------------|---------------|------|------------|--------------|----------------|-------|------------|-------|----------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| 7,8 | 120 | Spitzer | Sierra | 76,5 | 3.012 | N135 | 2,58 | 39.7 | 785 | 2574 | 2,79 | 43.1 | 857 | 2812 |
| | | | | | | N140 | 2,72 | 41.9 | 791 | 2594 | 2,97 | 45.8 | 870 | 2855 |
| | | | | | | N150 | 2,74 | 42.3 | 797 | 2613 | 3,00 | 46.3 | 873 | 2863 |
| 9,1 | 140 | Ballistic Tip | Nosler | 77,5 | 3.051 | N140 | 2,47 | 38.1 | 707 | 2320 | 2,74 | 42.2 | 777 | 2549 |
| | | | | | | N150 | 2,53 | 39.0 | 718 | 2354 | 2,81 | 43.4 | 787 | 2581 |
| 9,7 | 150 | TSX | Barnes | 76,5 | 3.012 | N150 | 2,23 | 34.4 | 663 | 2175 | 2,51 | 38.7 | 729 | 2392 |
| | | | | | | N540 | 2,38 | 36.7 | 696 | 2283 | 2,58 | 39.8 | 759 | 2490 |
| | | | | | | N550 | 2,58 | 39.8 | 702 | 2303 | 2,77 | 42.7 | 767 | 2516 |
| 9,7 | 150 | TOG | Brenneke | 76,5 | 3.012 | N150 | 2,32 | 35.8 | 685 | 2247 | 2,57 | 39.7 | 738 | 2421 |
| | | | | | | N540 | 2,33 | 36.0 | 700 | 2297 | 2,67 | 41.2 | 772 | 2533 |
| | | | | | | N550 | 2,67 | 41.2 | 718 | 2356 | 2,86 | 44.1 | 779 | 2556 |
| | | | | | | N160 | 2,99 | 46.1 | 723 | 2372 | 3,19 | 49.2 | 776 | 2546 |
| 9,7 | 150 | ScenarL | Lapua | 76,5 | 3.012 | N150 | 2,33 | 36.0 | 707 | 2320 | 2,57 | 39.7 | 768 | 2520 |
| | | | | | | N540 | 2,40 | 37.0 | 727 | 2385 | 2,58 | 39.8 | 780 | 2559 |
| | | | | | | N550 | 2,50 | 38.6 | 725 | 2379 | 2,70 | 41.7 | 782 | 2566 |
| | | | | | | N160 | 2,84 | 43.8 | 741 | 2431 | 3,06 | 47.2 | 798 | 2618 |
| 10,4 | 160 | Naturalis | Lapua | 75,0 | 2.953 | N140 | 2,17 | 33.5 | 643 | 2110 | 2,41 | 37.2 | 701 | 2300 |
| | | | | | | N150 | 2,08 | 32.1 | 603 | 1978 | 2,47 | 38.1 | 702 | 2303 |
| | | | | | | N540 | 2,26 | 34.9 | 645 | 2116 | 2,53 | 39.0 | 715 | 2346 |
| 10,4 | 160 | SPBT | Sierra | 77,5 | 3.051 | N150 | 2,39 | 36.8 | 662 | 2171 | 2,66 | 41.0 | 731 | 2397 |
| | | | | | | N160 | 2,93 | 45.2 | 693 | 2272 | 3,19 | 49.3 | 774 | 2539 |
| 11,3 | 174 | TSX | Barnes | 76,5 | 3.012 | N550 | 2,26 | 34.9 | 602 | 1975 | 2,52 | 38.9 | 676 | 2218 |
| | | | | | | N160 | 2,47 | 38.1 | 603 | 1978 | 2,80 | 43.2 | 672 | 2205 |
| | | | | | | N560 | 2,80 | 43.2 | 636 | 2087 | 3,14 | 48.5 | 711 | 2333 |
| 11,3 | 175 | Mag-Tip | Speer | 77,0 | 3.031 | N160 | 2,63 | 40.6 | 629 | 2065 | 2,95 | 45.4 | 701 | 2298 |
| | | | | | | N165 | 2,78 | 42.8 | 631 | 2072 | 3,17 | 48.9 | 711 | 2333 |

7 x 64

Test barrel: 600 mm (23½"), 1 in 10" twist

Primers: Large Rifle

Cases: Lapua, trim-to length 63,80 mm (2.512")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|---------------|--------|-------------|---------------|------|------------|--------------|----------------|-------|------------|-------|----------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| 7,8 | 120 | Ballistic Tip | Nosler | 82,0 | 3.228 | N150 | 2,94 | 45.4 | 863 | 2831 | 3,24 | 50.0 | 946 | 3104 |
| | | | | | | N540 | 3,03 | 46.8 | 888 | 2913 | 3,34 | 51.5 | 982 | 3222 |
| | | | | | | N550 | 3,16 | 48.8 | 884 | 2900 | 3,55 | 54.8 | 983 | 3225 |
| 9,1 | 140 | A-Frame | Swift | 81,4 | 3.205 | N150 | 2,66 | 41.1 | 766 | 2513 | 3,10 | 47.8 | 856 | 2808 |
| | | | | | | N540 | 2,74 | 42.3 | 788 | 2585 | 3,15 | 48.6 | 887 | 2910 |
| | | | | | | N550 | 3,04 | 46.9 | 802 | 2631 | 3,32 | 51.2 | 889 | 2917 |
| | | | | | | N160 | 3,31 | 51.1 | 797 | 2615 | 3,60 | 55.6 | 889 | 2917 |
| | | | | | | N560 | 3,56 | 54.9 | 811 | 2661 | 3,88 | 59.9 | 909 | 2982 |
| 9,7 | 150 | TSX | Barnes | 83,8 | 3.299 | N150 | 2,65 | 40.9 | 721 | 2365 | 2,99 | 46.1 | 813 | 2667 |
| | | | | | | N540 | 2,74 | 42.3 | 753 | 2470 | 3,06 | 47.2 | 846 | 2776 |

7 x 64

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-------|-----------|--------|-------------|---------------|------|------------|--------------|----------------|-------|------------|-------|----------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| | | | | | | N550 | 2,94 | 45.4 | 765 | 2510 | 3,15 | 48.6 | 931 | 3054 |
| | | | | | | N160 | 3,19 | 49.2 | 760 | 2493 | 3,27 | 50.5 | 966 | 3169 |
| | | | | | | N560 | 3,52 | 54.3 | 787 | 2582 | 3,91 | 60.3 | 992 | 2927 |
| 9,7 | 150 | Partition | Nosler | 83,8 | 3.299 | N150 | 2,66 | 41.1 | 758 | 2487 | 3,09 | 47.7 | 843 | 2766 |
| | | | | | | N540 | 2,68 | 41.4 | 774 | 2539 | 3,14 | 48.5 | 871 | 2858 |
| | | | | | | N550 | 3,04 | 46.9 | 795 | 2608 | 3,33 | 51.4 | 871 | 2858 |
| | | | | | | N160 | 3,30 | 50.9 | 790 | 2592 | 3,59 | 55.4 | 874 | 2867 |
| | | | | | | N560 | 3,43 | 52.9 | 800 | 2625 | 3,76 | 58.0 | 888 | 2913 |
| 9,7 | 150 | Scenar-L | Lapua | 84 | 3.307 | N150 | 2,64 | 40.7 | 757 | 2484 | 3,01 | 46.5 | 845 | 2772 |
| | | | | | | N540 | 2,71 | 41.8 | 779 | 2556 | 3,03 | 46.8 | 866 | 2841 |
| | | | | | | N550 | 2,92 | 45.1 | 787 | 2582 | 3,16 | 48.8 | 867 | 2844 |
| | | | | | | N160 | 3,22 | 49.7 | 794 | 2605 | 3,57 | 55.1 | 881 | 2890 |
| | | | | | | N560 | 3,33 | 51.4 | 796 | 2612 | 3,65 | 56.3 | 884 | 2900 |
| 10,1 | 156 | Naturalis | Lapua | 83,0 | 3.268 | | | | | | | | | |

7 x 65R

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 9,7 | 150 | Partition | Nosler | 83,5 | 3.287 | N150 | 2,64 | 40.7 | 750 | 2461 | 2,96 | 45.7 | 820 | 2690 |
| | | | | | | N540 | 2,67 | 41.2 | 770 | 2526 | 3,05 | 47.1 | 849 | 2785 |
| | | | | | | N550 | 2,99 | 46.1 | 788 | 2585 | 3,24 | 50.0 | 856 | 2808 |
| 9,7 | 150 | Scenar-L | Lapua | 82,3 | 3.240 | N150 | 2,62 | 40.4 | 756 | 2480 | 2,94 | 45.4 | 829 | 2720 |
| | | | | | | N540 | 2,70 | 41.7 | 783 | 2569 | 3,00 | 46.3 | 856 | 2808 |
| | | | | | | N550 | 2,93 | 45.2 | 793 | 2602 | 3,12 | 48.1 | 858 | 2815 |
| | | | | | | N160 | 3,22 | 49.7 | 793 | 2602 | 3,49 | 53.9 | 868 | 2848 |
| 10,1 | 156 | Naturalis | Lapua | 83,5 | 3.287 | N150 | 2,59 | 40.0 | 714 | 2343 | 2,84 | 43.8 | 777 | 2549 |
| | | | | | | N540 | 2,71 | 41.8 | 742 | 2434 | 2,94 | 45.4 | 809 | 2654 |
| | | | | | | N550 | 2,86 | 44.1 | 750 | 2461 | 3,07 | 47.4 | 808 | 2651 |
| | | | | | | N160 | 3,10 | 47.8 | 709 | 2326 | 3,41 | 52.6 | 809 | 2654 |
| | | | | | | N560 | 3,35 | 51.7 | 759 | 2490 | 3,71 | 57.3 | 844 | 2769 |
| 10,4 | 160 | AccuBond | Nosler | 83,5 | 3.287 | N150 | 2,57 | 39.7 | 715 | 2346 | 2,90 | 44.8 | 785 | 2575 |
| | | | | | | N540 | 2,71 | 41.8 | 744 | 2441 | 2,95 | 45.5 | 811 | 2661 |
| | | | | | | N550 | 2,87 | 44.3 | 748 | 2454 | 3,09 | 47.7 | 816 | 2677 |
| | | | | | | N160 | 3,10 | 47.8 | 745 | 2444 | 3,40 | 52.5 | 820 | 2690 |
| | | | | | | N560 | 3,35 | 51.7 | 766 | 2513 | 3,69 | 56.9 | 846 | 2776 |
| 11,4 | 175 | TSX | Barnes | 82,3 | 3.240 | N540 | 2,53 | 39.0 | 658 | 2159 | 2,80 | 43.2 | 740 | 2428 |
| | | | | | | N550 | 2,74 | 42.3 | 672 | 2205 | 3,02 | 46.6 | 751 | 2464 |
| | | | | | | N160 | 2,86 | 44.1 | 656 | 2152 | 3,28 | 50.6 | 747 | 2451 |
| | | | | | | N560 | 3,33 | 51.4 | 714 | 2343 | 3,67 | 56.6 | 800 | 2625 |
| 11,3 | 174 | GameKing | Sierra | 83,5 | 3.287 | N540 | 2,37 | 36.6 | 682 | 2238 | 2,88 | 44.4 | 783 | 2569 |
| | | | | | | N550 | 2,84 | 43.8 | 729 | 2392 | 3,07 | 47.4 | 796 | 2612 |
| | | | | | | N160 | 3,13 | 48.3 | 734 | 2408 | 3,33 | 51.4 | 796 | 2612 |
| | | | | | | N560 | 3,33 | 51.4 | 748 | 2454 | 3,59 | 55.4 | 822 | 2697 |
| | | | | | | N165 | 3,45 | 53.2 | 762 | 2500 | 3,74 | 57.7 | 828 | 2717 |
| 11,5 | 177 | TIG | Brenneke | 83,5 | 3.287 | N160 | 3,05 | 47.1 | 700 | 2297 | 3,37 | 52.0 | 773 | 2536 |
| | | | | | | N560 | 3,35 | 51.7 | 730 | 2395 | 3,66 | 56.5 | 806 | 2644 |
| | | | | | | N165 | 3,44 | 53.1 | 732 | 2402 | 3,72 | 57.4 | 800 | 2625 |
| 11,7 | 181 | Scenar-L | Lapua | 83,6 | 3.291 | N540 | 2,61 | 40.3 | 711 | 2333 | 2,82 | 43.5 | 772 | 2533 |
| | | | | | | N550 | 2,73 | 42.1 | 715 | 2346 | 2,97 | 45.8 | 776 | 2546 |
| | | | | | | N160 | 3,06 | 47.2 | 722 | 2369 | 3,30 | 50.9 | 786 | 2579 |
| | | | | | | N560 | 3,31 | 51.1 | 741 | 2431 | 3,58 | 55.2 | 810 | 2657 |
| | | | | | | N165 | 3,41 | 52.6 | 752 | 2467 | 3,68 | 56.8 | 815 | 2674 |

7 mm WSM

Test barrel: 660 mm (26"), 1 in 9.5" twist
Primers: Large Rifle Magnum
Cases: Winchester, trim-to length 53,15 mm (2.093")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|------|------|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 7,1 | 110 | TNT HP | Speer | 71,7 | 2.823 | N150 | 3,44 | 53.1 | 965 | 3166 | 3,95 | 61.0 | 1062 | 3484 |
| | | | | | | N550 | 3,88 | 59.9 | 987 | 3238 | 4,24 | 65.4 | 1086 | 3563 |
| | | | | | | N160 | 4,19 | 64.7 | 986 | 3235 | 4,62 | 71.3 | 1069 | 3507 |
| 9,1 | 140 | Partition | Nosler | 71,9 | 2.831 | N160 | 3,46 | 53.4 | 855 | 2805 | 4,00 | 61.7 | 957 | 3140 |
| | | | | | | N165 | 4,06 | 62.7 | 885 | 2904 | 4,50 | 69.4 | 970 | 3182 |
| | | | | | | N560 | 3,80 | 58.6 | 876 | 2874 | 4,34 | 67.0 | 979 | 3212 |
| 10,0 | 154 | Interbond | Hornady | 71,9 | 2.831 | N160 | 3,39 | 52.3 | 819 | 2687 | 3,92 | 60.5 | 912 | 2992 |
| | | | | | | N165 | 3,88 | 59.9 | 842 | 2762 | 4,51 | 69.6 | 941 | 3087 |
| | | | | | | N560 | 3,70 | 57.1 | 841 | 2759 | 4,25 | 65.6 | 946 | 3104 |
| 10,4 | 160 | SBT | Sierra | 72,4 | 2.850 | N160 | 3,38 | 52.2 | 796 | 2612 | 3,93 | 60.6 | 892 | 2927 |
| | | | | | | N165 | 3,91 | 60.3 | 834 | 2736 | 4,31 | 66.5 | 914 | 2999 |
| | | | | | | N560 | 3,70 | 57.1 | 827 | 2713 | 4,15 | 64.0 | 922 | 3025 |
| 10,4 | 160 | Naturalis | Lapua | 71,4 | 2.811 | N160 | 2,93 | 45.2 | 782 | 2566 | 3,56 | 54.9 | 843 | 2766 |
| | | | | | | N165 | 3,34 | 51.5 | 763 | 2503 | 3,90 | 60.2 | 859 | 2818 |
| | | | | | | N560 | 3,38 | 52.2 | 779 | 2556 | 3,85 | 59.4 | 878 | 2881 |

LIGHT GREY TEXT BOX INDICATES MAXIMUM LOAD - USE WITH CAUTION!
LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

7 mm Remington Magnum

Test barrel: 610 mm (24"), 1 in 9" twist
Primers: Large Rifle Magnum
Cases: Lapua, trim-to length 63,30 mm (2.492")

CAUTION: Loads less than the listed starting loads may cause excessive chamber pressure and must not be used!

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|------|-----|----------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 9,1 | 140 | A-Frame | Swift | 83,0 | 3.268 | N160 | 3,45 | 53.2 | 828 | 2717 | 4,03 | 62.2 | 935 | 3068 |
| | | | | | | N165 | 3,88 | 59.9 | 863 | 2831 | 4,37 | 67.4 | 955 | 3133 |
| 9,7 | 150 | Scenar-L | Lapua | 83,5 | 3.287 | N160 | 3,27 | 50.5 | 794 | 2605 | 3,87 | 59.7 | 893 | 2930 |
| | | | | | | N560 | 3,86 | 59.6 | 847 | 2779 | 4,32 | 66.7 | 951 | 3120 |
| | | | | | | N165 | 3,72 | 57.4 | 820 | 2690 | 4,28 | 66.1 | 925 | 3035 |
| 9,7 | 150 | Partition | Nosler | 83,5 | 3.287 | N160 | 3,53 | 54.5 | 824 | 2703 | 3,94 | 60.8 | 912 | 2992 |
| | | | | | | N560 | 3,89 | 60.0 | 851 | 2792 | 4,35 | 67.1 | 948 | 3110 |
| | | | | | | N165 | 3,82 | 59.0 | 847 | 2779 | 4,32 | 66.7 | 931 | 3054 |
| 10,1 | 156 | Naturalis | Lapua | 83,0 | 3.268 | N160 | 2,99 | 46.1 | 716 | 2349 | 3,42 | 52.8 | 806 | 2644 |
| | | | | | | N165 | 3,30 | 50.9 | 743 | 2438 | 3,93 | 60.6 | 852 | 2795 |
| | | | | | | N560 | 3,50 | 54.0 | 773 | 2536 | 3,90 | 60.2 | 879 | 2884 |
| 10,4 | 160 | Naturalis | Lapua | 81,8 | 3.220 | N160 | 3,15 | 48.6 | 753 | 2470 | 3,76 | 58.0 | 859 | 2818 |
| | | | | | | N560 | 3,67 | 56.6 | 843 | 2766 | 4,03 | 62.2 | 943 | 3094 |
| | | | | | | N165 | 3,65 | 56.3 | 786 | 2579 | 4,08 | 63.0 | 868 | 2848</td |

7 mm Weatherby Magnum

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 10,9 | 168 | HPBT | Sierra | 81,5 | 3.209 | N160 | 4,00 | 61.7 | 832 | 2730 | 4,23 | 65.3 | 879 | 2884 |
| | | | | | | N165 | 4,31 | 66.5 | 840 | 2755 | 4,51 | 69.6 | 888 | 2913 |
| | | | | | | N560 | 4,17 | 64.3 | 845 | 2771 | 4,42 | 68.2 | 909 | 2982 |

7 mm RUM

Test barrel: 660 mm (26"), 1 in 9" twist

Primers: Large Rifle Magnum

Cases: Remington, trim-to length 72.14 mm (2.840")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|---------------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|------|------|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 7,8 | 120 | Ballistic Tip | Nosler | 88,5 | 3.484 | N160 | 5,39 | 83,2 | 1015 | 3330 | 5,83 | 90,0 | 1107 | 3632 |
| | | | | | | N560 | 5,76 | 88,9 | 1020 | 3346 | 6,15 | 94,9 | 1123 | 3684 |
| | | | | | | N165 | 5,59 | 86,3 | 1046 | 3432 | 6,06 | 93,5 | 1143 | 3750 |
| 10,4 | 160 | Naturalis | Lapua | 91,0 | 3.583 | N560 | 3,30 | 50,9 | 751 | 2464 | 4,54 | 70,1 | 904 | 2966 |
| | | | | | | N170 | 3,64 | 56,2 | 758 | 2487 | 4,72 | 72,8 | 890 | 2920 |
| | | | | | | N570 | 3,55 | 54,8 | 792 | 2598 | 4,95 | 76,4 | 934 | 3064 |
| 10,9 | 168 | Match King | Sierra | 91,5 | 3.602 | N560 | 5,07 | 78,2 | 897 | 2943 | 5,51 | 85,0 | 978 | 3209 |
| | | | | | | N170 | 5,61 | 86,6 | 918 | 3012 | 5,96 | 92,0 | 997 | 3271 |
| | | | | | | N570 | 5,59 | 86,3 | 912 | 2992 | 6,07 | 93,7 | 1003 | 3291 |
| 11,3 | 175 | A-Frame | Swift | 91,5 | 3.602 | N560 | 4,82 | 74,4 | 853 | 2799 | 5,27 | 81,3 | 935 | 3068 |
| | | | | | | N170 | 5,26 | 81,2 | 880 | 2887 | 5,51 | 85,0 | 914 | 2999 |
| | | | | | | N570 | 5,31 | 81,9 | 873 | 2864 | 5,82 | 89,8 | 955 | 3133 |

.30 Carbine

Test barrel: 460 mm (18"), 1 in 10" twist

Primers: Small Rifle

Cases: Federal, trim-to length 32,60 mm (1.283")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-------------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 6,5 | 100 | Plinker | Speer | 42,5 | 1.673 | N110 | 0,88 | 13,6 | 610 | 2001 | 0,97 | 15,0 | 669 | 2196 |
| 7,1 | 110 | Spire Point | Speer | 42,5 | 1.673 | N110 | 0,79 | 12,1 | 545 | 1786 | 0,91 | 14,0 | 605 | 1983 |

.300 AAC Blackout

Test barrel: 356 mm (14"), 1 in 8" twist

Primers: Small Rifle

Cases: Lapua 221 Rem. Fireball, trim-to length 34,60 mm (1.362")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 6,5 | 100 | HPCE | Lapua | 46,5 | 1.831 | N105 | 0,67 | 10,3 | 569 | 1867 | 0,84 | 13,0 | 643 | 2110 |
| | | | | | | N110 | 0,93 | 14,4 | 633 | 2077 | 1,10 | 17,0 | 688 | 2257 |
| | | | | | | N110 | 0,94 | 14,5 | 566 | 1857 | 1,03 | 15,9 | 607 | 1991 |
| 8,0 | 123 | FMJ | Lapua | 50,2 | 1.976 | N105 | 0,67 | 10,3 | 480 | 1575 | 0,77 | 11,9 | 541 | 1775 |
| | | | | | | N110 | 0,94 | 14,5 | 566 | 1857 | 1,03 | 15,9 | 607 | 1991 |
| | | | | | | N110 | 0,89 | 13,7 | 580 | 1903 | 0,99 | 15,3 | 617 | 2024 |
| 8,1 | 125 | Accubond | Nosler | 51,4 | 2.024 | N105 | 0,66 | 10,2 | 518 | 1699 | 0,77 | 11,9 | 577 | 1893 |
| | | | | | | N110 | 0,92 | 14,2 | 568 | 1864 | 1,02 | 15,7 | 613 | 2011 |
| | | | | | | N110 | 0,66 | 10,2 | 531 | 1742 | 0,76 | 11,7 | 552 | 1811 |
| 9,7 | 150 | Lock Base | Lapua | 57,0 | 2.244 | N120 | 0,60 | 9,3 | 317 | 1040 | 1,27 | 19,6 | 615 | 2018 |
| | | | | | | N120 | 0,62 | 9,6 | 316 | 1037 | 1,19 | 18,4 | 588 | 1929 |
| | | | | | | N120 | 0,61 | 9,4 | 313 | 1027 | 1,17 | 18,1 | 561 | 1841 |
| 10,0 | 155 | Scenar | Lapua | 57,0 | 2.244 | N120 | 0,66 | 10,2 | 318 | 1043 | 1,09 | 16,8 | 522 | 1713 |
| | | | | | | N110 | 0,54 | 8,3 | 319 | 1047 | 0,79 | 12,2 | 436 | 1430 |
| | | | | | | N120 | 0,66 | 10,2 | 316 | 1037 | 1,02 | 15,7 | 459 | 1506 |

LIGHT GREY TEXT BOX INDICATES MAXIMUM LOAD - USE WITH CAUTION!

LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

.30-30 Winchester

Test barrel: 510 mm (20"), 1 in 12" twist

Primers: Large Rifle

Cases: Remington, trim-to length 51,60 mm (2.031")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 6,8 | 105 | HP | Lapua | 64,5 | 2.539 | N120 | 1,48 | 22,8 | 692 | 2271 | 1,73 | 26,8 | 781 | 2562 |
| | | | | | | N130 | 1,70 | 26,3 | 710 | 2329 | 1,95 | 30,1 | 800 | 2623 |
| | | | | | | N133 | 1,86 | 28,7 | 730 | 2395 | 2,19 | 33,8 | 833 | 2732 |
| 8,5 | 130 | FSP | Speer | 64,7 | 2.547 | N120 | 1,41 | 21,7 | 617 | 2024 | 1,67 | 25,8 | 705 | 2314 |
| | | | | | | N130 | 1,59 | 24,5 | 641 | 2103 | 1,84 | 28,4 | 728 | 2389 |
| | | | | | | N133 | 1,71 | 26,4 | 653 | 2143 | 1,97 | 30,4 | 741 | 2432 |
| 9,7 | 150 | FSP | Speer | 64,5 | 2.539 | N120 | 1,23 | 19,1 | 519 | 1701 | 1,46 | 22,5 | 593 | 1946 |
| | | | | | | N130 | 1,43 | 22,1 | 558 | 183 | | | | |

.308 Winchester

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-----------|----------------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | |
| 8,1 | 125 | Ballistic Tip | Nosler | N130 | 2,26 | 34.9 | 782 | 2566 | 2,78 | 42.9 | 923 | 3028 |
| | | | | N133 | 2,62 | 40.4 | 858 | 2815 | 2,87 | 44.3 | 940 | 3084 |
| | | | | N530 | 2,59 | 40.0 | 850 | 2789 | 2,88 | 44.4 | 959 | 3146 |
| | | | | N135 | 2,72 | 42.0 | 830 | 2723 | 3,06F | 47.2F | 921 | 3022 |
| | | | | N130 | 2,40 | 37.0 | 818 | 2684 | 2,79 | 43.0 | 935 | 3068 |
| | | | | N133 | 2,60 | 40.1 | 829 | 2721 | 3,00 | 46.3 | 951 | 3120 |
| | | | | N135 | 2,70 | 41.6 | 833 | 2732 | 3,17 | 48.9 | 958 | 3143 |
| | | | | N140 | 2,86 | 44.1 | 835 | 2739 | 3,23F | 49.8F | 936 | 3071 |
| | | | | N135 | 2,58 | 39.7 | 782 | 2567 | 3,02 | 46.7 | 907 | 2975 |
| | | | | N140 | 2,75 | 42.4 | 786 | 2579 | 3,15 | 48.7 | 903 | 2963 |
| 9,1 | 140 | Hunting Tactic | LOS | N135 | 2,55 | 39.4 | 812 | 2664 | 2,78 | 42.9 | 882 | 2894 |
| | | | | N140 | 2,70 | 41.7 | 809 | 2654 | 2,96 | 45.7 | 882 | 2894 |
| | | | | N540 | 2,72 | 42.0 | 816 | 2677 | 2,97 | 45.8 | 897 | 2943 |
| | | | | N140 | 2,53 | 39.0 | 735 | 2411 | 2,79 | 43.1 | 810 | 2657 |
| | | | | N150 | 2,55 | 39.4 | 736 | 2415 | 2,82 | 43.5 | 811 | 2661 |
| | | | | N540 | 2,60 | 40.1 | 744 | 2441 | 2,83 | 43.7 | 827 | 2713 |
| | | | | N140 | 2,64 | 40.7 | 780 | 2559 | 2,95 | 45.5 | 855 | 2805 |
| | | | | N540 | 2,67 | 41.2 | 789 | 2589 | 2,95 | 45.5 | 873 | 2864 |
| | | | | N135 | 2,42 | 37.3 | 751 | 2464 | 2,68 | 41.4 | 817 | 2680 |
| | | | | N140 | 2,53 | 39.0 | 745 | 2444 | 2,87 | 44.3 | 822 | 2697 |
| 9,7 | 150 | Weldcore PP | Woodleigh | N135 | 2,63 | 40.6 | 768 | 2520 | 2,93 | 45.2 | 854 | 2802 |
| | | | | N140 | 2,35 | 36.3 | 715 | 2346 | 2,95 | 45.5 | 824 | 2703 |
| | | | | N540 | 2,64 | 40.7 | 726 | 2382 | 2,97 | 45.8 | 833 | 2733 |
| | | | | N133 | 2,27 | 35.0 | 729 | 2391 | 2,86 | 44.1 | 863 | 2831 |
| | | | | N135 | 2,56 | 39.5 | 764 | 2505 | 2,96 | 45.7 | 871 | 2857 |
| | | | | N140 | 2,71 | 41.8 | 767 | 2516 | 3,05 | 47.1 | 858 | 2815 |
| | | | | N150 | 2,82 | 43.6 | 776 | 2545 | 3,23 | 49.9 | 878 | 2880 |
| | | | | N530 | 2,45 | 37.8 | 794 | 2605 | 2,76 | 42.6 | 892 | 2927 |
| | | | | N135 | 2,56 | 39.5 | 810 | 2657 | 2,83 | 43.7 | 885 | 2904 |
| | | | | N140 | 2,75 | 42.4 | 800 | 2625 | 2,90F | 44.7F | 853 | 2799 |
| 9,7 | 150 | Lock Base | Lapua | N540 | 2,78 | 42.9 | 807 | 2648 | 3,00 | 46.3 | 901 | 2956 |
| | | | | N150 | 2,80 | 43.2 | 803 | 2635 | 2,93F | 45.2F | 835 | 2740 |
| | | | | N140 | 2,62 | 40.4 | 752 | 2467 | 3,06 | 47.3 | 869 | 2851 |
| | | | | N540 | 2,71 | 41.8 | 758 | 2487 | 3,13 | 48.3 | 901 | 2956 |
| | | | | N150 | 2,74 | 42.2 | 776 | 2545 | 3,14C | 48.4C | 874 | 2869 |
| | | | | N550 | 2,88 | 44.5 | 772 | 2534 | 3,26F | 50.3F | 870 | 2855 |
| | | | | N140 | 2,66 | 41.1 | 765 | 2510 | 2,94 | 45.4 | 845 | 2772 |
| | | | | N150 | 2,74 | 42.3 | 772 | 2533 | 3,00 | 46.3 | 848 | 2782 |
| | | | | N540 | 2,69 | 41.5 | 776 | 2546 | 2,99 | 46.1 | 871 | 2858 |
| | | | | N140 | 2,62 | 40.4 | 766 | 2513 | 2,88 | 44.4 | 836 | 2743 |
| 10,0 | 155 | Hunting | LOS | N150 | 2,68 | 41.4 | 776 | 2546 | 2,94 | 45.4 | 846 | 2776 |
| | | | | N540 | 2,66 | 41.1 | 779 | 2556 | 2,90 | 44.8 | 855 | 2805 |
| | | | | N135 | 2,41 | 37.2 | 750 | 2461 | 2,61 | 40.3 | 812 | 2664 |
| | | | | N140 | 2,58 | 39.8 | 754 | 2474 | 2,80 | 43.2 | 819 | 2687 |
| | | | | N150 | 2,61 | 40.3 | 761 | 2497 | 2,84 | 43.8 | 829 | 2720 |
| | | | | N540 | 2,64 | 40.7 | 768 | 2520 | 2,85 | 44.0 | 842 | 2762 |
| | | | | N550 | 2,76 | 42.6 | 759 | 2490 | 3,01 | 46.5 | 840 | 2756 |
| | | | | N135 | 2,42 | 37.3 | 753 | 2470 | 2,60 | 40.1 | 809 | 2654 |
| | | | | N140 | 2,58 | 39.8 | 751 | 2464 | 2,79 | 43.1 | 816 | 2677 |
| | | | | N150 | 2,63 | 40.6 | 761 | 2497 | 2,85 | 44.0 | 826 | 2710 |
| 10,0 | 155 | Hybrid Target | Berger | N540 | 2,62 | 40.4 | 766 | 2513 | 2,88 | 44.4 | 836 | 2743 |
| | | | | N150 | 2,68 | 41.4 | 776 | 2546 | 2,94 | 45.4 | 846 | 2776 |
| | | | | N540 | 2,66 | 41.1 | 779 | 2556 | 2,90 | 44.8 | 855 | 2805 |
| | | | | N135 | 2,41 | 37.2 | 750 | 2461 | 2,61 | 40.3 | 812 | 2664 |
| | | | | N140 | 2,58 | 39.8 | 754 | 2474 | 2,80 | 43.2 | 819 | 2687 |
| | | | | N150 | 2,61 | 40.3 | 761 | 2497 | 2,84 | 43.8 | 829 | 2720 |
| | | | | N540 | 2,64 | 40.7 | 768 | 2520 | 2,85 | 44.0 | 842 | 2762 |
| | | | | N550 | 2,76 | 42.6 | 759 | 2490 | 3,01 | 46.5 | 840 | 2756 |
| | | | | N135 | 2,42 | 37.3 | 753 | 2470 | 2,60 | 40.1 | 809 | 2654 |
| | | | | N140 | 2,58 | 39.8 | 751 | 2464 | 2,79 | 43.1 | 816 | 2677 |
| 10,0 | 155 | TMK | Sierra | N150 | 2,63 | 40.6 | 761 | 2497 | 2,85 | 44.0 | 826 | 2710 |
| | | | | N540 | 2,62 | 40.4 | 766 | 2513 | 2,83 | 43.7 | 839 | 2753 |
| | | | | N550 | 2,78 | 42.9 | 765 | 2510 | 3,01 | 46.5 | 841 | 2759 |
| | | | | N135 | 2,42 | 37.3 | 753 | 2470 | 2,60 | 40.1 | 809 | 2654 |
| | | | | N140 | 2,58 | 39.8 | 751 | 2464 | 2,79 | 43.1 | 816 | 2677 |
| | | | | N150 | 2,63 | 40.6 | 761 | 2497 | 2,85 | 44.0 | 826 | 2710 |
| | | | | N540 | 2,62 | 40.4 | 766 | 2513 | 2,83 | 43.7 | 839 | 2753 |
| | | | | N550 | 2,78 | 42.9 | 765 | 2510 | 3,01 | 46.5 | 841 | 2759 |
| | | | | N135 | 2,24 | 34.6 | 727 | 2385 | 2,66 | 41.0 | 844 | 2769 |
| | | | | N140 | 2,23 | 34.4 | 687 | 2254 | 2,64 | 40.7 | 804 | 2638 |
| 10,0 | 155 | Scenar | Lapua | N140 | 2,38 | 36.7 | 686 | 2251 | 2,81 | 43.4 | 807 | 2648 |
| | | | | N540 | 2,63 | 40.6 | 781 | 2562 | 2,91 | 44.9 | 884 | 2900 |
| | | | | N150 | 2,53 | 39.0 | 719 | 2359 | 3,03 | | | |

.308 Winchester

cont.

| Bullet | | | Powder | | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----------|-------------|-------|---------------|------------|----------------|----------------|------------|----------------|----------------|-------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 11,7 | 180 | SP | Hornady | 71,0 | 2.795 | N135 | 2,33 | 36.0 | 661 | 2169 | 2,71 | 41.8 | 765 | 2510 |
| | | | | | | N140 | 2,47 | 38.1 | 669 | 2196 | 2,86 | 44.1 | 781 | 2561 |
| | | | | | | N150 | 2,48 | 38.3 | 677 | 2220 | 3,00 | 46.3 | 793 | 2601 |
| 11,7 | 180 | XFB | Barnes | 71,0 | 2.795 | N540 | 2,09 | 32.2 | 591 | 1938 | 2,55 | 39.3 | 715 | 2346 |
| | | | | | | N550 | 2,30 | 35.5 | 623 | 2043 | 2,75 | 42.4 | 734 | 2408 |
| 11,7 | 180 | Naturalis | Lapua | 68,1 | 2.681 | N140 | 2,60 | 40.1 | 707 | 2320 | 2,84 | 43.8 | 772 | 2533 |
| | | | | | | N540 | 2,63 | 40.6 | 703 | 2306 | 2,90 | 44.7 | 769 | 2523 |
| | | | | | | N150 | 2,75 | 42.4 | 727 | 2385 | 2,95 | 45.5 | 778 | 2552 |
| | | | | | | N550 | 2,84 | 43.8 | 716 | 2349 | 3,13 | 48.3 | 791 | 2595 |
| 12,0 | 185 | Mega | Lapua | 67,5 | 2.657 | N135 | 2,39 | 36.9 | 673 | 2208 | 2,57 | 39.7 | 731 | 2398 |
| | | | | | | N140 | 2,53 | 39.0 | 675 | 2215 | 2,82 | 43.5 | 756 | 2480 |
| | | | | | | N540 | 2,63 | 40.6 | 707 | 2320 | 2,92 | 45.1 | 801 | 2628 |
| | | | | | | N150 | 2,65 | 40.9 | 688 | 2257 | 2,93 | 45.2 | 756 | 2480 |
| | | | | | | N550 | 2,76 | 42.6 | 685 | 2247 | 3,07 | 47.4 | 768 | 2520 |
| 12,0 | 185 | FMJBT | Lapua | 71,0 | 2.795 | N135 | 2,33 | 36.0 | 667 | 2188 | 2,66 | 41.0 | 761 | 2495 |
| | | | | | | N140 | 2,44 | 37.6 | 675 | 2215 | 2,83A | 43.7A | 778 | 2551 |
| | | | | | | N540 | 2,54 | 39.2 | 712 | 2335 | 2,84 | 43.8 | 791 | 2595 |
| | | | | | | N150 | 2,57 | 39.7 | 728 | 2388 | 2,84 | 43.8 | 805 | 2641 |
| | | | | | | N550 | 2,73 | 42.1 | 731 | 2398 | 3,03F | 46.8F | 822 | 2697 |
| 12,0 | 185 | Scenar | Lapua | 71,0 | 2.795 | N140 | 2,44 | 37.7 | 706 | 2316 | 2,69 | 41.5 | 778 | 2552 |
| | | | | | | N540 | 2,38 | 36.7 | 725 | 2379 | 2,76 | 42.6 | 801 | 2628 |
| | | | | | | N150 | 2,42 | 37.3 | 664 | 2179 | 2,72 | 42.0 | 785 | 2575 |
| | | | | | | N550 | 2,62 | 40.5 | 672 | 2203 | 3,04A | 46.9A | 795 | 2608 |
| 12,0 | 185 | Scenar SJ | Lapua | 71,0 | 2.795 | N140 | 2,46 | 38.0 | 689 | 2259 | 2,77 | 42.7 | 776 | 2546 |
| | | | | | | N540 | 2,64 | 40.7 | 729 | 2392 | 2,88 | 44.4 | 865 | 2838 |
| | | | | | | N150 | 2,47 | 38.1 | 696 | 2283 | 2,80 | 43.2 | 782 | 2566 |
| | | | | | | N550 | 2,72 | 41.9 | 711 | 2331 | 3,06 | 47.2 | 811 | 2661 |
| 12,3 | 190 | HPBT | Sierra | 71,0 | 2.795 | N140 | 2,42 | 37.3 | 677 | 2222 | 2,78 | 42.9 | 764 | 2508 |
| | | | | | | N540 | 2,44 | 37.6 | 672 | 2204 | 2,83 | 43.7 | 786 | 2579 |
| | | | | | | N150 | 2,49 | 38.4 | 676 | 2218 | 2,82 | 43.6 | 767 | 2516 |
| | | | | | | N550 | 2,63 | 40.6 | 695 | 2279 | 3,06 | 47.2 | 800 | 2624 |
| 13,0 | 200 | SP | Speer | 71,0 | 2.795 | N140 | 2,28 | 35.2 | 609 | 1999 | 2,67 | 41.2 | 712 | 2335 |
| | | | | | | N150 | 2,24 | 34.5 | 604 | 1982 | 2,74 | 42.2 | 715 | 2344 |

A = Accuracy load C = Compressed load F = Full case

¹⁾ A muzzle velocity exceeding 1000 m/s (3300 fps) may lead to severe barrel fouling!**7,62 x 53R (7,62 Russian)**

Test barrel: 660 mm (26"), 1 in 10" twist

Primers: Large Rifle

Cases: Lapua, trim-to length 53,30 mm (2.098")

| Bullet | | | Powder | | Starting load | | | Maximum load | | | | | | |
|------------|-----------|--------|-------------|-------|---------------|------------|----------------|----------------|------------|----------------|----------------|------|------|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 6,5 | 100 | HPCE | Lapua | 68,0 | 2.677 | N120 | 2,59 | 40.0 | 933 | 3061 | 2,88 | 44.4 | 1020 | 3346 |
| | | | | | | N130 | 2,80 | 43.2 | 956 | 3136 | 3,03 | 46.8 | 1036 | 3399 |
| 8,0 | 123 | FMJ | Lapua | 68,5 | 2.697 | N130 | 2,81 | 43.3 | 883 | 2896 | 3,19 | 49.1 | 967 | 3171 |
| | | | | | | N133 | 3,07 | 47.4 | 900 | 2954 | 3,41 | 52.6 | 978 | 3209 |
| | | | | | | N135 | 3,19 | 49.2 | 901 | 2956 | 3,50 | 54.0 | 984 | 3229 |
| 9,7 | 150 | Mega | Lapua | 70,9 | 2.791 | N133 | 2,43 | 37.5 | 727 | 2384 | 2,83 | 43.6 | 826 | 2709 |
| | | | | | | N135 | 2,70 | 41.7 | 761 | 2497 | 3,05 | 47.1 | 851 | 2790 |
| | | | | | | N140 | 2,86 | 44.1 | 774 | 2540 | 3,19 | 49.2 | 862 | 2829 |
| 9,7 | 150 | FMJBT | Lapua | 73,0 | 2.874 | N133 | 2,71 | 41.8 | 811 | 2661 | 2,92 | 45.1 | 871 | 2858 |
| | | | | | | N135 | 2,90 | 44.8 | 825 | 2707 | 3,12 | 48.1 | 889 | 2917 |
| 10,0 | 155 | Scenar | Lapua | 75,5 | 2.972 | N135 | 2,74 | 42.3 | 786 | 2579 | 3,02 | 46.7 | 865 | 2839 |
| | | | | | | N140 | 2,90 | 44.8 | 800 | 2625 | 3,19 | 49.3 | 884 | 2900 |
| 10,1 | 156 | SPBT | Sako | 70,5 | 2.776 | N135 | 2,89 | 44.6 | 789 | 2589 | 3,18 | 49.0 | 866 | 2840 |
| | | | | | | N140 | 3,01 | 46.5 | 796 | 2612 | 3,19 | 49.2 | 845 | 2772 |
| | | | | | | N150 | 3,16 | 48.7 | 809 | 2655 | 3,33 | 51.4 | 857 | 2812 |

7,62 x 53R (7,62 Russian)

cont.

| Bullet | | | Powder | | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----------|-------------|-------|---------------|------------|----------------|----------------|------------|----------------|----------------|-------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 10,9 | 167 | Scenar | Lapua | 75,0 | 2.953 | N140 | 3,00 | 46.3 | 784 | 2573 | 3,10A | 47.8A | 830 | 2723 |
| | | | | | | N540 | 2,94 | 45.3 | 774 | 2541 | 3,12 | 48.1 | 812 | 2664 |
| | | | | | | N150 | 3,12 | 48.1 | 790 | 2590 | 3,27 | 50.5 | 834 | 2736 |
| 10,9 | 168 | HPBT | Sierra | 75,6 | 2.976 | N140 | 2,94 | 45.4 | 775 | 2616 | 3,40 | 52.5 | 840 | 2756 |
| | | | | | | N540 | 3,03 | 46.7 | 787 | 2581 | 3,12 | 48.1 | 812 | 2664 |
| 11,0 | 170 | Naturalis | Lapua | 72,0 | 2.835 | N140 | 2,80 | 43.2 | 744 | 2441 | 3,05 | 47.1 | 817 | 2680 |
| | | | | | | N558 | 2,83 | 43.7 | 750 | 2461 | 3,09 | 47.7 | 817 | 2680 |
| 11,0 | 170 | FMJBT | Lapua | 73,0 | 2.874 | N140 | 2,82 | 43.5 | 773 | 2536 | 3,04 | 46.9 | 834 | 2736 |
| | | | | | | N540 | 2,92 | 45.1 | 783 | 2569 | 3,18 | 49.1 | 856 | 2808 |
| | | | | | | N150 | 3,01 | 46.5 | 785 | 2575 | 3,24 | 50.0 | 846 | 2776 |
| 11,7 | 180 | Naturalis | Lapua | 72,5 | 2.854 | N140 | 2,80 | 43.2 | 708 | 2323 | 3,07 | 47.4 | 781 | 2562 |
| | | | | | | N540 | 2,85 | 44.0 | 714 | 2343 | 3,10 | 47.8 | 789 | 2589 |
| | | | | | | N150 | 2,81 | 4 | | | | | | |

.30-06 Springfield

Test barrel: 620 mm (24½"), 1 in 10" twist
 Primers: Large Rifle
 Cases: Lapua, trim-to length 63,10 mm (2.484")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|------------------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|-------|-------|------|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 3,7 | 57 | ALS ¹ | Lapua | 79,0 | 3.110 | N110 | 2,02 | 31.1 | 1075 | 3527 | 2,49 | 38.4 | 1217 | 3994 |
| 6,5 | 100 | HP | Lapua | 79,8 | 3.142 | N130 | 2,58 | 39.8 | 869 | 2851 | 3,15 | 48.6 | 998 | 3274 |
| | | | | | | N133 | 3,07 | 47.4 | 911 | 2989 | 3,49 | 53.9 | 1016 | 3333 |
| | | | | | | N135 | 3,25 | 50.1 | 927 | 3041 | 3,66 | 56.5 | 1033 | 3389 |
| | | | | | | N140 | 3,50 | 54.0 | 926 | 3038 | 3,96 | 61.1 | 1044 | 3425 |
| | | | | | | N540 | 3,59 | 55.4 | 939 | 3081 | 4,08 | 63.0 | 1058 | 3471 |
| 7,1 | 110 | RN | Hornady | 74,0 | 2.913 | N133 | 3,15 | 48.6 | 873 | 2864 | 3,48 | 53.7 | 983 | 3225 |
| | | | | | | N135 | 3,14 | 48.5 | 864 | 2835 | 3,47 | 53.5 | 964 | 3163 |
| | | | | | | N140 | 3,38 | 52.2 | 881 | 2890 | 3,74 | 57.7 | 977 | 3205 |
| | | | | | | N150 | 3,57 | 55.1 | 905 | 2969 | 3,94 | 60.8 | 1002 | 3287 |
| 8,0 | 123 | FMJ | Lapua | 79,8 | 3.142 | N130 | 2,61 | 40.3 | 838 | 2749 | 3,01 | 46.4 | 934 | 3064 |
| | | | | | | N133 | 2,95 | 45.5 | 825 | 2707 | 3,31 | 51.1 | 922 | 3025 |
| | | | | | | N135 | 3,19 | 49.2 | 852 | 2795 | 3,48 | 53.7 | 937 | 3074 |
| | | | | | | N140 | 3,35 | 51.7 | 853 | 2799 | 3,73 | 57.6 | 952 | 3123 |
| | | | | | | N540 | 3,49 | 53.9 | 863 | 2831 | 3,83 | 59.1 | 958 | 3143 |
| | | | | | | N150 | 3,59 | 55.4 | 880 | 2887 | 3,91 | 60.3 | 976 | 3202 |
| 8,1 | 125 | Ballistic Tip | Nosler | 84,0 | 3.307 | N135 | 3,10 | 47.8 | 865 | 2838 | 3,40 | 52.5 | 935 | 3068 |
| | | | | | | N140 | 3,31 | 51.1 | 878 | 2881 | 3,64 | 56.2 | 958 | 3143 |
| | | | | | | N540 | 3,49 | 53.9 | 880 | 2887 | 3,91 | 60.3 | 994 | 3261 |
| | | | | | | N150 | 3,34 | 51.5 | 882 | 2894 | 3,81 | 58.8 | 966 | 3169 |
| | | | | | | N550 | 3,70 | 57.1 | 895 | 2936 | 3,91 | 60.3 | 950 | 3117 |
| 8,5 | 130 | HP | Lapua | 84,0 | 3.307 | N135 | 3,08 | 47.5 | 843 | 2766 | 3,50 | 54.0 | 952 | 3123 |
| | | | | | | N140 | 3,29 | 50.8 | 862 | 2828 | 3,79 | 58.4 | 979 | 3213 |
| | | | | | | N540 | 3,40 | 52.5 | 867 | 2844 | 3,87 | 59.7 | 994 | 3261 |
| | | | | | | N150 | 3,50 | 54.0 | 871 | 2858 | 3,89 | 60.0 | 976 | 3202 |
| 9,7 | 150 | Lock Base | Lapua | 84,0 | 3.307 | N135 | 2,93 | 45.2 | 789 | 2589 | 3,23 | 49.8 | 851 | 2792 |
| | | | | | | N140 | 3,13 | 48.3 | 802 | 2631 | 3,45 | 53.2 | 872 | 2861 |
| | | | | | | N540 | 3,16 | 48.8 | 792 | 2598 | 3,54 | 54.6 | 882 | 2894 |
| | | | | | | N150 | 3,25 | 50.1 | 803 | 2635 | 3,58 | 55.2 | 877 | 2877 |
| | | | | | | N550 | 3,51 | 54.2 | 819 | 2687 | 3,87 | 59.7 | 917 | 3009 |
| 9,7 | 150 | Mega | Lapua | 76,9 | 3.028 | N135 | 2,60 | 40.1 | 711 | 2333 | 3,09 | 47.7 | 835 | 2740 |
| | | | | | | N140 | 2,83 | 43.7 | 732 | 2402 | 3,32 | 51.2 | 857 | 2812 |
| | | | | | | N540 | 2,94 | 45.4 | 742 | 2434 | 3,47 | 53.5 | 893 | 2930 |
| | | | | | | N150 | 2,86 | 44.1 | 777 | 2549 | 3,22 | 49.7 | 858 | 2815 |
| | | | | | | N550 | 3,12 | 48.1 | 801 | 2628 | 3,48 | 53.7 | 886 | 2907 |
| 9,7 | 150 | HPBT | Sierra | 84,0 | 3.307 | N140 | 3,08 | 47.5 | 798 | 2618 | 3,42 | 52.8 | 871 | 2858 |
| | | | | | | N540 | 3,27 | 50.5 | 809 | 2654 | 3,64 | 56.2 | 906 | 2972 |
| | | | | | | N150 | 3,29 | 50.8 | 807 | 2648 | 3,65 | 56.3 | 895 | 2936 |
| | | | | | | N550 | 3,54 | 54.6 | 833 | 2733 | 3,87 | 59.7 | 916 | 3005 |
| 10,0 | 155 | Scenar | Lapua | 84,0 | 3.307 | N140 | 2,78 | 42.9 | 755 | 2477 | 3,23 | 49.8 | 850 | 2789 |
| | | | | | | N150 | 2,79 | 43.0 | 767 | 2516 | 3,30 | 50.9 | 863 | 2831 |
| | | | | | | N540 | 3,05 | 47.1 | 774 | 2539 | 3,45 | 53.3 | 886 | 2907 |
| | | | | | | N550 | 3,19 | 49.2 | 811 | 2661 | 3,48 | 53.7 | 899 | 2949 |
| | | | | | | N160 | 3,45 | 53.2 | 817 | 2680 | 3,77 | 58.2 | 902 | 2959 |
| 10,0 | 155 | TAG | Brenneke | 81,8 | 3.220 | N150 | 2,89 | 44.6 | 760 | 2493 | 3,25 | 50.2 | 842 | 2762 |
| | | | | | | N550 | 3,28 | 50.6 | 796 | 2612 | 3,52 | 54.3 | 868 | 2848 |
| | | | | | | N160 | 3,43 | 52.9 | 784 | 2572 | 3,75C | 57.9C | 844 | 2769 |
| 10,1 | 156 | SPBT | Sako | 80,5 | 3.169 | N135 | 2,97 | 45.8 | 776 | 2546 | 3,29 | 50.8 | 851 | 2792 |
| | | | | | | N140 | 3,10 | 47.8 | 775 | 2543 | 3,42 | 52.8 | 859 | 2818 |
| | | | | | | N150 | 3,18 | 49.1 | 781 | 2562 | 3,53 | 54.5 | 863 | 2831 |
| 10,7 | 165 | TOG | Brenneke | 81,0 | 3.189 | N150 | 2,50 | 38.6 | 682 | 2238 | 2,90 | 44.8 | 764 | 2507 |
| | | | | | | N550 | 2,96 | 45.7 | 738 | 2421 | 3,33 | 51.4 | 816 | 2677 |
| | | | | | | N160 | 2,90 | 44.8 | 708 | 2323 | 3,53 | 54.5 | 810 | 2657 |
| 10,9 | 167 | Scenar | Lapua | 84,0 | 3.307 | N135 | 2,75 | 42.4 | 746 | 2449 | 3,02 | 46.6 | 808 | 2651 |
| | | | | | | N140 | 2,95 | 45.5 | 737 | 2418 | 3,25A | 50.1A | 812 | 2664 |
| | | | | | | N540 | 2,94 | 45.4 | 737 | 2418 | 3,37 | 52.0 | 836 | 2743 |
| | | | | | | N150 | 3,06 | 47.2 | 748 | 2454 | 3,38 | 52.2 | 821 | 2694 |

.30-06 Springfield

cont.

| Bullet | Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Powder | Starting load | | Maximum load | Maximum load | |
|--------|------------|-----------|--------|-------------|-------|--------|---------------|----------------|--------------|----------------|------|
| | [grs] | | | [in.] | | | Weight [g] | Velocity [m/s] | Weight [g] | Velocity [m/s] | |
| | | | | | | | N550 | 3,22 | 49.7 | 779 | 2556 |
| | | | | | | | N160 | 3,60 | 55.5 | 749 | 2457 |
| 10,9 | 168 | TMK | Sierra | 84,0 | 3.307 | N140 | 2,89 | 44.6 | 762 | 2500 | 3,16 |
| | | | | | | N150 | 2,95 | 45.5 | 774 | 2539 | 3,22 |
| | | | | | | N540 | 2,98 | 46.0 | 790 | 2592 | 3,24 |
| | | | | | | N550 | 3,17 | 48.9 | 800 | 2625 | 3,46 |
| 10,9 | 168 | TSX | Barnes | 81,7 | 3.217 | N540 | 2,73 | 42.1 | 735 | 2411 | 3,09 |
| | | | | | | N550 | 2,96 | 45.7 | 735 | 2411 | 3,26 |
| 11,0 | 170 | LockBase | Lapua | 84,0 | 3.307 | N140 | 2,91 | 44.9 | 717 | 2352 | 3,24 |
| | | | | | | N540 | 2,96 | 45.7 | 725 | 2444 | 3,65 |
| | | | | | | N150 | 3,06 | 47.2 | 735 | 2411 | 3,41 |
| | | | | | | N550 | 3,17 | 48.9 | 746 | 2448 | 3,61 |
| | | | | | | N160 | 3,65 | 56.3 | 765 | 2510 | 4,05 |
| 11,0 | 170 | Naturalis | Lapua | 82,0 | 3.228 | N150 | 2,62 | 40.4 | 694 | 2277 | 2,99 |
| | | N558 | | | | N540 | 2,85 | 44.0 | 739 | 2425 | 3,15 |
| | | | | | | N550 | 3,01 | 46.5 | 759 | 2490 | 3,33 |
| | | | | | | N160 | 3,38 | 52.2 | 777 | 2549 | 3,73 |
| | | | | | | N560 | 3,47 | 53.6 | 756 | 2480 | 3,91 |
| 11,7 | 180 | TSX | Barnes | | | | | | | | |

.300 H&H Magnum

Test barrel: 610 mm (24"), 1 in 10" twist
 Primers: Large Rifle Magnum
 Cases: Winchester, trim-to length 72,20 mm (2.842")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|--------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 10,0 | 155 | Scenar | Lapua | N150 | 3,76 | 58,0 | 2913 | 3,97 | 61,3 | 935 |
| | | | | N550 | 3,98 | 61,4 | 914 | 4,26 | 65,8 | 971 |
| | | | | N160 | 4,28 | 66,0 | 909 | 4,57 | 70,5 | 967 |
| 12,0 | 185 | Scenar | Lapua | N160 | 3,95 | 60,9 | 820 | 4,21 | 64,9 | 872 |
| | | | | N560 | 4,31 | 66,5 | 851 | 4,59 | 70,9 | 908 |
| | | | | N165 | 4,35 | 67,1 | 843 | 4,62 | 71,4 | 895 |
| 13,0 | 200 | HPBT | Sierra | N160 | 3,87 | 59,7 | 792 | 4,04 | 62,4 | 829 |
| | | | | N560 | 4,21 | 65,0 | 821 | 4,42 | 68,1 | 864 |
| | | | | N165 | 4,24 | 65,4 | 813 | 4,45 | 68,6 | 853 |
| | | | | | | | | | | 2799 |

.300 WSM

Test barrel: 620 mm (24½"), 1 in 10" twist
 Primers: Large Rifle Magnum
 Cases: Winchester, trim-to length 53,10 mm (2.091")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 6,5 | 100 | HPCE | Lapua | N150 | 3,85 | 59,4 | 1026 | 3366 | 4,21 | 65,0 |
| | | | | N540 | 3,91 | 60,3 | 1042 | 3419 | 4,29 | 66,2 |
| | | | | N550 | 4,14 | 63,9 | 1027 | 3369 | 4,55 | 70,2 |
| 8,0 | 123 | FMJ | Lapua | N150 | 3,82 | 59,0 | 963 | 3159 | 4,10 | 63,3 |
| | | | | N550 | 4,06 | 62,7 | 950 | 3117 | 4,39 | 67,7 |
| | | | | N160 | 4,28 | 66,1 | 953 | 3127 | 4,70 | 72,5 |
| 9,7 | 150 | Mega | Lapua | N550 | 3,51 | 54,2 | 860 | 2822 | 4,00 | 61,7 |
| | | | | N160 | 3,75 | 57,9 | 849 | 2785 | 4,34 | 67,0 |
| | | | | N560 | 4,14 | 63,9 | 862 | 2828 | 4,60 | 71,0 |
| 9,7 | 150 | Lock Base | Lapua | N550 | 3,74 | 57,7 | 882 | 2894 | 4,15 | 64,0 |
| | | | | N160 | 3,89 | 60,0 | 878 | 2881 | 4,50 | 69,4 |
| | | | | N560 | 4,36 | 67,3 | 886 | 2907 | 4,81 | 74,2 |
| 10,7 | 165 | Scirocco | Swift | N550 | 3,77 | 58,2 | 862 | 2828 | 4,16 | 64,2 |
| | | | | N160 | 3,87 | 59,7 | 842 | 2762 | 4,33 | 66,8 |
| | | | | N560 | 4,23 | 65,3 | 858 | 2815 | 4,63 | 71,5 |
| | | | | N165 | 4,32 | 66,7 | 868 | 2848 | 4,74 | 73,1 |
| 10,9 | 167 | Scenar | Lapua | N550 | 3,56 | 54,9 | 832 | 2730 | 3,97 | 61,3 |
| | | | | N160 | 3,49 | 53,9 | 792 | 2598 | 4,15 | 64,0 |
| | | | | N560 | 4,03 | 62,2 | 833 | 2733 | 4,48 | 69,1 |
| 11,0 | 170 | Naturalis | Lapua | N160 | 3,51 | 54,2 | 790 | 2592 | 4,12 | 63,6 |
| | | | | N165 | 3,96 | 61,1 | 817 | 2680 | 4,50 | 69,4 |
| | | | | N560 | 3,92 | 60,5 | 811 | 2661 | 4,40 | 67,9 |
| 12,0 | 185 | Mega | Lapua | N550 | 3,41 | 52,6 | 784 | 2572 | 3,83 | 59,1 |
| | | | | N160 | 3,35 | 51,7 | 752 | 2467 | 3,92 | 60,5 |
| | | | | N560 | 3,95 | 61,0 | 801 | 2628 | 4,33 | 66,8 |
| 12,0 | 185 | Scenar | Lapua | N160 | 3,83 | 59,1 | 799 | 2621 | 4,22 | 65,1 |
| | | | | N560 | 4,11 | 63,4 | 814 | 2671 | 4,50 | 69,4 |
| | | | | N165 | 4,18 | 64,5 | 823 | 2700 | 4,62 | 71,3 |
| 13,0 | 200 | Naturalis | Lapua | N160 | 3,56 | 54,9 | 733 | 2405 | 4,00 | 61,7 |
| | | | | N560 | 3,80 | 58,6 | 743 | 2438 | 4,30 | 66,4 |
| | | | | N165 | 3,90 | 60,2 | 758 | 2487 | 4,45 | 68,7 |
| 13,0 | 200 | Mega | Lapua | N160 | 3,67 | 56,6 | 749 | 2457 | 4,15 | 64,0 |
| | | | | N560 | 3,98 | 61,4 | 772 | 2533 | 4,44 | 68,5 |
| | | | | N165 | 4,10 | 63,3 | 777 | 2549 | 4,56 | 70,4 |
| | | | | | | | | | | 2841 |

.300 Winchester Magnum

Test barrel: 620 mm (24½"), 1 in 10" twist
 Primers: Large Rifle Magnum
 Cases: Lapua, trim-to length 66,30 mm (2.610")

CAUTION: Loads less than the listed starting loads may cause excessive chamber pressure and must not be used!

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|---------------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 7,1 | 110 | SP | Hornady | N160 | 5,40 | 83,3 | 1063 | 3488 | 5,65 | 87,1 |
| 8,0 | 123 | FMJ | Lapua | N150 | 3,99 | 61,6 | 943 | 3094 | 4,53 | 69,9 |
| | | | | N550 | 4,26 | 65,7 | 948 | 3110 | 4,72 | 72,8 |
| | | | | N160 | 4,47 | 69,0 | 939 | 3081 | 5,05 | 77,9 |
| 8,5 | 130 | HP | Lapua | N160 | 4,99 | 77,0 | 964 | 3162 | 5,34 | 82,4 |
| 9,7 | 150 | Mega | Lapua | N160 | 3,79 | 58,5 | 815 | 2674 | 4,48 | 69,1 |
| | | | | N165 | 4,29 | 66,2 | 844 | 2769 | 5,25 | 81,0 |
| | | | | N560 | 4,76 | 73,5 | 880 | 2887 | 5,26 | 81,2 |
| 9,7 | 150 | Lock Base | Lapua | N160 | 4,59 | 70,8 | 884 | 2900 | 5,08 | 78,4 |
| | | | | N165 | 5,10 | 78,7 | 900 | 2953 | 5,45 | 84,1 |
| | | | | N560 | 4,90 | 75,6 | 899 | 2949 | 5,29 | 81,6 |
| 9,7 | 150 | Ballistic Tip | Nosler | N160 | 4,79 | 73,9 | 913 | 2994 | 5,01 | 77,3 |
| | | | | N165 | 5,20 | 80,2 | 940 | 3084 | 5,35C | 82,6C |
| 10,0 | 154 | Scenar | Lapua | N160 | 4,54 | 70,1 | 862 | 2828 | 4,94 | 76,2 |
| | | | | N165 | 5,04 | 77,8 | 885 | 2904 | 5,25C | 81,0C |
| | | | | N560 | 4,81 | 74,2 | 879 | 2884 | 5,29 | 81,6 |
| 10,7 | 165 | GMX | Hornady | N565 | 4,43 | 68,4 | 853 | 2799 | 5,00 | 77,2 |
| 10,9 | 168 | TMK | Sierra | N165 | 4,70 | 72,5 | 876 | 2874 | 5,16 | 79,6 |
| | | | | N560 | 4,54 | 70,1 | 877 | 2877 | 4,98 | 76,9 |
| | | | | N565 | 4,78 | 73,8 | 889 | 2917 | 5,21 | 80,4 |
| 10,9 | 167 | Scenar | Lapua | N160 | 4,70 | 72,4 | 880 | 2887 | 5,01 | 77,3 |
| | | | | N165 | 5,02 | 77,5 | 892 | 2927 | 5,39C | 83,2C |
| 10,9 | 167 | Scenar SJ | Lapua | N160 | 4,39 | 67,7 | 830 | 2723 | 4,83 | 74,5 |
| | | | | N165 | 4,77 | 73,6 | 844 | 2769 | 5,15 | 79,5 |
| | | | | N560 | 4,73 | 73,0 | 846 | 2776 | 5,23 | 80,7 |
| 11,0 | 170 | Lock Base | Lapua | N160 | 4,43 | 68,4 | 849 | 2785 | 4,82 | 74,4 |
| | | | | N165 | 4,80 | 74,1 | 851 | 2792 | 5,09 | 78,5 |
| | | | | N560 | 4,82 | 74,4 | 866 | 2841 | 5,15 | 79,5 |
| 11,0 | 170 | Naturalis | Lapua | N160 | 4,09 | 63,1 | 824 | 2703 | 4,63 | 71,5 |
| | | | | N165 | 4,32 | 66,7 | 831 | 2726 | 4,92 | 75,9 |
| | | | | N560 | 4,43 | 68,4 | 848 | 2782 | 4,95 | 76,4 |
| 11,3 | 175 | Scenar-L | Lapua | N160 | 4,38 | 67,6 | 812 | 2664 | 4,79 | 73,9 |
| | | | | N165 | 4,60 | 71,0 | 831 | 2726 | 5,06 | 78,1 |
| | | | | N560 | 4,72 | 72,8 | 831 | 2726 | 5,15 | 79,5 |
| 11,7 | 180 | Partition | Nosler | N160 | 4,52 | 69,8 | 843 | 2765 | 4,94 | 76,1 |
| | | | | N165 | 4,86 | 75,0 | 852 | 2795 | 5,26 | 81,1 |
| 11,7 | 180 | Naturalis | Lapua | N160 | 4,05 | 62,5 | 836 | 2743 | 4,53 | 69,9 |
| | | | | N165 | 4,80 | 74,1 | 873 | 2864 | 5,01 | 77,3 |
| | | </ | | | | | | | | |

.300 Winchester Magnum

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|---------------------------------------|-----------|---------------|-------------|--|---------------|----------------|-------|--------------|----------------|-------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] |
| 13,0 | 200 | Hybrid Target | Berger | N565 | 3,82 | 59,0 | 753 | 2470 | 4,37 | 67,4 |
| | | | | N160 | 3,84 | 59,3 | 758 | 2487 | 4,36 | 67,3 |
| | | | | N165 | 4,40 | 67,9 | 797 | 2615 | 4,87 | 75,2 |
| | | | | N560 | 4,30 | 66,4 | 806 | 2644 | 4,70 | 72,5 |
| | | | | N565 | 4,46 | 68,8 | 817 | 2680 | 4,90 | 75,6 |
| 13,0 | 200 | Mega | Lapua | N560 | 4,00 | 61,7 | 753 | 2470 | 4,55 | 70,2 |
| | | | | N165 | 4,10 | 63,3 | 748 | 2454 | 4,65 | 71,7 |
| | | | | N170 | 4,31 | 66,5 | 740 | 2428 | 4,95 | 76,4 |
| 13,0 | 200 | Naturalis | Lapua | N560 | 3,98 | 61,4 | 745 | 2444 | 4,40 | 67,9 |
| | | | | N165 | 3,65 | 56,3 | 703 | 2306 | 4,29 | 66,2 |
| | | | | N170 | 4,23 | 65,3 | 728 | 2388 | 4,70 | 72,5 |
| 13,0 | 200 | HPBT | Sierra | N170 | 4,05 | 62,4 | 743 | 2438 | 4,85 | 74,8 |
| | | | | N560 | 3,95 | 60,9 | 770 | 2526 | 4,60 | 70,9 |
| | | | | N160 | 4,02 | 62,0 | 760 | 2495 | 4,56 | 70,3 |
| | | | | N165 | 4,15 | 64,0 | 768 | 2518 | 4,79 | 73,8 |
| | | | | N570 | 4,84 | 74,7 | 797 | 2615 | 5,31 | 81,9 |
| 13,9 | 215 | Hybrid Target | Berger | N165 | 4,04 | 62,3 | 745 | 2444 | 4,65 | 71,8 |
| | | | | N560 | 4,14 | 63,9 | 772 | 2533 | 4,56 | 70,4 |
| | | | | N565 | 4,26 | 65,7 | 779 | 2556 | 4,74 | 73,1 |
| 14,3 | 220 | Scenar-L | Lapua | N560 | 4,34 | 67,0 | 751 | 2464 | 4,74 | 73,1 |
| | | | | N165 | 4,29 | 66,2 | 723 | 2372 | 4,88 | 75,3 |
| | | | | N170 | 4,63 | 71,5 | 734 | 2408 | 5,20 | 80,2 |
| | | | | N570 | 5,04 | 77,8 | 782 | 2566 | 5,30 | 81,8 |
| 14,9 | 230 | Hybrid Target | Berger | N165 | 4,01 | 61,9 | 724 | 2375 | 4,52 | 69,8 |
| | | | | N560 | 4,03 | 62,2 | 743 | 2438 | 4,48 | 69,1 |
| | | | | N565 | 4,27 | 65,9 | 760 | 2493 | 4,68 | 72,2 |
| A = Accuracy load C = Compressed load | | | | 1) The cartridge overall length exceeds the CIP maximum. | | | | | | |

.300 Weatherby Magnum

Test barrel: 660 mm (26"), 1 in 10" twist

Primers: Large Rifle Magnum

Cases: Weatherby, trim-to length 71,50 mm (2.815")

CAUTION: Loads less than the listed starting loads may cause excessive chamber pressure and must not be used!

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|---------------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] |
| 8,1 | 125 | Ballistic Tip | Nosler | N160 | 5,19 | 80,2 | 1046 | 3430 | 5,52 | 85,2 |
| 9,7 | 150 | Ballistic Tip | Nosler | N160 | 4,88 | 75,2 | 945 | 3102 | 5,22 | 80,6 |
| | | | | N165 | 5,27 | 81,3 | 949 | 3113 | 5,59 | 86,3 |
| 10,7 | 165 | SPBT | Speer | N160 | 4,85 | 74,8 | 923 | 3028 | 5,16 | 79,6 |
| | | | | N165 | 5,24 | 80,9 | 932 | 3057 | 5,57 | 85,9 |
| 11,7 | 180 | SP | Hornady | N160 | 4,66 | 71,9 | 875 | 2872 | 5,01 | 77,3 |
| | | | | N165 | 5,04 | 77,7 | 888 | 2912 | 5,43 | 83,8 |
| 13,0 | 200 | Naturalis | Lapua | N560 | 4,16 | 64,2 | 816 | 2677 | 4,44 | 68,5 |
| | | | | N165 | 3,80 | 58,6 | 760 | 2493 | 4,29 | 66,2 |
| | | | | N170 | 4,50 | 69,4 | 800 | 2625 | 4,82 | 74,4 |
| 13,0 | 200 | HPBT | Sierra | N560 | 4,47 | 69,0 | 821 | 2694 | 4,81 | 74,2 |
| | | | | N165 | 4,39 | 67,7 | 795 | 2609 | 4,87 | 75,1 |
| | | | | N170 | 4,44 | 68,5 | 781 | 2562 | 5,11 | 78,9 |
| | | | | | | | | | | 2817 |

LIGHT GREY TEXT BOX INDICATES MAXIMUM LOAD - USE WITH CAUTION!

LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

.300 Lapua Magnum

Test barrel: 690 mm (27"), 1 in 9½ twist

Primers: Large Rifle Magnum

Cases: Lapua, trim-to length 68,90 mm (2.713")

CAUTION: Loads less than the listed starting loads may cause excessive chamber pressure and must not be used!

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] |
| 10,0 | 155 | Scenar | Lapua | N160 | 4,89 | 75,5 | 973 | 3192 | 5,23 | 80,7 |
| | | | | N560 | 5,24 | 80,9 | 973 | 3192 | 5,73 | 88,4 |
| 11,0 | 170 | Lock Base | Lapua | N165 | 6,01 | 92,7 | 993 | 3258 | 6,41 | 99,0 |
| | | | | N170 | 5,66 | 87,3 | 939 | 3081 | 6,10 | 94,1 |
| 12,0 | 185 | Scenar | Lapua | N560 | 4,82 | 74,4 | 879 | 2884 | 5,31 | 81,9 |
| | | | | N170 | 5,40 | 83,3 | 893 | 2930 | 5,89 | 90,9 |
| 13,0 | 200 | HPBT | Sierra | N170 | 5,93 | 91,5 | 916 | 3005 | 6,30 | 97,2 |
| | | | | 24N41 | 6,15 | 94,9 | 945 | 3100 | 6,56 | 101,2 |
| 14,3 | 220 | HPBT | Sierra | N560 | 4,82 | 74,4 | 879 | 2884 | 5,31 | 81,9 |
| | | | | N170 | 5,56 | 85,8 | 866 | 2841 | 6,01 | 92,8 |
| | | | | 24N41 | 5,10 | 78,7 | 804 | 2638 | 5,67 | 87,4 |
| | | | | N570 | 6,06 | 93,5 | 856 | 2808 | 6,45 | 99,6 |
| | | | | | | | | | | 908 |

.300 Norma Magnum

Test barrel: 655 mm (25.75"), 1 in 10" twist

Primers: Large Rifle Magnum

Cases: Lapua, trim-to length 63 mm (2.480")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|---------------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] |
| 12,0 | 185 | Scenar | Lapua | N560 | 4,72 | 72,8 | 844 | 2769 | 5,35 | 82,6 |
| | | | | N565 | 4,91 | 75,8 | 863 | 2831 | 5,51 | 85,0 |
| | | | | N170 | 4,98 | 76,9 | 825 | 2707 | 5,75 | 88,7 |
| 13,9 | 215 | Hybrid Target | Berger | N560 | 5,16 | 79,6 | 862 | 2828 | 5,75 | 88,7 |
| | | | | N565 | 4,56 | 70,4 | 790 | 2592 | 5,10 | 78,7 |
| | | | | N170 | 4,71 | 72,7 | 799 | 2621 | 5,25 | 81,0 |
| | | | | N570 | 4,65 | 71,8 | 773 | 2536 | 5,50 | 84,9 |
| 14,3 | 220 | Scenar-L | Lapua | N560 | 4,30 | 66,4 | 762 | 2500 | 4,98 | 76,9 |
| | | | | N565 | 4,41 | 68,1 | 769 | 2523 | 5,17 | 79,8 |
| | | | | N170 | 4,30 | 66,4 | 734 | 2408 | 5,30 | 81,8 |
| | | | | N570 | 4,62 | 71,3 | 780 | 2559 | 5,37 | 82,9 |
| 14,9 | 230 | Hybrid Target | Berger | N560 | 4,35 | 67,1 | 754 | 2474 | 4,92 | 75,9 |
| | | | | N565 | 4,53 | 69,9 | 763 | 2503 | 5,11 | 78,9 |
| | | | | N570 | 4,60 | 71,0 | 764 | 2507 | 5,41 | 83,5 |

.300 Remington Ultra Magnum

Test barrel: 660 mm (26"), 1 in 10" twist

Primers: Large Rifle Magnum

Cases: Remington, trim-to length 72,10 mm (2.839")

CAUTION: Loads less than the listed starting loads may cause excessive chamber pressure and must not be used!

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] |
</tbl

.300 Remington Ultra Magnum

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|-------|------|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 11,0 | 170 | Lock Base | Lapua | 90,0 | 3.543 | N560 | 4,73 | 73.0 | 899 | 2949 | 5,74 | 88.6 | 1006 | 3301 |
| | | | | | | N165 | 4,56 | 70.4 | 851 | 2792 | 5,73 | 88.4 | 976 | 3202 |
| | | | | | | N170 | 5,02 | 77.5 | 865 | 2838 | 6,36 | 98.1 | 992 | 3255 |
| 11,7 | 180 | XFB | Barnes | 89,5 | 3.524 | N165 | 4,52 | 69.7 | 833 | 2733 | 5,40 | 83.3 | 939 | 3079 |
| | | | | | | N560 | 4,65 | 71.7 | 854 | 2802 | 5,60 | 86.3 | 956 | 3137 |
| | | | | | | N170 | 4,90 | 75.6 | 840 | 2756 | 6,12 | 94.4 | 952 | 3124 |
| 12,0 | 185 | Mega | Lapua | 88,5 | 3.484 | N560 | 5,18 | 79.9 | 874 | 2867 | 5,83 | 90.0 | 969 | 3179 |
| | | | | | | N165 | 4,75 | 73.3 | 826 | 2710 | 5,82 | 89.8 | 937 | 3074 |
| | | | | | | N170 | 5,22 | 80.6 | 837 | 2746 | 6,31 | 97.4 | 953 | 3127 |
| 12,0 | 185 | Scenar | Lapua | 91,4 | 3.598 | N560 | 5,46 | 84.2 | 888 | 2913 | 5,93 | 91.5 | 979 | 3213 |
| | | | | | | N165 | 5,18 | 79.9 | 865 | 2838 | 6,09 | 94.0 | 960 | 3148 |
| | | | | | | N170 | 5,98 | 92.3 | 875 | 2871 | 6,40 | 98.7 | 966 | 3170 |
| | | | | | | N570 | 5,90 | 91.0 | 908 | 2979 | 6,54 | 100.9 | 1023 | 3356 |
| 13,0 | 200 | Mega | Lapua | 89,3 | 3.516 | N560 | 5,24 | 80.9 | 892 | 2927 | 5,85 | 90.3 | 959 | 3146 |
| | | | | | | N165 | 4,95 | 76.4 | 831 | 2726 | 5,70 | 88.0 | 922 | 3025 |
| | | | | | | N570 | 5,70 | 88.0 | 877 | 2877 | 6,37 | 98.3 | 958 | 3143 |
| 13,0 | 200 | Naturalis | Lapua | 89,2 | 3.512 | N560 | 4,87 | 75.1 | 842 | 2762 | 5,57 | 85.9 | 933 | 3061 |
| | | | | | | N165 | 4,75 | 73.3 | 826 | 2710 | 5,62 | 86.7 | 923 | 3028 |
| | | | | | | N170 | 5,16 | 79.6 | 833 | 2733 | 5,82 | 89.8 | 912 | 2992 |
| | | | | | | N570 | 5,44 | 83.9 | 860 | 2822 | 6,01 | 92.7 | 961 | 3153 |
| | | | | | | 24N41 | 5,60 | 86.4 | 829 | 2720 | 6,11 | 94.3 | 914 | 2999 |

.30-.378 Weatherby Magnum

Test barrel: 670 mm (26½"), 1 in 10" twist
 Primers: Large Rifle Magnum
 Cases: Weatherby, trim to-length 73,70 mm (2.902")

CAUTION: Loads less than the listed starting loads may cause excessive chamber pressure and must not be used!

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|-------|------|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 10,0 | 155 | Scenar | Lapua | 93,0 | 3.661 | N160 | 6,10 | 94.1 | 1004 | 3294 | 6,41 | 98.9 | 1062 | 3484 |
| | | | | | | N165 | 6,68 | 103.1 | 1017 | 3337 | 6,94 | 107.1 | 1075 | 3527 |
| | | | | | | N170 | 7,23 | 111.6 | 1008 | 3307 | 7,54 | 116.3 | 1069 | 3507 |
| 11,0 | 170 | Lock Base | Lapua | 93,0 | 3.661 | N160 | 5,63 | 86.9 | 933 | 3061 | 5,91 | 91.2 | 973 | 3192 |
| | | | | | | N165 | 6,33 | 97.7 | 957 | 3140 | 6,67 | 102.9 | 1002 | 3287 |
| | | | | | | N170 | 6,94 | 107.1 | 957 | 3140 | 7,20 | 111.1 | 1008 | 3307 |
| | | | | | | 24N41 | 7,31 | 112.8 | 980 | 3215 | 7,83 | 120.8 | 1060 | 3478 |
| 12,0 | 185 | Scenar | Lapua | 93,0 | 3.661 | N160 | 5,61 | 86.6 | 913 | 2995 | 5,95 | 91.8 | 963 | 3159 |
| | | | | | | N560 | 5,96 | 92.0 | 922 | 3025 | 6,26 | 96.6 | 981 | 3219 |
| | | | | | | N170 | 6,69 | 103.2 | 946 | 3104 | 7,12 | 109.9 | 1009 | 3310 |
| | | | | | | 24N41 | 7,16 | 110.5 | 959 | 3146 | 7,58 | 117.0 | 1023 | 3356 |
| | | | | | | 20N29 | 7,94 | 122.5 | 971 | 3186 | 8,18 | 126.2 | 1003 | 3291 |
| 13,0 | 200 | HPBT | Sierra | 93,0 | 3.661 | 24N41 | 4,80 | 74.1 | 691 | 2267 | 6,96 | 107.4 | 949 | 3114 |
| | | | | | | 20N29 | 7,52 | 116.0 | 918 | 3012 | 7,88 | 121.6 | 980 | 3215 |
| 14,3 | 220 | HPBT | Sierra | 93,0 | 3.661 | 20N29 | 7,14 | 110.2 | 874 | 2868 | 7,64 | 117.9 | 938 | 3077 |

7,62 x 39

Test barrel: 415 mm (16"), 1 in 9½ twist
 Primers: Large Rifle
 Cases: Lapua, trim-to length 38,50 mm (1.516")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 3,7 | 57 | ALS | Lapua | 55,7 | 2.193 | N110 | 1,56 | 24.1 | 925 | 3035 | 1,78 | 27.5 | 997 | 3271 |
| 6,5 | 100 | HP | Lapua | 55,4 | 2.181 | N110 | 1,22 | 18.8 | 685 | 2247 | 1,41 | 21.8 | 772 | 2533 |
| | | | | | | N120 | 1,65 | 25.5 | 688 | 2257 | 1,80 | 27.8 | 769 | 2523 |
| 8,0 | 123 | FMJ | Lapua | 55,7 | 2.193 | N120 | 1,60 | 24.7 | 663 | 2175 | 1,77 | 27.3 | 728 | 2388 |
| 8,1 | 125 | Mega | Lapua | 52,4 | 2.063 | N120 | 1,55 | 23.9 | 658 | 2159 | 1,68 | 25.9 | 712 | 2336 |
| | | | | | | N130 | 1,68 | 25.9 | 677 | 2221 | 1,79 | 27.6 | 728 | 2388 |

.303 British

Test barrel: 600 mm (23½"), 1 in 10" twist
 Primers: Large Rifle
 Cases: Remington, trim-to length 56,20 mm (2.213")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-------------------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|------|------|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 3,7 | 57 | ALS ¹⁾ | Lapua | 73,3 | 2.886 | N110 | 1,68 | 25.9 | 981 | 3219 | 2,21 | 34.1 | 1178 | 3865 |
| 8,0 | 123 | FMJ | Lapua | 73,3 | 2.886 | N120 | 2,18 | 33.6 | 819 | 2687 | 2,37 | 36.6 | 873 | 2864 |
| | | | | | | N130 | 2,39 | 36.9 | 840 | 2756 | 2,59 | 40.0 | 895 | 2936 |
| 9,7 | 150 | Mega | Lapua | 70,5 | 2.776 | N130 | 2,38 | 36.7 | 831 | 2726 | 2,55 | 39.3 | 884 | 2900 |
| 11,3 | 174 | HPBT | Sierra | 78,0 | 3.071 | N135 | 2,29 | 35.3 | 711 | 2333 | 2,49 | 38.4 | 761 | 2497 |
| | | | | | | N140 | 2,49 | 38.4 | 725 | 2379 | 2,70 | 41.7 | 782 | 2566 |
| 11,7 | 180 | Spitzer | Sierra | 78,0 | 3.071 | N135 | 2,15 | 33.2 | 664 | 2178 | 2,36 | 36.4 | 714 | 2343 |
| | | | | | | N140 | 2,33 | 36.0 | 683 | 2241 | 2,57 | 39.7 | 739 | 2425 |
| 11,7 | 180 | Spitzer | Sierra | 78,0 | 3.071 | N140 | 2,48 | 38.3 | 697 | 2287 | 2,70 | 41.7 | 758 | 2487 |

¹⁾ A muzzle velocity exceeding 1000 m/s (3300 fps) may lead to severe barrel fouling!

8 x 57 IS (8 mm Mauser)

Test barrel: 620 mm (24½"), 1 in 9½" twist
 Primers: Large Rifle
 Cases: Lapua, trim-to length 56,80 mm (2.236")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] |

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8 x 57 IRS

Test barrel: 620 mm (24½"), 1 in 9½" twist
 Primers: Large Rifle
 Cases: Lapua, trim-to length 56,80 mm (2.236")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|-----------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 9,7 | 150 | Spitzer | Speer | N140 | 3,14 | 48.5 | 797 | 2615 | 3,35 | 51.7 |
| | | | | N540 | 3,12 | 48.1 | 793 | 2602 | 3,52 | 54.3 |
| | | | | N150 | 2,83 | 43.7 | 712 | 2336 | 3,08 | 47.5 |
| 11,7 | 180 | Naturalis | Lapua | N135 | 2,47 | 38.1 | 702 | 2303 | 2,65 | 40.9 |
| | | | | N140 | 2,63 | 40.6 | 711 | 2333 | 2,83 | 43.7 |
| | | | | N150 | 2,63 | 40.6 | 717 | 2352 | 2,83 | 43.7 |
| | | | | N540 | 2,77 | 42.7 | 733 | 2405 | 2,94 | 45.4 |
| 12,8 | 198 | TIG | Brenneke | 77,0 | 3,031 | N140 | 2,80 | 43.2 | 708 | 2323 |
| | | | | N540 | 2,93 | 45.2 | 721 | 2365 | 3,07 | 47.4 |

8 x 68S

Test barrel: 670 mm (26.4"), 1 in 11" twist
 Primers: Large Rifle
 Cases: RWS, trim-to length 67,20 mm (2.646")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|------------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 9,7 | 150 | Pro Hunter | Sierra | N150 | 4,00 | 61.7 | 924 | 3031 | 4,48 | 69.1 |
| | | | | N550 | 4,32 | 66.7 | 946 | 3104 | 4,75 | 73.3 |
| | | | | N160 | 4,69 | 72.4 | 945 | 3100 | 5,12 | 79.0 |
| 11,7 | 180 | Naturalis | Lapua | N150 | 3,52 | 54.3 | 819 | 2687 | 4,00 | 61.7 |
| | | | | N550 | 3,83 | 59.1 | 847 | 2779 | 4,22 | 65.1 |
| | | | | N160 | 4,14 | 63.9 | 840 | 2756 | 4,62 | 71.3 |
| 11,7 | 180 | E-Tip | Nosler | N150 | 3,35 | 51.7 | 790 | 2592 | 3,92 | 60.5 |
| | | | | N550 | 3,79 | 58.5 | 825 | 2707 | 4,21 | 65.0 |
| | | | | N160 | 3,82 | 59.0 | 803 | 2635 | 4,62 | 71.3 |
| 13,0 | 200 | AccuBond | Nosler | N550 | 3,79 | 58.5 | 809 | 2654 | 4,16 | 64.2 |
| | | | | N160 | 4,13 | 63.7 | 810 | 2657 | 4,56 | 70.4 |
| | | | | N560 | 4,45 | 68.7 | 815 | 2674 | 4,97 | 76.7 |

.338 Winchester Magnum

Test barrel: 620 mm (24½"), 1 in 10" twist
 Primers: Large Rifle Magnum
 Cases: Lapua, trim-to length 63,30 mm (2.492")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
|------------|-----------|------------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 13,0 | 200 | SP | Hornady | N540 | 3,90 | 60.2 | 814 | 2671 | 4,34 | 67.0 |
| | | | | N150 | 3,85 | 59.4 | 801 | 2628 | 4,34 | 67.0 |
| | | | | N550 | 4,15 | 64.0 | 822 | 2697 | 4,61 | 71.1 |
| 14,6 | 225 | SP | Hornady | N160 | 4,71 | 72.7 | 720 | 2362 | 5,23F | 80.7F |
| | | | | N560 | 4,56 | 70.4 | 798 | 2617 | 4,80 | 74.1 |
| | | | | N560 | 4,78 | 73.8 | 820 | 2689 | 5,15 | 79.4 |
| 15,0 | 231 | Naturalis | Lapua | N550 | 3,80 | 58.6 | 752 | 2467 | 4,31 | 66.5 |
| | | | | N160 | 4,25 | 65.6 | 751 | 2464 | 4,74 | 73.1 |
| | | | | N560 | 4,50 | 69.4 | 769 | 2523 | 4,85F | 74.8F |
| 16,2 | 250 | Grand Slam | Speer | N160 | 4,49 | 69.3 | 753 | 2470 | 4,83 | 74.5 |
| | | | | N165 | 4,81 | 74.3 | 766 | 2511 | 5,19 | 80.0 |
| | | | | N560 | 4,39 | 67.7 | 774 | 2540 | 4,78 | 73.7 |
| 16,2 | 250 | SBT | Sierra | N160 | 4,63 | 71.4 | 779 | 2555 | 5,02 | 77.4 |
| | | | | N165 | 4,23 | 65.3 | 760 | 2494 | 4,55 | 70.1 |
| | | | | N560 | 4,72 | 72.9 | 787 | 2581 | 5,03 | 77.5 |
| 16,2 | 250 | Scenar | Lapua | N165 | 4,63 | 71.4 | 779 | 2555 | 5,02 | 77.4 |
| | | | | N550 | 4,06 | 62.7 | 765 | 2509 | 4,27 | 65.8 |
| | | | | N160 | 4,23 | 65.3 | 760 | 2494 | 4,55 | 70.1 |
| 17,8 | 275 | SP | Speer | N560 | 4,63 | 71.5 | 731 | 2398 | 5,01 | 77.3 |
| | | | | N165 | 3,55 | 54.8 | 634 | 2080 | 4,15 | 64.0 |
| | | | | N560 | 3,76 | 58.0 | 651 | 2136 | 4,30 | 66.3 |
| 17,8 | 275 | A-Frame | Swift | N165 | 3,79 | 58.5 | 651 | 2136 | 4,35 | 67.1 |
| | | | | N165 | 3,79 | 58.5 | 651 | 2136 | 4,35 | 67.1 |

LIGHT GREY TEXT BOX INDICATES MAXIMUM LOAD - USE WITH CAUTION!
 LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

.338 Winchester Magnum

cont.

| Bullet | Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Starting load | Maximum load |
|--------|------------|-----------|-----------|-------------|-------|------------|----------------|---------------|--------------|
| | [grs] | | | [in.] | | [grs] | [fps] | Weight [g] | Weight [g] |
| 19,4 | 300 | HPBT | Sierra | 84,8 | 3.339 | N160 | 4,06 | 62.7 | 692 |
| | | | | | | N560 | 4,20 | 64.7 | 700 |
| 19,4 | 300 | RNSP | Woodleigh | 83,5 | 3.287 | N160 | 3,58 | 55.2 | 2295 |
| | | | | | | N560 | 3,92 | 60.5 | 4,10 |
| | | | | | | N165 | 3,92 | 637 | 692 |
| | | | | | | | | 2090 | 2333 |

F = Case full

¹⁾ The cartridge overall length exceeds the CIP maximum.

.338 Lapua Magnum

Test barrel: 700 mm (27½"), 1 in 10" twist

Primers: Large Rifle Magnum
 Cases: Lapua, trim-to length 69,00 mm (2.714")

| Bullet | Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Starting load | Maximum load |
|--------|------------|-----------|---------|-------------|-------|------------|----------------|---------------|--------------|
| | [grs] | | | [in.] | | [grs] | [fps] | Weight [g] | Weight [g] |
| 13,0 | 200 | SP | Hornady | 91,0 | 3.583 | N160 | 5,81 | 89.6 | 926 |
| | | | | | | N165 | 6,24 | 96.3 | 3068 |
| 14,6 | 225 | SP | Hornady | 91,0 | 3.583 | N160 | 5,07 | 78.3 | 2723 |
| | | | | | | N560 | 5,35 | 82.6 | 2838 |
| | | | | | | N165 | 5,40 | 83.2 | 2753 |
| 15,0 | 231 | Naturalis | Lapua | 90,5 | 3.563 | N160 | 4,73 | 73.0 | 2602 |
| | | | </td | | | | | | |

.338 Lapua Magnum

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-------|-----------|--------|-------------|---------------|-------|------------|----------------|----------------|------------|----------------|----------------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 19,4 | 300 | HPBT | Berger | 93,5 | 3.681 | N560 | 4,64 | 71,6 | 744 | 2441 | 5,34 | 82,4 |
| | | | | | | N170 | 4,62 | 71,3 | 720 | 2362 | 5,68 | 87,7 |
| | | | | | | N570 | 4,24 | 65,4 | 711 | 2333 | 5,55 | 85,6 |
| 19,4 | 300 | HPBT | Sierra | 91,5 | 3.602 | N165 | 4,57 | 70,5 | 695 | 2281 | 5,20 | 80,2 |
| | | | | | | N560 | 4,70 | 72,5 | 722 | 2370 | 5,37 | 82,8 |
| | | | | | | N170 | 5,15 | 79,4 | 719 | 2360 | 5,86 | 90,4 |
| | | | | | | N570 | 5,39 | 83,2 | 776 | 2546 | 5,92 | 91,3 |
| | | | | | | 24N41 | 5,52 | 85,2 | 735 | 2410 | 6,28 | 96,8 |
| | | | | | | | | | | 809 | | 2653 |

9,3 x 62

Test barrel: 580 mm (22 3/4"), 1 in 14" twist

Primers: Large Rifle

Cases: Lapua, trim-to length 61,80 mm (2.433")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-------|-----------|-----------|-------------|---------------|------|------------|----------------|----------------|------------|----------------|----------------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 14,3 | 220 | Naturalis | Lapua | 82,0 | 3.228 | N530 | 3,01 | 46,4 | 687 | 2254 | 3,48 | 53,7 |
| | | | | | | N135 | 2,95 | 45,5 | 662 | 2172 | 3,67 | 56,6 |
| 14,6 | 225 | TAG | Brenneke | 82,0 | 3.228 | N530 | 3,16 | 48,8 | 718 | 2356 | 3,52 | 54,3 |
| | | | | | | N540 | 3,62 | 55,9 | 745 | 2444 | 4,04 | 62,3 |
| | | | | | | N150 | 3,61 | 55,7 | 737 | 2418 | 3,97 | 61,3 |
| 16,2 | 250 | Naturalis | Lapua | 83,4 | 3.283 | N140 | 3,44 | 53,1 | 692 | 2270 | 3,77 | 58,2 |
| | | | | | | N540 | 3,40 | 52,5 | 702 | 2303 | 3,84 | 59,3 |
| | | | | | | N150 | 3,53 | 54,5 | 701 | 2300 | 3,81 | 58,8 |
| 16,2 | 250 | AccuBond | Nosler | 82,0 | 3.228 | N530 | 2,99 | 46,1 | 678 | 2224 | 3,32 | 51,2 |
| | | | | | | N140 | 3,37 | 52,0 | 693 | 2274 | 3,73 | 57,6 |
| | | | | | | N540 | 3,46 | 53,4 | 701 | 2300 | 3,98 | 61,4 |
| 17,5 | 270 | Naturalis | Lapua | 82,5 | 3.248 | N135 | 2,80 | 43,2 | 642 | 2106 | 3,30 | 50,9 |
| | | | | | | N140 | 3,39 | 52,3 | 673 | 2208 | 3,70 | 57,1 |
| | | | | | | N540 | 3,52 | 54,3 | 679 | 2228 | 3,77 | 58,2 |
| | | | | | | N150 | 3,50 | 54,0 | 684 | 2244 | 3,82 | 58,9 |
| 18,5 | 285 | Mega | Lapua | 82,2 | 3.236 | N135 | 2,85 | 44,0 | 605 | 1985 | 3,14 | 48,5 |
| | | | | | | N140 | 3,00 | 46,3 | 614 | 2014 | 3,39 | 52,3 |
| | | | | | | N540 | 3,05 | 47,1 | 607 | 1991 | 3,50 | 54,0 |
| | | | | | | N150 | 3,17 | 48,9 | 627 | 2057 | 3,60 | 55,6 |
| 18,5 | 286 | TSX | Barnes | 82,5 | 3.248 | N150 | 2,83 | 43,7 | 559 | 1834 | 3,32 | 51,2 |
| | | | | | | N540 | 3,12 | 48,1 | 607 | 1991 | 3,47 | 53,6 |
| | | | | | | N550 | 2,88 | 44,4 | 534 | 1752 | 3,94 | 60,8 |
| 19,0 | 293 | TUG | Brenneke | 82,0 | 3.228 | N150 | 3,20 | 49,4 | 619 | 2031 | 3,58 | 55,2 |
| | | | | | | N540 | 3,31 | 51,1 | 635 | 2083 | 3,57 | 55,1 |
| | | | | | | N550 | 3,50 | 54,0 | 638 | 2093 | 3,89 | 60,0 |
| 19,4 | 299 | A-Frame | Swift | 79,9 | 3.146 | N150 | 2,89 | 44,6 | 569 | 1867 | 3,25 | 50,2 |
| | | | | | | N540 | 2,92 | 45,1 | 582 | 1909 | 3,29 | 50,8 |
| | | | | | | N550 | 3,13 | 48,3 | 590 | 1936 | 3,50 | 54,0 |
| 20,7 | 320 | RNSP | Woodleigh | 82,0 | 3.228 | N540 | 3,45 | 53,2 | 630 | 2067 | 3,72 | 57,4 |
| | | | | | | N150 | 3,50 | 54,0 | 627 | 2057 | 3,73 | 57,6 |
| | | | | | | N550 | 3,70 | 57,1 | 636 | 2087 | 4,04 | 62,3 |

9,3 x 66 Sako

Test barrel: 630 mm (24 3/4"), 1 in 14" twist

Primers: Large Rifle

Cases: Sako, trim-to length 65,80 mm (2.591")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-------|-----------|-----------|-------------|---------------|------|------------|----------------|----------------|------------|----------------|----------------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 17,5 | 270 | Naturalis | Lapua | 85,0 | 3.346 | N140 | 3,40 | 52,5 | 684 | 2244 | 4,00 | 61,7 |
| | | | | | | N540 | 3,84 | 59,3 | 736 | 2415 | 4,15 | 64,0 |
| 19,4 | 300 | A-Frame | Swift | 84,0 | 3.307 | N540 | 3,06 | 47,2 | 622 | 2041 | 3,53 | 54,5 |
| | | | | | | N150 | 3,09 | 47,7 | 599 | 1965 | 3,42 | 52,8 |
| 20,7 | 320 | RNSP | Woodleigh | 85,0 | 3.346 | N540 | 3,47 | 53,5 | 678 | 2224 | 3,91 | 60,3 |
| | | | | | | N150 | 3,44 | 53,1 | 602 | 1975 | 3,80 | 58,6 |
| | | | | | | N550 | 3,70 | 57,1 | 650 | 2133 | 4,25 | 65,6 |

F = Case full

9,3 x 74R

Test barrel: 610 mm (24"), 1 in 14" twist

Primers: Large Rifle

Cases: RWS, trim-to length 74,50 mm (2.933")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-------|-----------|-------|--------------------|---------------|------|------------|----------------|----------------|------------|----------------|----------------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 12,5 | 193 | JFP | S&B | 88,9 | 3.500 | N120 | 2,98 | 46,0 | 744 | 2441 | 3,33 | 51,4 |
| | | | | | | N130 | 3,42 | 52,8 | 791 | 2595 | 3,66 | 56,5 |
| 14,3 | 220 | Naturalis | Lapua | 94,4 | 3.717 | N530 | 3,04 | 46,9 | 708 | 2323 | 3,40 | 52,5 |
| | | | | | | N135 | 3,02 | 46,6 | 702 | 2303 | 3,50 | 54,0 |
| | | | | | | N140 | 3,39 | 52,3 | 721 | 2365 | 3,88 | 59,9 |
| 15,0 | 231 | SP | Norma | 92,1 | 3.626 | N140 | 3,72 | 57,4 | 718 | 2356 | 4,29 | 66,2 |
| 16,2 | 250 | Naturalis | Lapua | 94,0 | 3.701 | N135 | 2,98 | 46,0 | 676 | 2218 | 3,30 | 50,9 |
| | | | | | | N140 | 3,11 | 48,0 | 686 | 2251 | 3,46 | 53,4 |
| | | | | | | N540 | 3,15 | 48,6 | 690 | 2264 | 3,61 | 55,7 |
| 16,6 | 256 | SP | Sako | 92,2 | 3.630 | N140 | 3,50 | 54,0 | 654 | 2146 | 4,00 | 61,8 |
| 17,5 | 270 | Naturalis | Lapua | 94,0 | 3.701 | N135 | 3,10 | 47,8 | 649 | 2129 | 3,30 | 50,9 |
| | | | | | | N140 | 3,30 | 50,9 | 656 | 2152 | 3,75 | 57,9 |
| | | | | | | N540 | 3,48 | 53,7 | 655 | 2149 | 3,83 | 59,1 |
| 18,5 | 285 | Mega | Lapua | 92,2 | 3.630 | N135 | 2,80 | 43,2 | 576 | 1890 | 3,43 | 52,9 |
| | | | | | | N140 | 3,45 | 53,2 | 636 | 2087 | 3,78 | 58,3 |
| | | | | | | N540 | 3,24 | 50,0 | 618 | 2028 | 3,78 | 58,3 |
| 19,0 | 293 | TUG | RWS | 95,5 ¹⁾ | 3.760 | N140 | 3,42 | 52,7 | 637</ | | | |

.375 H&H Magnum

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|------------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 17,5 | 270 | Speer | 91,0 | 91,0 | 3,583 | N140 | 4,00 | 61,7 | 718 | 2356 | 4,57 | 70,5 | 805 | 2641 |
| | | | | | | N540 | 4,32 | 66,7 | 767 | 2516 | 4,71 | 72,7 | 825 | 2707 |
| | | | | | | N150 | 4,36 | 67,3 | 769 | 2523 | 4,87 | 75,1 | 830 | 2723 |
| 17,5 | 270 | RNSP | Woodleigh | 91,0 | 3,583 | N135 | 3,85 | 59,4 | 707 | 2320 | 4,27 | 65,9 | 771 | 2530 |
| | | | | | | N540 | 4,45 | 68,7 | 766 | 2513 | 4,85 | 74,8 | 827 | 2713 |
| | | | | | | N150 | 4,20 | 64,8 | 735 | 2411 | 4,70 | 72,5 | 799 | 2621 |
| 18,5 | 285 | Grand Slam | Speer | 91,0 | 3,583 | N140 | 3,90 | 60,2 | 665 | 2182 | 4,41 | 68,0 | 784 | 2572 |
| | | | | | | N540 | 4,22 | 65,1 | 732 | 2402 | 4,60 | 71,0 | 790 | 2592 |
| | | | | | | N150 | 4,21 | 65,0 | 733 | 2405 | 4,69 | 72,4 | 792 | 2598 |
| 19,4 | 300 | A-Frame | Swift | 91,0 | 3,583 | N140 | 3,75 | 57,9 | 657 | 2156 | 4,27 | 65,9 | 736 | 2415 |
| | | | | | | N540 | 4,02 | 62,0 | 692 | 2270 | 4,34 | 67,0 | 743 | 2438 |
| | | | | | | N150 | 3,70 | 57,1 | 650 | 2133 | 4,24 | 65,4 | 726 | 2382 |

.416 Rigby

Test barrel: 620 mm (24½"), 1 in 12" twist

Primers: Large Rifle Magnum

Cases: Norma, trim-to length 73,40 mm (2.890")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|---------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 22,7 | 350 | A-Frame | Swift | 92,0 | 3,622 | N160 | 5,45 | 84,1 | 679 | 2228 | 5,95 | 91,8 | 736 | 2415 |
| | | | | | | N560 | 5,73 | 88,4 | 685 | 2247 | 6,02 | 92,9 | 728 | 2388 |
| | | | | | | N165 | 5,55 | 85,6 | 682 | 2238 | 6,25 | 96,4 | 747 | 2451 |
| 25,9 | 400 | XFB | Barnes | 94,5 | 3,720 | N160 | 4,70 | 72,5 | 599 | 1965 | 5,40 | 83,3 | 660 | 2165 |
| | | | | | | N560 | 5,10 | 78,7 | 622 | 2041 | 5,43 | 83,8 | 661 | 2169 |
| | | | | | | N165 | 5,83 | 90,0 | 631 | 2070 | 5,97 | 92,1 | 662 | 2172 |
| 25,9 | 400 | A-Frame | Swift | 92,0 | 3,622 | N160 | 4,85 | 74,8 | 611 | 2005 | 5,36 | 82,7 | 672 | 2205 |
| | | | | | | N560 | 5,00 | 77,2 | 616 | 2021 | 5,54 | 85,5 | 660 | 2165 |
| | | | | | | N165 | 5,45 | 84,1 | 651 | 2136 | 5,91 | 91,2 | 698 | 2290 |
| 26,6 | 410 | RNSP | Woodleigh | 92,5 | 3,642 | N160 | 5,43 | 83,8 | 637 | 2090 | 5,80 | 89,5 | 695 | 2280 |
| | | | | | | N560 | 5,86 | 90,4 | 655 | 2149 | 6,28 | 96,9 | 711 | 2333 |
| | | | | | | N165 | 5,93 | 91,5 | 660 | 2165 | 6,42 | 99,1 | 720 | 2362 |
| 29,2 | 450 | RNSP | Woodleigh | 94,5 | 3,720 | N160 | 5,20 | 80,2 | 614 | 2014 | 5,67 | 87,5 | 663 | 2175 |
| | | | | | | N560 | 5,70 | 88,0 | 633 | 2077 | 6,14 | 94,7 | 680 | 2231 |
| | | | | | | N165 | 5,83 | 90,0 | 631 | 2070 | 6,17 | 95,2 | 682 | 2238 |

.444 Marlin

Test barrel: 560 mm (22"), 1 in 38" twist

Primers: Large Rifle

Cases: Remington, trim-to length 56,30 mm (2.216")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|---------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 13,0 | 200 | HP/XTP | Hornady | 64,4 | 2,535 | N110 | 2,66 | 41,0 | 720 | 2362 | 3,05 | 47,1 | 797 | 2613 |
| | | | | | | N120 | 3,28 | 50,6 | 782 | 2565 | 3,75 | 57,8 | 869 | 2851 |
| | | | | | | N130 | 2,91 | 44,9 | 684 | 2243 | 3,43 | 53,0 | 780 | 2560 |
| 15,6 | 240 | JTC-SIL | Hornady | 64,5 | 2,539 | N120 | 3,23 | 49,8 | 697 | 2286 | 3,68 | 56,8 | 780 | 2558 |
| | | | | | | N120 | 2,82 | 43,5 | 649 | 2129 | 3,27 | 50,5 | 736 | 2415 |
| | | | | | | N130 | 3,09 | 47,7 | 657 | 2157 | 3,45 | 53,2 | 732 | 2401 |

LIGHT GREY TEXT BOX INDICATES MAXIMUM LOAD - USE WITH CAUTION!

LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

.45-70 Government

Test barrel: 560 mm (22"), 1 in 20" twist

Primers: Large Rifle

Cases: Remington, trim-to length 53,30 mm (2.098")

WARNING: These loads are to be used only in modern rifles like Ruger #1 or .45-70's chambered on Mauser type bolt actions. They MUST NOT be used in old rifles with weaker actions like Trapdoor and old Marlin mod. 1895. The listed maximum loads do not exceed 210 MPa.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|--------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 19,4 | 300 | FN HP | Sierra | 64,7 | 2,547 | N120 | 2,95 | 45,5 | 579 | 1900 | 3,25 | 50,2 | 651 | 2136 |
| | | | | | | N130 | 3,38 | 52,2 | 609 | 1998 | 3,70 | 57,1 | 686 | 2251 |
| | | | | | | N530 | 3,65 | 56,3 | 596 | 1955 | 3,90 | 60,2 | 652 | 2139 |
| 19,4 | 300 | TSX FN | Barnes | 64,7 | 2,547 | N120 | 2,45 | 37,8 | 502 | 1647 | 2,91 | 44,9 | 594 | 1949 |
| | | | | | | N530 | 3,02 | 46,6 | 460 | 1509 | 3,40 | 52,5 | 569 | 1867 |
| | | | | | | N130 | 3,10 | 47,8 | 547 | 1795 | 3,37 | 52,0 | 602 | 1975 |
| 22,7 | 350 | RN | Hornady | 64,7 | 2,547 | N130 | 3,11 | 48,0 | 522 | 1713 | 3,46 | 53,4 | 614 | 2014 |
| | | | | | | N133 | 3,26 | 50,3 | 507 | 1663 | 3,72 | 57,4 | 621 | 2037 |
| | | | | | | N530 | 3,45 | 53,2 | 509 | 1670 | 3,82 | 58,9 | 606 | 1988 |
| 25,9 | 400 | FN | Speer | 64,7 | 2,547 | N130 | 2,90 | 44,7 | 489 | 1604 | 3,22 | 49,7 | 559 | 1834 |
| | | | | | | N133 | 3,06 | 47,2 | 485 | 1591 | 3,40 | 52,5 | 574 | 1883 |
| | | | | | | N530 | 3,20 | 49,4 | 478</ | | | | | |

| Bullet | | | | Powder | Starting load | | Maximum load | | | |
|---------------|-----------|----------|----------------|--------|---------------|-------------------|-------------------|---------------|-------------------|-------------------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 48,6 | 750 | Bullex-N | Lapua | 20N29 | 14,59 | 225.2 | 779 | 2556 | 15,97 | 246.4 |
| | | | | 24N41 | 13,83 | 213.4 | 798 | 2618 | 14,93 | 230.4 |
| 48,6 | 750 | Solid | Barnes | 20N29 | 15,57 | 240.3 | 826 | 2710 | 16,58 | 255.9 |
| | | | | 24N41 | 13,26 | 204.6 | 768 | 2520 | 14,54 | 224.4 |
| 51,8 | 800 | Bullex-N | Lapua | 20N29 | 14,64 | 226.0 | 782 | 2565 | 16,23 | 250.5 |
| | | | | 24N41 | 12,93 | 199.5 | 756 | 2480 | 14,23 | 219.6 |
| 51,8 | 800 | Solid | Barnes | 20N29 | 14,95 | 230.7 | 796 | 2612 | 15,79 | 243.7 |
| | | | | 24N41 | 11,79 | 181.9 | 722 | 2369 | 12,84 | 198.1 |
| 55,1 | 850 | Solid | Barnes | 20N29 | 14,19 | 219.1 | 779 | 2557 | 15,88 | 245.0 |
| | | | | 24N41 | 12,34 | 190.5 | 716 | 2349 | 13,50 | 208.3 |
| | | | | 20N29 | 13,91 | 214.7 | 746 | 2447 | 15,42 | 238.0 |
| | | | | | | | | 828 | | 2716 |

HANDGUN RELOADING DATA

Disclaimer

All of this reloading information has been provided by Nammo Lapua Oy and Nammo Vihtavuori Oy. The data given here were obtained in laboratory conditions following strictly the CIP (Commission International Permanente) June 13, 1990 and November 9, 1993 rules. The listed maximum loads have been determined according to the respective CIP/SAAMI maximum pressure specification, whichever is lower.

These test methods have been deemed to be safe throughout the world. Pressure is measured at the case mouth or from inside the case according to the CIP.

DO NOT ATTEMPT ANY EXTRAPOLATIONS. PLEASE FOLLOW THE DATA AS WRITTEN.

IT IS A MUST FOR EVERY RELOADER TO READ THE RELOADING SAFETY RULES ON THE PAGES 16 AND 17 OF THIS GUIDE.

7 mm TCU

Test barrel: 360 mm (14"), 1 in 10" twist

Primers: Small Rifle

Cases: Necked-up Lapua .223 Rem., trim-to length 44,50 mm (1.752")

| Bullet | | | | Powder | Starting load | | Maximum load | | | |
|---------------|-----------|---------|----------------|--------|---------------|-------------------|-------------------|---------------|-------------------|-------------------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 6,5 | 100 | HP | Hornady | 62,5 | 2.461 | N120 | 1,48 | 22.8 | 667 | 2188 |
| | | | | | | N130 | 1,62 | 25.0 | 672 | 2205 |
| | | | | | | N133 | 1,77 | 27.3 | 695 | 2280 |
| 7,8 | 120 | SSSP | Hornady | 63,5 | 2.500 | N120 | 1,32 | 20.4 | 606 | 1988 |
| | | | | | | N130 | 1,45 | 22.4 | 610 | 2001 |
| | | | | | | N133 | 1,62 | 25.0 | 630 | 2067 |
| 8,4 | 130 | Spitzer | Speer | 65,0 | 2.559 | N120 | 1,24 | 19.1 | 542 | 1778 |
| | | | | | | N130 | 1,40 | 21.6 | 573 | 1880 |
| | | | | | | N133 | 1,46 | 22.5 | 576 | 1890 |
| 9,7 | 150 | SBT | Sierra | 65,0 | 2.559 | N120 | 1,17 | 18.1 | 513 | 1683 |
| | | | | | | N130 | 1,31 | 20.2 | 535 | 1755 |
| | | | | | | N133 | 1,38 | 21.3 | 542 | 1778 |
| | | | | | | N135 | 1,44 | 22.2 | 538 | 1765 |
| 10,4 | 160 | SBT | Sierra | 66,0 | 2.598 | N120 | 1,12 | 17.3 | 480 | 1575 |
| | | | | | | N130 | 1,26 | 19.4 | 505 | 1657 |
| | | | | | | N133 | 1,31 | 20.2 | 511 | 1677 |
| | | | | | | N135 | 1,45 | 22.4 | 531 | 1742 |
| | | | | | | N540 | 1,48 | 22.8 | 544 | 1785 |
| | | | | | | | | 1,63 | 25.2 | 598 |
| | | | | | | | | | | 1962 |

NOTE: This cartridge is not supported by CIP or SAAMI. The maximum loads do not exceed 300 MPa.

7 mm BR Remington

Test barrel: 375 mm (14½"), 1 in 10" twist

Primers: Small Rifle

Cases: Remington, trim-to length 38,40 mm (1.512")

| Bullet | | | | Powder | Starting load | | Maximum load | | | |
|---------------|-----------|------|----------------|--------|---------------|-------------------|-------------------|---------------|-------------------|-------------------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |
| 6,5 | 100 | HP | Hornady | 56,0 | 2.205 | N120 | 1,82 | 28.0 | 774 | 2539 |
| | | | | | | N130 | 1,97 | 30.5 | 783 | 2568 |
| 7,8 | 120 | SSSP | Hornady | 56,6 | 2.228 | N120 | 1,67 | 25.8 | 687 | 2255 |
| | | | | | | N130 | 1,81 | 27.9 | 707 | 2318 |
| | | | | | | N133 | 1,94 | 30.0 | 714 | 2343 |
| | | | | | | | | 2,11 | 32.6 | 771 |
| | | | | | | | | | | 2530 |

7 mm BR Remington

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|---------------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 9,1 | 140 | Ballistic Tip | Nosler | 60,3 | 2,374 | N120 | 1,45 | 22,4 | 595 | 1954 | 1,58 | 24,4 | 640 | 2100 |
| | | | | | | N130 | 1,62 | 25,0 | 612 | 2006 | 1,73 | 26,7 | 661 | 2169 |
| | | | | | | N133 | 1,71 | 26,3 | 623 | 2044 | 1,84 | 28,4 | 671 | 2201 |
| | | | | | | N120 | 1,42 | 21,9 | 576 | 1890 | 1,54 | 23,8 | 619 | 2031 |
| | | | | | | N130 | 1,54 | 23,8 | 589 | 1931 | 1,67 | 25,8 | 635 | 2083 |
| 9,7 | 150 | Ballistic Tip | Nosler | 60,3 | 2,374 | | 1,62 | 25,1 | 595 | 1952 | 1,77 | 27,3 | 642 | 2106 |
| | | | | | | N135 | 1,75 | 27,0 | 606 | 1988 | 1,87 | 28,9 | 650 | 2133 |
| | | | | | | N120 | 1,30 | 20,1 | 539 | 1770 | 1,42 | 21,9 | 580 | 1903 |
| | | | | | | N130 | 1,42 | 21,9 | 559 | 1834 | 1,55 | 23,9 | 602 | 1975 |
| | | | | | | N133 | 1,56 | 24,1 | 575 | 1886 | 1,69 | 26,1 | 619 | 2031 |
| 10,4 | 160 | HPBT | Sierra | 59,7 | 2,350 | N120 | 1,67 | 25,8 | 588 | 1929 | 1,79 | 27,6 | 630 | 2067 |
| | | | | | | N135 | 1,75 | 27,0 | 606 | 1988 | 1,87 | 28,9 | 650 | 2133 |
| | | | | | | N130 | 1,30 | 20,1 | 539 | 1770 | 1,42 | 21,9 | 580 | 1903 |
| | | | | | | N133 | 1,42 | 21,9 | 559 | 1834 | 1,55 | 23,9 | 602 | 1975 |
| | | | | | | N135 | 1,56 | 24,1 | 575 | 1886 | 1,69 | 26,1 | 619 | 2031 |

7 mm GJW

Test barrel: 380 mm (15"), 1 in 8" twist
Primers: Small Rifle
Cases: Munitionsfabrik Thun, trim-to length 48,80 mm (1.920")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|---------------|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 9,7 | 150 | Ballistic Tip | Nosler | 75,0 | 2,953 | N130 | 1,58 | 24,4 | 613 | 2013 | 1,67 | 25,8 | 642 | 2106 |
| | | | | | | N133 | 1,65 | 25,5 | 614 | 2013 | 1,74 | 26,8 | 644 | 2113 |
| | | | | | | N135 | 1,78 | 27,5 | 629 | 2065 | 1,86 | 28,7 | 658 | 2159 |
| | | | | | | N130 | 1,54 | 23,7 | 583 | 1913 | 1,63 | 25,2 | 611 | 2005 |
| | | | | | | N133 | 1,62 | 25,1 | 587 | 1927 | 1,71 | 26,4 | 617 | 2024 |
| 10,9 | 168 | HPBT | Sierra | 75,0 | 2,953 | N130 | 1,54 | 23,7 | 583 | 1913 | 1,63 | 25,2 | 611 | 2005 |
| | | | | | | N133 | 1,62 | 25,1 | 587 | 1927 | 1,71 | 26,4 | 617 | 2024 |
| | | | | | | N135 | 1,76 | 27,1 | 605 | 1984 | 1,83 | 28,2 | 631 | 2070 |
| | | | | | | N140 | 1,83 | 28,2 | 607 | 1991 | 1,91 | 29,5 | 636 | 2087 |

7,62 x 25 Tokarev

Test barrel: 150 mm (6"), 1 in 10" twist, groove calibre 7,85 mm (0.309")
Primers: Large Pistol
Cases: Fiocchi 7,63 Mauser, trim-to length 24,80 mm (0.976")

NOTE: FOR FIREARMS CHAMBERED FOR THE 7,62 x 25 TOKAREV CARTRIDGE ONLY.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|--|-----------|-------------------|-------------|--|---------------|----------------|----------------|--------------|----------------|----------------|------|-----|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 3,9 | 60 | HP ²⁾ | Speer | 32,0 | 1,260 | N320 | 0,29 | 4,4 | 391 | 1284 | 0,36 | 5,5 | 480 | 1574 |
| | | | | | | N340 | 0,39 | 5,9 | 434 | 1425 | 0,46 | 7,1 | 522 | 1713 |
| | | | | | | N3N37 | 0,39 | 6,0 | 412 | 1352 | 0,49 | 7,6 | 493 | 1616 |
| | | | | | | N3N38 | 0,53 | 8,1 | 471 | 1546 | 0,61 | 9,5 | 521 | 1708 |
| | | | | | | N3N37 | 0,39 | 5,9 | 403 | 1322 | 0,49 | 7,6 | 478 | 1569 |
| 4,8 | 74 | FMJ ¹⁾ | Lapua | 33,0 | 1,299 | N340 | 0,35 | 5,5 | 406 | 1331 | 0,43 | 6,6 | 471 | 1546 |
| | | | | | | N3N37 | 0,39 | 5,9 | 403 | 1322 | 0,49 | 7,6 | 478 | 1569 |
| | | | | | | N3N38 | 0,46 | 7,1 | 404 | 1326 | 0,53 | 8,1 | 452 | 1482 |
| | | | | | | N3N37 | 0,31 | 4,7 | 342 | 1122 | 0,39 | 5,9 | 401 | 1316 |
| | | | | | | N3N38 | 0,43 | 6,6 | 378 | 1241 | 0,56 | 8,6 | 445 | 1460 |
| ¹⁾ Bullet cal. 7,84 mm (0,309") | | | | ²⁾ Bullet cal. 7,92 mm (0,312") | | | | | | | | | | |

.32 S&W Long N.P.

Test barrel: 175 mm (7"), 1 in 18½" twist
Primers: Small Pistol
Cases: Lapua, trim-to length 23,20 mm (0.913")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|-----|-----|-----|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 5,4 | 83 | LWC | Lapua | 24,6 | 0,969 | N310 | 0,09 | 1,4 | 231 | 758 | 0,11 | 1,7 | 258 | 846 |
| 6,4 | 98 | LWC | Lapua | 24,6 | 0,969 | N310 | 0,07 | 1,1 | 186 | 610 | 0,08 | 1,2 | 208 | 682 |
| 6,4 | 98 | LRN | Lapua | 32,3 | 1,272 | N310 | 0,12 | 1,9 | 256 | 840 | 0,14 | 2,2 | 277 | 909 |

.32 S&W Long Wadcutter

Test barrel: 150 mm (6"), 1 in 18¾" twist

Primers: Small Pistol

Cases: Lapua, trim-to length 23,20 mm (0.913")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----|-------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|------|-----|-----|-----|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | | |
| 5,4 | 83 | LWC | Lapua | 24,6 | 0,969 | N310 | 0,11 | 1,7 | 246 | 807 | 0,13 | 2,0 | 286 | 938 |
| 6,4 | 98 | LWC | Lapua | 24,6 | 0,969 | N310 | 0,09 | 1,4 | 233 | 764 | 0,12 | 1,9 | 257 | 843 |

9 mm Luger

Test barrel: 100 mm (4"), 1 in 10" twist

Primers: Small Pistol

Cases: Lapua, trim-to length 19,00 mm (0.748")

| Bullet | | | | Powder | Starting load | | | Maximum load | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |

<tbl_r cells="11"

| 9 mm Luger | | | | cont. | | Powder | | Starting load | | | | Maximum load | | | |
|------------|-----------|-----------|----------------|-------|-------|------------------------|----------------------------|------------------------|----------------------------|------------------------|----------------------------|--------------|-----|------|--|
| Bullet | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] [grs] | Velocity [m/s] [fps] | Weight [g] [grs] | Velocity [m/s] [fps] | Weight [g] [grs] | Velocity [m/s] [fps] | | | | |
| 8,0 | 124 | FMJ-RN | Lapua | 29,0 | 1.142 | N320 | 0,22 | 3.4 | 290 | 951 | 0,26 | 4.0 | 326 | 1070 | |
| | | | | | | N330 | 0,28 | 4.3 | 315 | 1033 | 0,32 | 4.9 | 359 | 1178 | |
| | | | | | | N340 | 0,29 | 4.5 | 331 | 1086 | 0,33 | 5.1 | 360 | 1181 | |
| | | | | | | N350 | 0,32 | 4.9 | 341 | 1119 | 0,37 | 5.7 | 377 | 1237 | |
| | | | | | | 3N37 | 0,34 | 5.2 | 336 | 1102 | 0,40 | 6.2 | 379 | 1243 | |
| | | | | | | N320 | 0,23 | 3.5 | 273 | 896 | 0,27 | 4.2 | 321 | 1053 | |
| 8,0 | 124 | Megashock | Lapua | 28,7 | 1.130 | N320 | 0,23 | 3.5 | 273 | 896 | 0,27 | 4.2 | 321 | 1053 | |
| | | | | | | N330 | 0,27 | 4.2 | 299 | 981 | 0,32 | 4.9 | 344 | 1129 | |
| | | | | | | N340 | 0,28 | 4.3 | 299 | 981 | 0,32 | 4.9 | 344 | 1129 | |
| | | | | | | N350 | 0,33 | 5.1 | 321 | 1053 | 0,37 | 5.7 | 362 | 1188 | |
| | | | | | | 3N37 | 0,34 | 5.2 | 334 | 1096 | 0,39 | 6.0 | 375 | 1230 | |
| | | | | | | N320 | 0,23 | 3.6 | 299 | 981 | 0,26 | 4.0 | 319 | 1046 | |
| 8,4 | 130 | FMJ | Sierra | 29,0 | 1.142 | N320 | 0,23 | 3.6 | 299 | 981 | 0,29 | 4.5 | 333 | 1094 | |
| | | | | | | N330 | 0,26 | 4.0 | 314 | 1031 | 0,29 | 4.5 | 333 | 1094 | |
| | | | | | | N340 | 0,28 | 4.4 | 325 | 1066 | 0,31 | 4.8 | 341 | 1119 | |
| | | | | | | N350 | 0,33 | 5.2 | 330 | 1083 | 0,36 | 5.5 | 346 | 1135 | |
| | | | | | | 3N37 | 0,32 | 4.9 | 325 | 1067 | 0,36 | 5.5 | 344 | 1130 | |
| | | | | | | N105 | 0,45 | 7.0 | 351 | 1151 | 0,48 | 7.4 | 375 | 1232 | |
| 9,4 | 145 | FMJ | H&N | 28,5 | 1.122 | N320 | 0,20 | 3.1 | 259 | 850 | 0,24 | 3.7 | 297 | 974 | |
| 9,4 | 145 | LRN | Intercast | 29,0 | 1.142 | N330 | 0,22 | 3.5 | 285 | 935 | 0,25 | 3.8 | 305 | 1000 | |
| | | | | | | N340 | 0,25 | 3.9 | 299 | 982 | 0,28 | 4.3 | 318 | 1044 | |
| | | | | | | N350 | 0,27 | 4.2 | 296 | 972 | 0,30 | 4.7 | 319 | 1047 | |
| | | | | | | 3N37 | 0,29 | 4.5 | 299 | 982 | 0,32 | 5.0 | 322 | 1055 | |
| | | | | | | N320 | 0,20 | 3.1 | 239 | 784 | 0,25 | 3.9 | 298 | 978 | |
| | | | | | | N330 | 0,25 | 3.9 | 294 | 964 | 0,28 | 4.3 | 315 | 1032 | |
| 9,5 | 147 | HP/XTP | Hornady | 29,0 | 1.142 | N340 | 0,25 | 3.9 | 289 | 948 | 0,28 | 4.3 | 309 | 1015 | |
| | | | | | | 3N37 | 0,30 | 4.7 | 298 | 979 | 0,33 | 5.1 | 321 | 1052 | |
| | | | | | | N350 | 0,29 | 4.5 | 302 | 991 | 0,32 | 5.0 | 326 | 1070 | |
| | | | | | | 3N38 | 0,41 | 6.3 | 357 | 1171 | 0,45 | 6.9 | 368 | 1207 | |
| | | | | | | N105 | 0,40 | 6.1 | 317 | 1039 | 0,41 | 6.4 | 338 | 1108 | |
| | | | | | | N330 | 0,22 | 3.5 | 272 | 893 | 0,25 | 3.8 | 287 | 942 | |
| 9,5 | 147 | RN | Rainier | 29,0 | 1.142 | N340 | 0,24 | 3.8 | 272 | 892 | 0,27 | 4.1 | 293 | 960 | |
| | | | | | | N350 | 0,27 | 4.2 | 285 | 935 | 0,30 | 4.7 | 309 | 1014 | |
| | | | | | | 3N37 | 0,29 | 4.5 | 286 | 937 | 0,32 | 4.9 | 307 | 1008 | |
| | | | | | | N320 | 0,23 | 3.5 | 264 | 867 | 0,24 | 3.8 | 283 | 929 | |
| | | | | | | N330 | 0,24 | 3.8 | 275 | 903 | 0,27 | 4.1 | 294 | 966 | |
| | | | | | | N340 | 0,27 | 4.2 | 285 | 936 | 0,30 | 4.6 | 304 | 997 | |
| 9,7 | 150 | CEPP | Lapua | 28,7 | 1.130 | N350 | 0,27 | 4.2 | 275 | 904 | 0,30 | 4.7 | 298 | 976 | |

9 x 21

Test barrel: 140 mm (5½"), 1 in 10" twist

Primers: Small

Cases: Tanfoglio, trim-to length 21,00 mm (0.826")

| Bullet | | | | | Powder | Starting load | | | | Maximum load | | | | |
|---------------|-----------|-------|----------------|-------|--------|---------------|-------------------|-------------------|---------------|-------------------|-------------------|-----|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 6,5 | 100 | HP | Speer | 29,0 | 1.142 | N340 | 0,39 | 5.9 | 416 | 1363 | 0,43 | 6.6 | 444 | 1455 |
| | | | | | | 3N37 | 0,43 | 6.7 | 427 | 1400 | 0,48 | 7.4 | 453 | 1485 |
| | | | | | | N350 | 0,46 | 7.0 | 433 | 1420 | 0,50 | 7.6 | 459 | 1505 |
| 7,5 | 115 | FMJ | Sierra | 29,5 | 1.161 | N340 | 0,35 | 5.3 | 381 | 1248 | 0,38 | 5.9 | 401 | 1314 |
| | | | | | | 3N37 | 0,39 | 5.9 | 375 | 1229 | 0,43 | 6.6 | 402 | 1319 |
| | | | | | | N350 | 0,39 | 5.9 | 388 | 1274 | 0,43 | 6.6 | 410 | 1346 |
| | | | | | | N105 | 0,53 | 8.1 | 410 | 1344 | 0,57 | 8.7 | 438 | 1435 |
| 7,5 | 115 | FMJHP | Fiocchi | 29,5 | 1.161 | N340 | 0,35 | 5.3 | 313 | 1027 | 0,40 | 6.2 | 409 | 1342 |
| | | | | | | 3N37 | 0,40 | 6.2 | 324 | 1063 | 0,46 | 7.1 | 372 | 1220 |
| | | | | | | 3N38 | 0,49 | 7.6 | 383 | 1257 | 0,61 | 9.4 | 452 | 1483 |
| 8,0 | 123 | FMJ | Lapua | 29,5 | 1.161 | N340 | 0,31 | 4.7 | 348 | 1142 | 0,34 | 5.2 | 364 | 1194 |
| | | | | | | 3N37 | 0,35 | 5.3 | 354 | 1160 | 0,39 | 5.9 | 372 | 1222 |
| | | | | | | N350 | 0,35 | 5.3 | 348 | 1143 | 0,38 | 5.9 | 370 | 1213 |
| | | | | | | N105 | 0,45 | 6.9 | 372 | 1220 | 0,48 | 7.4 | 397 | 1301 |
| 8,0 | 123 | FMJTC | Fiocchi | 29,5 | 1.161 | N340 | 0,32 | 4.9 | 330 | 1083 | 0,37 | 5.7 | 398 | 1306 |
| | | | | | | 3N37 | 0,38 | 5.9 | 345 | 1132 | 0,43 | 6.6 | 384 | 1260 |
| | | | | | | 3N38 | 0,46 | 7.1 | 353 | 1158 | 0,53 | 8.2 | 406 | 1332 |

9 x 21

com

| Bullet | | | | | Powder | Starting load | | | | Maximum load | | | | |
|---------------|-------|-----------|---------|----------------|--------|---------------|---------------|-------|-------------------|--------------|---------------|-------|-------------------|-------|
| Weight [g] | [grs] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | [grs] | Velocity [m/s] | [fps] | Weight [g] | [grs] | Velocity [m/s] | [fps] |
| 9,5 | 147 | HP-XTP | Hornady | 29,5 | 1.161 | 3N37 | 0,32 | 4.9 | 310 | 1016 | 0,34 | 5.3 | 329 | 1079 |
| | | | | | | N350 | 0,30 | 4.6 | 324 | 1064 | 0,32 | 5.0 | 338 | 1110 |
| | | | | | | N105 | 0,38 | 5.8 | 326 | 1071 | 0,41 | 6.3 | 347 | 1139 |

9 x 23 Winchester

Test barrel: 130 mm (5"), 1 in 16" twist

Primers: Small Pistol

Cases: Winchester, trim-to length 22,75 mm (0.896")

| Bullet | | | | | Powder | Starting load | | | | Maximum load | | | | |
|------------|-----|-----------|---------|-------------|--------|---------------|------------|-----|----------------|--------------|------------|-------|----------------|------|
| Weight [g] | | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | | Velocity [m/s] | | Weight [g] | | Velocity [m/s] | |
| [grs] | | | | | | | [grs] | | [fps] | [grs] | | [fps] | | |
| 7,5 | 115 | FMJ | Sierra | 32,5 | 1.280 | N340 | 0,41 | 6.3 | 425 | 1395 | 0,46 | 7.2 | 449 | 1474 |
| | | | | | | 3N37 | 0,47 | 7.3 | 424 | 1392 | 0,54 | 8.3 | 462 | 1517 |
| | | | | | | N350 | 0,48 | 7.4 | 419 | 1374 | 0,57 | 8.8 | 456 | 1496 |
| 8,0 | 123 | FMJ | Lapua | 32,5 | 1.280 | N340 | 0,38 | 5.9 | 384 | 1261 | 0,45 | 6.9 | 422 | 1385 |
| | | | | | | 3N37 | 0,43 | 6.6 | 397 | 1302 | 0,48 | 7.5 | 427 | 1400 |
| | | | | | | N350 | 0,45 | 6.9 | 388 | 1272 | 0,50 | 7.8 | 425 | 1394 |
| 8,0 | 123 | Megashock | Lapua | 30,2 | 1.189 | N340 | 0,37 | 5.7 | 382 | 1254 | 0,42 | 6.5 | 419 | 1373 |
| | | | | | | N350 | 0,44 | 6.8 | 391 | 1282 | 0,48 | 7.3 | 423 | 1386 |
| | | | | | | 3N37 | 0,41 | 6.4 | 391 | 1281 | 0,50 | 7.7 | 432 | 1416 |
| 8,5 | 130 | RN B | Rainier | 32,5 | 1.280 | N340 | 0,37 | 5.7 | 366 | 1202 | 0,41 | 6.3 | 401 | 1315 |
| | | | | | | 3N37 | 0,43 | 6.6 | 377 | 1238 | 0,48 | 7.5 | 412 | 1351 |
| | | | | | | N350 | 0,40 | 6.1 | 361 | 1184 | 0,47 | 7.3 | 405 | 1328 |

NOTE: This cartridge is not supported by CIP or SAAMI. The maximum loads do not exceed 300 MPa.

.357 SIG

Test barrel: 130 mm (5"), 1 in 16" twist

Primers: Small Pistol

Cases: Starline, trim-to length 21,80 mm (0.858")

| Bullet | | | | | Powder | Starting load | | | | Maximum load | | | | |
|------------|------------|-----------|-------------|------|--------|---------------|------|----------------|-----|--------------|------|----------------|-----|------|
| Weight [g] | Type/[grs] | Mfg | C.O.L. [mm] | | Type | Weight [g] | | Velocity [m/s] | | Weight [g] | | Velocity [m/s] | | |
| | | | [in.] | | | [grs] | | [fps] | | [grs] | | [fps] | | |
| 6,2 | 95 | FMJ | Sierra | 28,9 | 1.140 | N340 | 0,51 | 7.8 | 461 | 1512 | 0,58 | 8.9 | 504 | 1652 |
| | | | | | | 3N37 | 0,56 | 8.7 | 469 | 1539 | 0,65 | 10.0 | 514 | 1686 |
| | | | | | | N350 | 0,57 | 8.8 | 469 | 1537 | 0,66 | 10.1 | 518 | 1699 |
| 7,5 | 115 | FMJ | Sierra | 28,9 | 1.140 | N340 | 0,41 | 6.3 | 404 | 1325 | 0,50 | 7.7 | 449 | 1473 |
| | | | | | | 3N37 | 0,49 | 7.5 | 416 | 1365 | 0,56 | 8.6 | 458 | 1502 |
| | | | | | | N350 | 0,47 | 7.3 | 411 | 1347 | 0,56 | 8.6 | 460 | 1509 |
| 8,0 | 123 | FMJ-RN | Lapua | 28,9 | 1.140 | N340 | 0,39 | 6.0 | 381 | 1250 | 0,48 | 7.4 | 426 | 1398 |
| | | | | | | 3N37 | 0,47 | 7.2 | 392 | 1287 | 0,54 | 8.3 | 436 | 1431 |
| | | | | | | N350 | 0,47 | 7.2 | 394 | 1293 | 0,54 | 8.3 | 439 | 1440 |
| 8,0 | 123 | Megashock | Lapua | 28,9 | 1.140 | N340 | 0,39 | 6.0 | 381 | 1249 | 0,48 | 7.4 | 427 | 1400 |
| | | | | | | 3N37 | 0,45 | 7.0 | 393 | 1291 | 0,54 | 8.3 | 437 | 1435 |
| | | | | | | N350 | 0,45 | 6.9 | 389 | 1276 | 0,54 | 8.4 | 440 | 1445 |
| 8,5 | 130 | RN B | Rainier | 28,9 | 1.140 | N340 | 0,40 | 6.1 | 370 | 1213 | 0,46 | 7.1 | 409 | 1343 |
| | | | | | | 3N37 | 0,46 | 7.1 | 381 | 1249 | 0,52 | 8.1 | 405 | 1330 |
| | | | | | | N350 | 0,44 | 6.8 | 383 | 1257 | 0,53 | 8.1 | 428 | 1404 |

.38 Super Auto

Test barrel: 140 mm (5½"), 1 in 16" twist

Primers: Small Pistol

Cases: Remington +P, trim-to length 22,70 mm (0.893")

| Bullet | | | | | Powder | Starting load | | | | Maximum load | | | |
|---------------|-----------|--------|----------------|-------|--------|---------------|-----------------|-------------------|-------------------|---------------|-----------------|-------------------|-------------------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Weight [grs] | Velocity [m/s] | Velocity [fps] | Weight [g] | Weight [grs] | Velocity [m/s] | Velocity [fps] |
| 7,5 | 115 | HP-XTP | Hornady | 31,5 | N320 | 0,33 | 5,1 | 362 | 1188 | 0,36 | 5,5 | 382 | 1253 |
| | | | | | N340 | 0,39 | 6,0 | 381 | 1250 | 0,42 | 6,5 | 404 | 1324 |
| | | | | | 3N37 | 0,42 | 6,5 | 385 | 1263 | 0,47 | 7,2 | 411 | 1347 |
| | | | | | N250 | 0,26 | 5,6 | 357 | 1171 | 0,41 | 6,2 | 396 | 1266 |

| .38 Super Auto | | | | cont. | | .38 Super Auto | | | | | | | | |
|----------------|-----------|--------|-------------|--------|-------|----------------|----------------|-------|------------|----------------|-------|------|-----|------|
| Bullet | | | | Powder | | Starting load | | | | Maximum load | | | | |
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | |
| 7,5 | 115 | FMJ | Lapua | 31,5 | 1.240 | N330 | 0,34 | 5,2 | 350 | 1148 | 0,39 | 6,1 | 394 | 1294 |
| 7,5 | 115 | FMJ | Sierra | 32,4 | 1.276 | N350 | 0,51 | 7,9 | 414 | 1358 | 0,55 | 8,5 | 439 | 1439 |
| | | | | | | 3N37 | 0,48 | 7,4 | 395 | 1296 | 0,51 | 7,9 | 419 | 1375 |
| 7,5 | 115 | RN | Rainier | 31,5 | 1.240 | N320 | 0,31 | 4,8 | 357 | 1171 | 0,34 | 5,2 | 376 | 1232 |
| | | | | | | N340 | 0,39 | 6,0 | 382 | 1253 | 0,42 | 6,5 | 404 | 1325 |
| | | | | | | N350 | 0,43 | 6,6 | 388 | 1273 | 0,48 | 7,3 | 413 | 1355 |
| | | | | | | 3N37 | 0,44 | 6,8 | 390 | 1280 | 0,48 | 7,3 | 411 | 1348 |
| 8,0 | 123 | FMJ | Lapua | 31,5 | 1.240 | N330 | 0,32 | 4,9 | 362 | 1188 | 0,37 | 5,8 | 382 | 1254 |
| 8,0 | 124 | FMJ-FP | Hornady | 32,0 | 1.260 | N320 | 0,30 | 4,6 | 330 | 1083 | 0,33 | 5,0 | 348 | 1142 |
| | | | | | | N330 | 0,36 | 5,6 | 363 | 1191 | 0,42 | 6,4 | 409 | 1340 |
| | | | | | | N340 | 0,39 | 6,0 | 368 | 1207 | 0,43 | 6,6 | 391 | 1281 |
| | | | | | | 3N37 | 0,46 | 7,1 | 374 | 1227 | 0,48 | 7,4 | 388 | 1271 |
| | | | | | | N350 | 0,41 | 6,3 | 366 | 1201 | 0,45 | 6,9 | 389 | 1275 |
| | | | | | | N105 | 0,64 | 9,9 | 429 | 1407 | 0,67 | 10,4 | 458 | 1501 |
| 8,0 | 124 | LSWC | Intercast | 32,0 | 1.260 | N320 | 0,26 | 4,0 | 334 | 1096 | 0,29 | 4,5 | 352 | 1153 |
| | | | | | | N340 | 0,35 | 5,4 | 367 | 1204 | 0,38 | 5,9 | 386 | 1266 |
| | | | | | | N350 | 0,39 | 6,0 | 371 | 1217 | 0,43 | 6,6 | 393 | 1289 |
| | | | | | | 3N37 | 0,41 | 6,3 | 377 | 1237 | 0,45 | 6,9 | 397 | 1302 |
| 8,4 | 130 | FMJ | Sierra | 32,0 | 1.260 | N320 | 0,27 | 4,2 | 317 | 1040 | 0,30 | 4,6 | 336 | 1101 |
| | | | | | | N330 | 0,32 | 4,9 | 323 | 1060 | 0,37 | 5,6 | 359 | 1178 |
| | | | | | | N340 | 0,36 | 5,6 | 349 | 1145 | 0,39 | 5,9 | 367 | 1202 |
| | | | | | | 3N37 | 0,41 | 6,3 | 360 | 1181 | 0,44 | 6,8 | 380 | 1245 |
| | | | | | | N105 | 0,60 | 9,3 | 402 | 1319 | 0,63 | 9,6 | 423 | 1388 |
| 8,4 | 130 | RN | Rainier | 32,0 | 1.260 | N320 | 0,29 | 4,5 | 312 | 1024 | 0,31 | 4,8 | 331 | 1086 |
| | | | | | | N340 | 0,35 | 5,4 | 344 | 1129 | 0,38 | 5,8 | 360 | 1179 |
| | | | | | | N350 | 0,38 | 5,9 | 347 | 1138 | 0,42 | 6,4 | 368 | 1206 |
| | | | | | | 3N37 | 0,41 | 6,3 | 355 | 1165 | 0,44 | 6,8 | 374 | 1225 |
| 9,4 | 145 | LRN | Intercast | 32,0 | 1.260 | N340 | 0,28 | 4,3 | 315 | 1033 | 0,31 | 4,7 | 333 | 1091 |
| | | | | | | 3N37 | 0,36 | 5,6 | 329 | 1079 | 0,39 | 5,9 | 349 | 1143 |
| | | | | | | N350 | 0,33 | 5,1 | 319 | 1047 | 0,36 | 5,6 | 339 | 1111 |
| 9,5 | 147 | HP/XTP | Hornady | 32,0 | 1.260 | N340 | 0,33 | 5,1 | 315 | 1033 | 0,36 | 5,5 | 335 | 1097 |
| | | | | | | 3N37 | 0,38 | 5,9 | 334 | 1096 | 0,41 | 6,3 | 353 | 1158 |
| | | | | | | N350 | 0,37 | 5,7 | 327 | 1073 | 0,40 | 6,1 | 346 | 1134 |
| | | | | | | N105 | 0,51 | 7,9 | 360 | 1181 | 0,53 | 8,2 | 377 | 1237 |
| 9,5 | 147 | RN | Rainier | 32,0 | 1.260 | N340 | 0,32 | 4,9 | 321 | 1053 | 0,35 | 5,3 | 335 | 1097 |
| | | | | | | N350 | 0,34 | 5,2 | 307 | 1007 | 0,37 | 5,7 | 326 | 1070 |
| | | | | | | 3N37 | 0,36 | 5,6 | 316 | 1037 | 0,39 | 5,9 | 333 | 1091 |

.38 Special

Test barrel: 170 mm (6½"), 1 in 18" twist

Primers: Small Piste

Cases: Lapua, trim-to length 29,10 mm (1.146")

| Bullet | | | | | Powder | Starting load | | | | Maximum load | | | | |
|---------------|-----------|--------|----------------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight | | Velocity | | Weight | | Velocity | | |
| | | | | | | [g] | [grs] | [m/s] | [fps] | [g] | [grs] | [m/s] | [fps] | |
| 7,1 | 110 | HP/XTP | Hornady | 36,5 | 1.437 | N320 | 0,35 | 5.4 | 342 | 1120 | 0,40 | 6.1 | 388 | 1272 |
| | | | | | | N340 | 0,40 | 6.2 | 345 | 1130 | 0,45 | 6.9 | 386 | 1267 |
| | | | | | | 3N37 | 0,48 | 7.3 | 353 | 1156 | 0,53 | 8.2 | 399 | 1308 |
| | | | | | | N350 | 0,43 | 6.6 | 355 | 1165 | 0,50 | 7.7 | 398 | 1305 |
| 8,0 | 124 | LSWC | Intercast | 36,5 | 1.437 | N320 | 0,29 | 4.5 | 310 | 1015 | 0,34 | 5.2 | 353 | 1159 |
| | | | | | | N340 | 0,37 | 5.7 | 324 | 1063 | 0,42 | 6.4 | 367 | 1203 |
| | | | | | | 3N37 | 0,41 | 6.3 | 329 | 1079 | 0,46 | 7.0 | 367 | 1205 |
| | | | | | | N350 | 0,39 | 5.9 | 336 | 1101 | 0,44 | 6.8 | 370 | 1215 |
| 8,1 | 125 | FP/XTP | Hornady | 36,5 | 1.437 | N320 | 0,32 | 4.9 | 299 | 981 | 0,37 | 5.6 | 342 | 1121 |
| | | | | | | N340 | 0,38 | 5.8 | 318 | 1042 | 0,43 | 6.7 | 359 | 1178 |
| | | | | | | 3N37 | 0,44 | 6.8 | 319 | 1045 | 0,49 | 7.5 | 367 | 1204 |
| | | | | | | N350 | 0,42 | 6.5 | 323 | 1058 | 0,49 | 7.5 | 373 | 1224 |
| 8,1 | 125 | FP | Rainier | 36,5 | 1.437 | N320 | 0,29 | 4.5 | 293 | 960 | 0,34 | 5.2 | 332 | 1089 |
| | | | | | | N340 | 0,34 | 5.2 | 306 | 1002 | 0,41 | 6.3 | 349 | 1146 |
| | | | | | | 3N37 | 0,40 | 6.2 | 310 | 1017 | 0,47 | 7.2 | 362 | 1187 |
| | | | | | | N350 | 0,38 | 5.9 | 304 | 997 | 0,45 | 6.9 | 354 | 1160 |

LIGHT GREY TEXT BOX INDICATES MAXIMUM LOAD - USE WITH CAUTION!

LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

***) Cowboy Action Shooting load**

.357 Magnum

Test barrel: 175 mm (7"), 1 in 18½" twist

Primers: Small Pistol

Cases: Remington, trim-to length 32,60 mm (1.283")

| Bullet | | | | Powder | | Starting load | | | | Maximum load | | | | |
|------------|-----|-----------|-----------|--------------------|-------|---------------|------------|-------|----------------|--------------|------------|-------|----------------|-------|
| Weight [g] | | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | | Velocity [m/s] | | Weight [g] | | Velocity [m/s] | |
| [grs] | | | | | | | [grs] | [grs] | [fps] | [fps] | [grs] | [grs] | [fps] | [fps] |
| 7,1 | 110 | HP/XTP | Hornady | 40,0 | 1.575 | N310 | 0,43 | 6.6 | 413 | 1355 | 0,45 | 7.0 | 427 | 1402 |
| | | | | | | N320 | 0,51 | 7.9 | 445 | 1460 | 0,54 | 8.3 | 462 | 1516 |
| | | | | | | N340 | 0,60 | 9.3 | 475 | 1558 | 0,64 | 9.8 | 500 | 1639 |
| | | | | | | 3N37 | 0,68 | 10.5 | 496 | 1627 | 0,73 | 11.3 | 518 | 1701 |
| | | | | | | N350 | 0,69 | 10.6 | 497 | 1631 | 0,73 | 11.2 | 517 | 1697 |
| | | | | | | N110 | 1,20 | 18.5 | 523 | 1716 | 1,35F | 20.8F | 612 | 2006 |
| 8,0 | 124 | LSWC | Intercast | 41,0 ¹⁾ | 1.614 | N340 | 0,56 | 8.6 | 443 | 1453 | 0,60 | 9.2 | 462 | 1516 |
| | | | | | | N350 | 0,59 | 9.1 | 446 | 1463 | 0,63 | 9.8 | 465 | 1524 |
| | | | | | | N110 | 1,11 | 17.1 | 510 | 1673 | 1,18 | 18.3 | 541 | 1775 |
| | | | | | | N310 | 0,39 | 6.0 | 371 | 1217 | 0,42 | 6.4 | 391 | 1284 |
| 8,1 | 125 | FP/XTP | Hornady | 40,0 | 1.575 | N320 | 0,45 | 6.9 | 400 | 1312 | 0,49 | 7.5 | 420 | 1379 |
| | | | | | | N340 | 0,56 | 8.6 | 440 | 1444 | 0,60 | 9.3 | 462 | 1517 |
| | | | | | | N350 | 0,62 | 9.6 | 456 | 1496 | 0,66 | 10.2 | 476 | 1561 |
| | | | | | | N110 | 1,09 | 16.8 | 488 | 1601 | 1,19F | 18.4F | 540 | 1772 |
| | | | | | | N340 | 0,53 | 8.2 | 404 | 1325 | 0,56 | 8.7 | 422 | 1385 |
| 9,1 | 140 | HP | Speer | 40,0 | 1.575 | 3N37 | 0,59 | 9.1 | 417 | 1368 | 0,63 | 9.8 | 439 | 1440 |
| | | | | | | N350 | 0,58 | 8.9 | 416 | 1365 | 0,62 | 9.5 | 437 | 1433 |
| | | | | | | N110 | 1,02 | 15.7 | 457 | 1499 | 1,11F | 17.1F | 502 | 1647 |

LIGHT GREY TEXT BOX INDICATES MAXIMUM LOAD - USE WITH CAUTION!

THE GREY TEXT BOX INDICATES MAXIMUM LOAD USE WITH CAUTION
LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

.357 Magnum

cont.

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|---------|-------------|--------------------|---------------|--------------------|-------|--------------|----------------|-------|-------|-------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 9,4 | 145 | LSWC | Intercast | 41,0 ¹⁾ | 1.614 | N320 | 0,41 | 6.3 | 376 | 1234 | 0,44 | 6.7 | 390 | 1281 |
| | | | | | | N340 | 0,47 | 7.3 | 398 | 1306 | 0,50 | 7.7 | 415 | 1360 |
| | | | | | | 3N37 | 0,54 | 8.3 | 412 | 1352 | 0,58 | 9.0 | 432 | 1418 |
| | | | | | | N350 | 0,51 | 7.9 | 404 | 1325 | 0,56 | 8.7 | 427 | 1401 |
| | | | | | | N110 | 0,98 | 15.1 | 479 | 1572 | 1,04 | 16.0 | 502 | 1649 |
| 10,2 | 158 | HP | Speer | 40,0 | 1.575 | N320 | 0,40 | 6.2 | 335 | 1099 | 0,43 | 6.6 | 354 | 1160 |
| | | | | | | N340 | 0,47 | 7.3 | 361 | 1184 | 0,50 | 7.7 | 378 | 1239 |
| | | | | | | 3N37 | 0,53 | 8.2 | 377 | 1237 | 0,57 | 8.8 | 398 | 1305 |
| | | | | | | N350 | 0,54 | 8.3 | 385 | 1263 | 0,58 | 8.9 | 400 | 1314 |
| 10,2 | 158 | FP/XTP | Hornady | 40,0 | 1.575 | N105 | 0,76 | 11.7 | 427 | 1401 | 0,80 | 12.4 | 447 | 1466 |
| 10,2 | 158 | HP | Speer | 40,0 | 1.575 | N110 | 0,98 | 15.1 | 451 | 1480 | 1,03 | 15.9 | 478 | 1569 |
| 10,2 | 158 | FNCM | Gunhill | 40,2 | 1.583 | N32C ¹⁾ | 0,29 | 4.5 | 265 | 869 | 0,37 | 5.7 | 309 | 1014 |
| 10,3 | 158 | LSWC/HP | | 40,0 | 1.575 | N330 ¹⁾ | 0,25 | 3.9 | 241 | 791 | 0,32 | 5.0 | 304 | 997 |
| | | | | | | N340 ¹⁾ | 0,29 | 4.5 | 245 | 804 | 0,38 | 5.9 | 320 | 1050 |
| 10,4 | 160 | LFN | Intercast | 40,0 | 1.575 | N340 | 0,45 | 6.9 | 376 | 1234 | 0,48 | 7.4 | 389 | 1276 |
| | | | | | | 3N37 | 0,51 | 7.9 | 383 | 1257 | 0,54 | 8.4 | 403 | 1321 |
| | | | | | | N350 | 0,48 | 7.4 | 383 | 1257 | 0,52 | 8.1 | 399 | 1309 |
| | | | | | | N110 | 0,92 | 14.2 | 456 | 1496 | 0,97 | 15.0 | 478 | 1570 |
| 11,7 | 180 | TMJ | Speer | 42,6 ¹⁾ | 1.677 | N340 | 0,45 | 6.9 | 321 | 1053 | 0,48 | 7.4 | 341 | 1118 |
| | | | | | | 3N37 | 0,50 | 7.7 | 336 | 1102 | 0,54 | 8.3 | 358 | 1174 |
| | | | | | | N350 | 0,47 | 7.3 | 325 | 1066 | 0,51 | 7.9 | 351 | 1150 |
| | | | | | | N105 | 0,65 | 10.0 | 379 | 1243 | 0,71 | 10.9 | 401 | 1315 |
| | | | | | | N110 | 0,82 | 12.7 | 382 | 1253 | 0,91F | 14.0F | 425 | 1394 |
| 13,0 | 200 | TMJ | Speer | 43,1 ¹⁾ | 1.697 | 3N37 | 0,46 | 7.1 | 297 | 974 | 0,50 | 7.7 | 317 | 1041 |
| | | | | | | N350 | 0,45 | 6.9 | 288 | 945 | 0,49 | 7.7 | 314 | 1031 |
| | | | | | | N105 | 0,60 | 9.3 | 337 | 1106 | 0,64 | 10.2 | 358 | 1174 |
| | | | | | | N110 | 0,79 | 12.2 | 362 | 1188 | 0,83 | 12.8 | 382 | 1252 |

F = Case full

¹⁾ The cartridge overall length exceeds the CIP maximum.¹⁾ Cowboy Action Shooting load**.357 Remington Maximum**

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|------------|-------------|--------------------|---------------|----------------|-------|--------------|----------------|-------|------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 10,2 | 158 | FP/XTP | Hornady | 48,0 | 1.890 | 3N37 | 0,70 | 10.8 | 461 | 1512 | 0,74 | 11.3 | 478 | 1568 |
| | | | | | | N350 | 0,64 | 9.9 | 443 | 1453 | 0,71 | 10.9 | 470 | 1541 |
| | | | | | | N105 | 0,85 | 13.1 | 485 | 1591 | 0,92 | 14.3 | 513 | 1683 |
| | | | | | | N110 | 1,21 | 18.7 | 557 | 1827 | 1,27 | 19.5 | 578 | 1898 |
| 10,2 | 158 | FP | Rainier | 48,0 | 1.890 | N350 | 0,71 | 11.0 | 440 | 1444 | 0,78 | 12.0 | 472 | 1548 |
| | | | | | | 3N37 | 0,69 | 10.6 | 445 | 1460 | 0,75 | 11.5 | 473 | 1552 |
| | | | | | | N105 | 0,86 | 13.3 | 490 | 1608 | 0,94 | 14.5 | 517 | 1695 |
| | | | | | | N110 | 1,27 | 19.6 | 559 | 1834 | 1,32 | 20.3 | 581 | 1907 |
| 10,4 | 160 | LFN | Intercast | 48,0 | 1.890 | 3N37 | 0,66 | 10.2 | 465 | 1526 | 0,72 | 11.1 | 482 | 1580 |
| | | | | | | N350 | 0,66 | 10.2 | 459 | 1506 | 0,70 | 10.7 | 473 | 1553 |
| | | | | | | N105 | 0,87 | 13.4 | 517 | 1696 | 0,95 | 14.6 | 541 | 1775 |
| 11,7 | 180 | Silhouette | Nosler | 48,1 | 1.894 | N105 | 0,79 | 12.2 | 443 | 1453 | 0,85 | 13.1 | 468 | 1534 |
| | | | | | | N110 | 1,07 | 16.5 | 500 | 1640 | 1,12 | 17.3 | 519 | 1704 |
| | | | | | | N120 | 1,40 | 21.6 | 516 | 1693 | 1,46 | 22.5 | 537 | 1762 |
| 13,0 | 200 | TMJ | Speer | 50,8 ¹⁾ | 2.000 | N110 | 0,99 | 15.3 | 440 | 1444 | 1,04 | 16.1 | 460 | 1508 |
| | | | | | | N120 | 1,30 | 20.1 | 458 | 1503 | 1,36 | 20.9 | 483 | 1584 |

¹⁾ The cartridge overall length exceeds the CIP maximum.Test barrel: 300 mm (12"), 1 in 18½" twist
Primers: Small Rifle
Cases: Remington, trim-to length 40,60 mm (1.598")**.40 S&W**Test barrel: 140 mm (5½"), 1 in 16" twist
Primers: Small Pistol
Cases: Remington, trim-to length 21,40 mm (0.843")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | | | |
|------------|-----------|--------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|------|-----|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | | | |
| 8,7 | 135 | HP-XTP | Hornady | 28,6 | 1.126 | N320 | 0,34 | 5.2 | 337 | 1106 | 0,35 | 5.5 | 346 | 1134 |
| | | | | | | N330 | 0,39 | 6.0 | 348 | 1142 | 0,40 | 6.2 | 357 | 1172 |
| | | | | | | 3N37 | 0,47 | 7.3 | 357 | 1171 | 0,49 | 7.6 | 369 | 1210 |
| | | | | | | N350 | 0,43 | 6.6 | 351 | 1152 | 0,45 | 7.0 | 362 | 1189 |
| 8,7 | 135 | HP | Nosler | 28,6 | 1.126 | N320 | 0,39 | 6.0 | 373 | 1224 | 0,40 | 6.2 | 384 | 1259 |
| | | | | | | N340 | 0,48 | 7.4 | 403 | 1322 | 0,50 | 7.8 | 416 | 1364 |
| | | | | | | 3N37 | 0,54 | 8.3 | 403 | 1322 | 0,56 | 8.6 | 417 | 1367 |
| 10,0 | 155 | FP | Rainier | 28,6 | 1.126 | N320 | 0,34 | 5.2 | 331 | 1086 | 0,35 | 5.5 | 340 | 1114 |
| | | | | | | N330 | 0,39 | 6.0 | 344 | 1129 | 0,40 | 6.2 | 354 | 1160 |
| | | | | | | N340 | 0,41 | 6.3 | 352 | 1155 | 0,43 | 6.6 | 364 | 1195 |
| | | | | | | 3N37 | 0,49 | 7.6 | 359 | 1178 | 0,51 | 7.9 | 371 | 1216 |
| 10,7 | 165 | TC-FMJ | PMC | 28,6 | 1.126 | N320 | 0,32 | 4.9 | 303 | 994 | 0,34 | 5.2 | 316 | 1038 |
| | | | | | | N340 | 0,41 | 6.3 | 334 | 1096 | 0,43 | 6.6 | 347 | 1137 |
| | | | | | | 3N37 | 0,47 | 7.3 | 343 | 1125 | 0,49 | 7.5 | 355 | 1166 |
| 11,0 | 170 | HP | Hornady | 28,6 | 1.126 | N340 | 0,34 | 5.2 | 313 | 1027 | 0,36 | 5.6 | 324 | 1063 |
| | | | | | | 3N37 | 0,39 | 6.0 | 322 | 1056 | 0,41 | 6.3 | 333 | 1093 |
| | | | | | | N350 | 0,38 | 5.9 | 322 | 1056 | 0,40 | 6.2 | 333 | 1091 |
| 11,7 | 180 | HP | Speer | 28,6 | 1.126 | N340 | 0,35 | 5.4 | 305 | 1001 | 0,37 | 5.7 | 316 | 1037 |
| | | | | | | 3N37 | 0,38 | 5.9 | 303 | 994 | 0,40 | 6.2 | 315 | 1035 |
| | | | | | | N350 | 0,38 | 5.9 | 319 | 1047 | 0,40 | | | |

.41 Remington Magnum

Test barrel: 150 mm (6"), 1 in 18¾" twist
 Primers: Large Pistol
 Cases: W-W Super, trim-to length 32,50 mm (1.280")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-----------|--------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | |
| 11,0 | 170 | JHC | Sierra | N350 | 0,72 | 11.1 | 415 | 1362 | 0,81 | 12.5 | 451 | 1480 |
| | | | | N105 | 0,99 | 15.3 | 465 | 1526 | 1,10 | 16.9 | 500 | 1642 |
| | | | | N110 | 1,41 | 21.8 | 500 | 1640 | 1,50 | 23.2 | 532 | 1746 |
| 13,6 | 210 | HP/XTP | Hornady | N350 | 0,67 | 10.3 | 373 | 1224 | 0,74 | 11.4 | 400 | 1312 |
| | | | | N105 | 0,84 | 13.0 | 405 | 1329 | 0,95 | 14.6 | 437 | 1435 |
| | | | | N110 | 1,20 | 18.5 | 436 | 1430 | 1,28 | 19.8 | 466 | 1529 |

.44 S&W Special

Test barrel: 150 mm (6"), 1 in 18" twist
 Primers: Large Pistol
 Cases: Remington, trim-to length 29,30 mm (1.153")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-----------|-----------|-------------|--------------------|---------------|----------------|-------|--------------|----------------|-------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | |
| 11,7 | 180 | HP-XTP | Hornady | N320 | 0,44 | 6.8 | 285 | 935 | 0,49 | 7.6 | 315 | 1033 |
| | | | | N330 | 0,50 | 7.7 | 308 | 1010 | 0,56 | 8.6 | 338 | 1109 |
| | | | | N340 | 0,57 | 8.8 | 319 | 1047 | 0,62 | 9.6 | 349 | 1145 |
| 13,0 | 200 | HP-XTP | Hornady | N320 | 0,41 | 6.3 | 270 | 886 | 0,45 | 6.9 | 294 | 965 |
| | | | | N330 | 0,50 | 7.7 | 287 | 942 | 0,55 | 8.5 | 315 | 1033 |
| | | | | N340 | 0,54 | 8.3 | 293 | 961 | 0,59 | 9.1 | 325 | 1066 |
| 14,3 | 220 | FPJ-Match | Sierra | N320 | 0,34 | 5.2 | 221 | 725 | 0,39 | 6.0 | 255 | 837 |
| | | | | N330 | 0,40 | 6.2 | 232 | 761 | 0,46 | 7.1 | 271 | 889 |
| | | | | N340 | 0,43 | 6.6 | 248 | 814 | 0,48 | 7.4 | 278 | 912 |
| 15,6 | 240 | JTC-Sil | Hornady | N320 | 0,31 | 4.8 | 193 | 633 | 0,36 | 5.6 | 223 | 732 |
| | | | | N330 | 0,35 | 5.4 | 206 | 676 | 0,40 | 6.2 | 234 | 768 |
| | | | | N340 | 0,41 | 6.3 | 222 | 728 | 0,46 | 7.1 | 252 | 827 |
| 15,6 | 240 | SWC/HP | | N350 | 0,49 | 7.6 | 239 | 784 | 0,53 | 8.2 | 271 | 889 |
| | | | | N320 ¹⁾ | 0,30 | 4.7 | 214 | 702 | 0,38 | 5.9 | 260 | 853 |
| | | | | N330 ¹⁾ | 0,36 | 5.5 | 229 | 751 | 0,41 | 6.3 | 270 | 886 |
| 16,1 | 248 | LRNFP | Gunhill | N32C ¹⁾ | 0,38 | 5.9 | 238 | 781 | 0,41 | 6.3 | 255 | 837 |
| | | | | N320 | 0,31 | 4.8 | 193 | 633 | 0,36 | 5.6 | 226 | 741 |
| | | | | N330 | 0,32 | 4.9 | 191 | 627 | 0,39 | 6.0 | 228 | 748 |
| 16,2 | 250 | FPJ | Sierra | N340 | 0,36 | 5.6 | 197 | 646 | 0,42 | 6.5 | 237 | 778 |
| | | | | N350 | 0,44 | 6.8 | 229 | 751 | 0,49 | 7.6 | 260 | 853 |
| | | | | N320 | 0,34 | 5.2 | 242 | 794 | 0,39 | 6.0 | 262 | 860 |
| 17,3 | 267 | LFN | Intercast | N330 | 0,41 | 6.3 | 261 | 856 | 0,45 | 6.9 | 281 | 922 |
| | | | | N340 | 0,42 | 6.5 | 256 | 840 | 0,46 | 7.1 | 278 | 912 |
| | | | | N350 | 0,47 | 7.3 | 259 | 850 | 0,52 | 8.0 | 282 | 925 |
| 17,3 | 267 | LFN | | N320 ¹⁾ | 0,25 | 3.8 | 193 | 633 | 0,34 | 5.3 | 242 | 794 |
| | | | | N330 ¹⁾ | 0,32 | 4.9 | 216 | 709 | 0,38 | 5.9 | 254 | 833 |
| | | | | N340 ¹⁾ | 0,43 | 6.6 | 261 | 856 | 0,47 | 7.3 | 282 | 925 |

¹⁾ Cowboy Action Shooting load

.44 Remington Magnum

Test barrel: 175 mm (7"), 1 in 20" twist
 Primers: Large Pistol
 Cases: Remington, trim-to length 32,40 mm (1.275")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-----------|--------|-------------|--------|---------------|----------------|-------|--------------|----------------|-------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Weight [g] | Velocity [m/s] | [fps] | Weight [g] | Velocity [m/s] | [fps] | | |
| 11,7 | 180 | HP-XTP | Hornady | N320 | 0,69 | 10,6 | 407 | 1335 | 0,77 | 11,8 | 437 | 1432 |
| | | | | N340 | 0,84 | 13,0 | 439 | 1440 | 0,92 | 14,1 | 472 | 1549 |
| | | | | N350 | 0,89 | 13,7 | 448 | 1470 | 0,99 | 15,3 | 481 | 1578 |
| | | | | N105 | 1,23 | 19,0 | 498 | 1634 | 1,40 | 21,6 | 543 | 1781 |
| | | | | N110 | 1,63 | 25,2 | 492 | 1614 | 1,76 | 27,1 | 534 | 1751 |

LIGHT GREY TEXT BOX INDICATES MAXIMUM LOAD - USE WITH CAUTION!
 LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

.44 Remington Magnum

cont.

| Bullet | Weight [g] | Type/Name | Mfg | C.O.L. [mm] | Type | Powder | Starting load | Maximum load | | | | | | |
|--------|------------|-----------|---------|-------------|-------|--------|----------------|----------------|-----|------|------|------|-----|------|
| | [grs] | | | [in.] | | | Weight [g] | Weight [g] | | | | | | |
| | | | | | | | Velocity [m/s] | Velocity [m/s] | | | | | | |
| 13,0 | 200 | HP-XTP | Hornady | 40,7 | 1,602 | N320 | 0,65 | 10,0 | 381 | 1250 | 0,73 | 11,3 | 408 | 1339 |
| | | | | | | N340 | 0,76 | 11,7 | 410 | 1345 | 0,84 | 13,0 | 437 | 1434 |
| | | | | | | 3N37 | 0,89 | 13,7 | 433 | 1421 | 0,98 | 15,2 | 462 | 1515 |
| | | | | | | N350 | 0,83 | 12,8 | 416 | 1365 | 0,95 | 14,6 | 453 | 1487 |
| | | | | | | N105 | 1,09 | 16,8 | 459 | 1506 | 1,26 | 19,4 | 500 | 1642 |
| | | | | | | N110 | 1,58 | 24,4 | 494 | 1621 | 1,71 | 26,3 | 530 | 1740 |
| 14,3 | 220 | FPJ-Match | Sierra | 40,7 | 1,602 | N320 | 0,59 | 9,1 | 350 | 1148 | 0,67 | 10,4 | 375 | 1232 |
| | | | | | | N340 | 0,72 | 11,1 | 381 | 1250 | 0,80 | 12,3 | 405 | 1328 |
| | | | | | | 3N37 | 0,78 | 12,0 | 372 | 1220 | 0,86 | 13,3 | 402 | 1318 |
| | | | | | | N350 | 0,83 | 12,8 | 402 | 1319 | 0,96 | 14,8 | 439 | 1441 |
| | | | | | | N105 | 1,08 | 16,7 | 432 | 1417 | 1,22 | 18,8 | 470 | 1542 |
| 15,6 | 240 | JTC-Sil | Hornady | 40,7 | 1,602 | N320 | 0,58 | 8,9 | 331 | 1086 | 0,63 | 9,7 | 354 | 1161 |
| | | | | | | N340 | 0,67 | 10,3 | 358 | 1175 | 0,75 | 11,5 | 380 | 1247 |
| | | | | | | 3N37 | 0,78 | 12,0 | 372 | 1220 | 0,86 | 13,3 | 402 | 1318 |
| | | | | | | N350 | 0,77 | 11,9 | 375 | 1230 | 0,83 | 12,8 | 399 | 1308 |
| | | | | | | N105 | 0,9 | | | | | | | |

.45 ACP

cont.

| Bullet | | | Powder | | Starting load | | | Maximum load | | | | | | |
|------------|-----------|--------|-------------|-------|---------------|------------|----------------|----------------|------------|----------------|----------------|-----|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 13,0 | 200 | FMJ-CT | Hornady | 31,0 | 1.220 | N330 | 0,37 | 5,7 | 263 | 863 | 0,41 | 6,3 | 291 | 955 |
| | | | | | | 3N37 | 0,42 | 6,5 | 227 | 745 | 0,48 | 7,4 | 279 | 915 |
| 13,0 | 200 | LSWC | Intercast | 31,5 | 1.240 | N310 | 0,24 | 3,7 | 252 | 827 | 0,26 | 4,0 | 272 | 892 |
| | | | | | | N320 | 0,30 | 4,7 | 271 | 888 | 0,33 | 5,1 | 292 | 958 |
| | | | | | | N340 | 0,39 | 6,1 | 295 | 966 | 0,43 | 6,6 | 317 | 1039 |
| 13,0 | 200 | FMJ-CT | Hornady | 31,5 | 1.240 | N320 | 0,32 | 5,0 | 261 | 855 | 0,35 | 5,4 | 283 | 928 |
| | | | | | | N340 | 0,40 | 6,2 | 276 | 906 | 0,44 | 6,8 | 300 | 986 |
| | | | | | | N350 | 0,43 | 6,7 | 279 | 916 | 0,47 | 7,3 | 303 | 996 |
| 14,9 | 230 | FMJ-RN | Hornady | 32,0 | 1.260 | N310 | 0,24 | 3,7 | 219 | 719 | 0,27 | 4,2 | 235 | 771 |
| | | | | | | N320 | 0,32 | 4,9 | 239 | 784 | 0,34 | 5,2 | 259 | 850 |
| | | | | | | N330 | 0,33 | 5,1 | 228 | 748 | 0,36 | 5,6 | 256 | 840 |
| | | | | | | N340 | 0,38 | 5,9 | 253 | 830 | 0,41 | 6,4 | 278 | 912 |
| | | | | | | 3N37 | 0,37 | 5,7 | 205 | 673 | 0,43 | 6,6 | 253 | 830 |
| | | | | | | N350 | 0,43 | 6,7 | 257 | 845 | 0,47 | 7,2 | 280 | 920 |

.45 Colt

Test barrel: 150 mm (6"), 1 in 16" twist

Primers: Large Pistol

Cases: Remington, trim-to length 32,50 mm (1.279")

| Bullet | | | Powder | | Starting load | | | Maximum load | | | | | | |
|------------|-----------|-----------|-------------|-------|---------------|--------------------|----------------|----------------|------------|----------------|----------------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 11,7 | 180 | LSWC | Intercast | 40,5 | 1.594 | N320 | 0,55 | 8,6 | 341 | 1119 | 0,60 | 9,2 | 367 | 1204 |
| | | | | | | N330 | 0,66 | 10,1 | 362 | 1188 | 0,71 | 10,9 | 389 | 1276 |
| | | | | | | N340 | 0,69 | 10,7 | 362 | 1188 | 0,74 | 11,5 | 391 | 1283 |
| | | | | | | N350 | 0,75 | 11,6 | 363 | 1191 | 0,83 | 12,8 | 399 | 1309 |
| 12,0 | 185 | HP/XTP | Hornady | 40,5 | 1.594 | N320 | 0,57 | 8,7 | 334 | 1096 | 0,62 | 9,6 | 360 | 1181 |
| | | | | | | N340 | 0,71 | 10,9 | 342 | 1122 | 0,76 | 11,8 | 377 | 1237 |
| | | | | | | N350 | 0,80 | 12,3 | 346 | 1135 | 0,86 | 13,2 | 382 | 1253 |
| 12,0 | 185 | FN | Rainier | 40,5 | 1.594 | N320 | 0,57 | 8,9 | 328 | 1076 | 0,62 | 9,6 | 358 | 1175 |
| | | | | | | N330 | 0,67 | 10,4 | 333 | 1093 | 0,73 | 11,2 | 367 | 1204 |
| | | | | | | N340 | 0,72 | 11,1 | 343 | 1125 | 0,78 | 12,1 | 383 | 1257 |
| | | | | | | N350 | 0,80 | 12,3 | 346 | 1135 | 0,88 | 13,6 | 389 | 1276 |
| 13,0 | 200 | FMJ-CT | Hornady | 40,5 | 1.594 | N320 | 0,52 | 8,1 | 317 | 1040 | 0,58 | 8,9 | 342 | 1122 |
| 13,0 | 200 | LSWC | Hornady | 40,5 | 1.594 | N320 | 0,56 | 8,7 | 326 | 1070 | 0,61 | 9,4 | 347 | 1138 |
| | | | | | | N340 | 0,70 | 10,9 | 341 | 1119 | 0,75 | 11,6 | 364 | 1194 |
| 13,0 | 200 | LRN | | 40,5 | 1.594 | N320 ^{*)} | 0,44 | 6,8 | 259 | 850 | 0,56 | 8,7 | 318 | 1043 |
| | | | | | | N330 ^{*)} | 0,52 | 8,0 | 267 | 876 | 0,56 | 8,6 | 298 | 978 |
| 14,9 | 230 | FMJ-Match | Sierra | 40,5 | 1.594 | N320 | 0,49 | 7,5 | 286 | 938 | 0,54 | 8,3 | 306 | 1004 |
| | | | | | | N340 | 0,63 | 9,7 | 301 | 988 | 0,68 | 10,4 | 330 | 1083 |
| 16,2 | 250 | HP/XTP | Hornady | 40,5 | 1.594 | N320 | 0,47 | 7,3 | 257 | 843 | 0,51 | 7,8 | 280 | 919 |
| | | | | | | N340 | 0,60 | 9,2 | 281 | 922 | 0,64 | 9,8 | 307 | 1007 |
| | | | | | | N350 | 0,69 | 10,7 | 297 | 974 | 0,72 | 11,2 | 321 | 1053 |
| | | | | | | N105 | 0,91 | 14,1 | 296 | 971 | 0,97 | 15,0 | 344 | 1129 |
| 16,2 | 250 | LRN | | 40,5 | 1.594 | N320 ^{*)} | 0,36 | 5,6 | 229 | 751 | 0,45 | 6,9 | 279 | 915 |
| | | | | | | N330 ^{*)} | 0,41 | 6,3 | 238 | 781 | 0,49 | 7,5 | 293 | 961 |
| 16,3 | 251 | LRNFP | Gunhill | 40,3 | 1.587 | N32C ^{*)} | 0,54 | 8,3 | 271 | 889 | 0,62 | 9,6 | 305 | 1001 |

*) Cowboy Action Shooting load

.45 Winchester Magnum

Test barrel: 300 mm (12"), 1 in 16" twist

Primers: Large Pistol

Cases: Winchester, trim-to length 30,30 mm (1.192")

| Bullet | | | Powder | | Starting load | | | Maximum load | | | | | | |
|------------|-----------|---------|-------------|-------|---------------|------------|----------------|----------------|------------|----------------|----------------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 12,0 | 185 | HP/XTP | Hornady | 38,5 | 1.516 | N350 | 0,81 | 12,5 | 451 | 1478 | 0,99 | 15,3 | 512 | 1678 |
| | | | | | | 3N37 | 0,91 | 14,0 | 507 | 1662 | 1,03 | 15,9 | 534 | 1750 |
| | | | | | | N105 | 1,13 | 17,4 | 523 | 1714 | 1,33 | 20,5 | 576 | 1888 |
| 13,0 | 200 | TMJ-SWC | Speer | 38,5 | 1.516 | 3N37 | 0,91 | 14,0 | 487 | 1598 | 1,00 | 15,4 | 513 | 1683 |
| 13,0 | 200 | FMJ-CT | Hornady | 39,5 | 1.555 | N105 | 1,07 | 16,5 | 483 | 1583 | 1,23 | 19,0 | 532 | 1744 |

LIGHT GREY TEXT BOX INDICATES MAXIMUM LOAD - USE WITH CAUTION!

LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

.45 Winchester Magnum

cont.

| Bullet | | | Powder | | Starting load | | | Maximum load | | | | | | |
|------------|-----------|---------|-------------|-------|---------------|------------|----------------|----------------|------------|----------------|----------------|------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | | |
| 13,0 | 200 | TMJ-SWC | Speer | 38,5 | 1.516 | N110 | 1,49 | 22,9 | 528 | 1731 | 1,64 | 25,2 | 575 | 1885 |
| 14,9 | 230 | FMJ-RN | Hornady | 39,5 | 1.555 | 3N37 | 0,82 | 12,7 | 410 | 1344 | 0,92 | 14,2 | 451 | 1478 |
| | | | | | | N110 | 1,41 | 21,8 | 495 | 1622 | 1,55 | 23,9 | 532 | 1744 |
| 16,2 | 250 | HP-XTP | Hornady | 38,2 | 1.504 | N350 | 0,65 | 10,0 | 309 | 1014 | 0,78 | 12,0 | 373 | 1224 |
| | | | | | | 3N37 | 0,75 | 11,6 | 354 | 1160 | 0,83 | 12,8 | 401 | 1314 |
| | | | | | | N105 | 0,90 | 13,8 | 393 | 1289 | 1,03 | 15,8 | 431 | 1414 |
| | | | | | | N110 | 1,20 | 18,4 | 442 | 1448 | 1,37 | 21,1 | 481 | 1576 |

.454 Casull

Test barrel: 240 mm (9½"), 1 in 24" twist

Primers: Small Rifle

Cases: Freedom Arms, trim-to length 33,30 mm (1.311")

| Bullet | | | Powder | | Starting load | | | Maximum load | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] | [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] |

<tbl

VIHTAVUORI SMOKELESS LOADS FOR COWBOY ACTION SHOOTING

About the Data

These loads are developed to give the velocities required for the cowboy action shooting using revolvers with lead bullets. The maximum load is determined by the velocity limit about 300 m/s, or by the maximum pressure limit according to the CIP October 1, 1992 rules. The bold text in the tables indicate the maximum load according to CIP pressure level. The maximum loads must never be exceeded.

All the listed loads are intended to be used in modern firearms, which are according to the SAAMI requirements. Please use a competent gunsmith to evaluate that the condition of your gun is adequate to be used with the pressures indicated in the tables. The starting loads are the lowest charges which appeared to give clean burning, i.e. no unburned residues in the barrel or in the case, in our test shooting. This limit may, however vary according to the revolver used.

There are some special features, which must be considered, when using reduced loads like the ones presented in the tables below. The same facts are equally valid always when using any smokeless powder in such loads.

1) Double charges

Some of these loads are so small that throwing the load twice in the same case is possible because of the large case volume. Doubling the charge accidentally causes most probably truly lethal chamber pressures. Therefore, it is a must for everyone using this data to check visually every single load for the double charge before seating the bullet.

2) Free space in the case

When using charges which leave large amount of free space in the case, the shooting characteristics may vary largely depending on where the powder is located in the case. If the powder lies totally in the bottom of the case (i.e. in the end where primer is), the muzzle velocity and especially the maximum pressure become much higher. The maximum pressure may even be doubled when same powder charge is moved from the bullet end to the primer end of the case. This can simply be demonstrated by shaking the revolver barrel upwards or barrel downwards just before turning it smoothly in horizontal position, aiming and shooting. Also the recoil may transfer the

Warnings

Smokeless powder differs considerably in its burning characteristics from common "black powder". Black powder burns essentially at the same rate in the open (unconfined) as when in a gun. The burning rate of smokeless powder increases with increasing pressure. If burning smokeless powder is confined, gas pressure will rise and eventually can cause the container or chamber to burst. A slight increase in smokeless powder charge after maximum load causes sharp increase in maximum pressure in the chamber. **Never exceed the maximum loads.**

.38 Special

Test barrel: 125 mm (5"), 1 in 18" twist
Primers: Small Pistol
Cases: Remington, trim-to length 29,10 mm (1.146")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-------------|---------|-------------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | |
| 9,4 | 145 LSWC | | 37,5 1.476 | N32C | 0,32 | 4.9 | 307 | 1007 | 0,37 | 5.7 | 314 | 1030 |
| 10,2 | 158 FNCM | Gunhill | 36,7 1.445 | N32C | 0,27 | 4.2 | 261 | 856 | 0,36 | 5.6 | 306 | 1004 |
| 10,3 | 158 LSWC/HP | | 36,5 1.437 | N320 | 0,21 | 3.3 | 230 | 755 | 0,25 | 3.8 | 256 | 840 |
| | | | | N330 | 0,23 | 3.6 | 240 | 787 | 0,27 | 4.1 | 269 | 883 |

.357 Magnum

Test barrel: 150 mm (6"), 1 in 18½" twist
Primers: Small Rifle
Cases: Remington, trim-to length 32,60 mm (1.283")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-------------|---------|-------------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | |
| 10,2 | 158 FNCM | Gunhill | 40,2 1.583 | N32C | 0,29 | 4.5 | 265 | 869 | 0,37 | 5.7 | 309 | 1014 |
| 10,3 | 158 LSWC/HP | | 40,0 1.575 | N330 | 0,25 | 3.9 | 241 | 791 | 0,32 | 5.0 | 304 | 997 |
| | | | | N340 | 0,29 | 4.5 | 245 | 804 | 0,38 | 5.9 | 320 | 1050 |

.44 S&W Special

Test barrel: 165 mm (6½"), 1 in 18" twist
Primers: Large Pistol
Cases: Remington, trim-to length 29,30 mm (1.153")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|------------|---------|-------------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|-----|-----|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | |
| 15,6 | 240 SWC/HP | | 39,1 1.539 | N320 | 0,30 | 4.7 | 214 | 702 | 0,38 | 5.9 | 260 | 853 |
| | | | | N330 | 0,36 | 5.5 | 229 | 751 | 0,41 | 6.3 | 270 | 886 |
| 16,1 | 248 LRNFP | Gunhill | 37,2 1.465 | N32C | 0,38 | 5.9 | 238 | 781 | 0,41 | 6.3 | 255 | 837 |
| 17,3 | 267 LFN | | 39,1 1.539 | N320 | 0,25 | 3.8 | 193 | 633 | 0,34 | 5.3 | 242 | 794 |
| | | | | N330 | 0,32 | 4.9 | 216 | 709 | 0,38 | 5.9 | 254 | 833 |
| | | | | N340 | 0,43 | 6.6 | 261 | 856 | 0,47 | 7.3 | 282 | 925 |

.44 Remington Magnum

Test barrel: 175 mm (7"), 1 in 20" twist
Primers: Large Pistol
Cases: Remington, trim-to length 32,40 mm (1.276")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-----------|---------|-------------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | |
| 16,1 | 248 LRNFP | Gunhill | 40,5 1.594 | N32C | 0,49 | 7.6 | 272 | 892 | 0,62 | 9.6 | 309 | 1014 |
| 17,3 | 267 LFN | | 40,0 1.575 | N340 | 0,38 | 5.9 | 224 | 735 | 0,49 | 7.5 | 288 | 945 |
| 17,3 | 267 LSWC | | 40,5 1.681 | N32C | 0,50 | 7.7 | 271 | 889 | 0,60 | 9.3 | 301 | 988 |

.45 Colt

Test barrel: 150 mm (6"), 1 in 16" twist
Primers: Large Pistol
Cases: Remington, trim-to length 32,50 mm (1.280")

| Bullet | | | | Powder | Starting load | | | Maximum load | | | | |
|------------|-----------|---------|-------------------|--------|---------------|----------------|----------------|--------------|----------------|----------------|-----|------|
| Weight [g] | Type/Name | Mfg | C.O.L. [mm] [in.] | Type | Weight [g] | Velocity [m/s] | Velocity [fps] | Weight [g] | Velocity [m/s] | Velocity [fps] | | |
| 13,0 | 200 LRN | | 40,5 1.594 | N320 | 0,44 | 6.8 | 259 | 850 | 0,56 | 8.7 | 318 | 1043 |
| | | | | N330 | 0,52 | 8.0 | 267 | 876 | 0,56 | 8.6 | 298 | 978 |
| 16,2 | 250 LRN | | 40,5 1.594 | N320 | 0,36 | 5.6 | 229 | 751 | 0,45 | 6.9 | 279 | 915 |
| 16,3 | 251 LRNFP | Gunhill | 40,3 1.587 | N32C | 0,41 | 6.3 | 238 | 781 | 0,49 | 7.5 | 293 | 961 |
| | | | | N330 | 0,54 | 8.3 | 271 | 889 | 0,62 | 9.6 | 305 | 1001 |

PERSONAL LOADS

PERSONAL LOADS

QUALITY by DESIGN

Manufacturing propellants entirely in-house ensures their high quality. All Vihtavuori powders are made using nitro-cellulose produced by cotton linters at our own plant. Premium quality Vihtavuori powders deliver consistently flawless firing performance – for you this means reliable reloading and ammunition you demand.

Each stage of the production process is subject to stringent quality control by the Vihtavuori experts to ensure that each production lot has the exact ballistic performance required. Each and every batch produced is inspected by comparing them to selected reference batches.

All Vihtavuori powders for small arms are extruded propellants. Propellant grains are perforated cylinders of various sizes, flat ribbon flakes or other shapes extruded for special applications. The grain geometry of different powder types provides the wanted combustion characteristics for the chosen cartridge application.

The estimated shelf-life of Vihtavuori powders is a minimum of 10 years, if stored and sealed in its original containers at a temperature circa 20°C and relative humidity of 55 -65%.

All Vihtavuori reloading powders are packed into bottles and canisters and further in cardboard boxes.





EXPERIENCED CRAFTMANSHIP FOR THE PERFECT AMMO

For almost 100 years, Vihtavuori has been known for producing high quality propellants with reliable ballistic performance, long shelf-life and wide variety selection. All of our powders meet the strict requirements of both civilian and military needs.

Vihtavuori powders come in three different series: N100 offers traditional single base propellants for rifle calibers, N300/3N offers porous single base powders and precise measuring capability for pistol cartridges, rimfire ammunition and shotgun shells, and N500 series powders are special high energy rifle propellants enhanced with nitroglycerin for extra ballistic performance.

N100 Reloading Powders for Rifles

| | N110 | N120 | N130 | N133 | N135 | N140 | N150 | N160 | N165 | N170 | 24N41 | 20N29 |
|----------------------|------|------|------|------|------|------|------|------|------|------|-------|-------|
| Bulk density (g/l) | 800 | 860 | 870 | 870 | 870 | 910 | 910 | 920 | 920 | 960 | 970 | 960 |
| Energy content (J/g) | 3950 | 3700 | 3750 | 3600 | 3550 | 3700 | 3750 | 3650 | 3500 | 3700 | 3700 | 3600 |

N300 Reloading Powders for Handguns

| | N310 | N320 | N32C | N330 | N340 | N350 | 3N37 | 3N38 | N105 |
|----------------------|------|------|------|------|------|------|------|------|------|
| Bulk density (g/l) | 560 | 550 | 420 | 620 | 620 | 660 | 720 | 730 | 730 |
| Energy content (J/g) | 4100 | 4100 | 3050 | 4100 | 4100 | 4100 | 4100 | 4000 | 3950 |

N500 High Energy Reloading Powders for Rifles

| | N530 | N540 | N550 | N560 | N565 | N570 |
|----------------------|------|------|------|------|------|------|
| Bulk density (g/l) | 930 | 940 | 940 | 960 | 960 | 960 |
| Energy content (J/g) | 3950 | 4000 | 3900 | 4000 | 4000 | 4000 |

Relative burning rate of powder types mentioned above decreases from left to right.

CONSUMER PACKAGE INFORMATION

| | | |
|---|------------|--------------|
| Consumer package, bottle 0,6 ltr (36,6 in ³) Measures: sides & height 95 x 75 x 140 mm | net weight | gross weight |
| N110, N120, N130, N133, N135, N140, N150, N160, N165, N170 | 1,0 lbs | 1,1 lbs |
| N530, N540, N550, N560, N565, N570 | 1,0 lbs | 1,1 lbs |

| | | |
|---|------------|--------------|
| Consumer package, bottle 1,2 ltr (73,2 in ³) Measures: sides & height 95 x 75 x 226 mm | net weight | gross weight |
| N110, N120, N130, N133, N135, N140, N150, N160, N165, N170 | 1,0 kg | 1,1 kg |
| 24N41, 20N29, N530, N540, N550, N560, N565, N570 | 1,0 kg | 1,1 kg |
| N310, N320, N32C, N330, N340, N350, 3N37, 3N38, N105 | 0,5 kg | 0,6 kg |
| N310, N320, N32C, N330, N340, N350, 3N37, 3N38, N105 | 1,0 lbs | 1,2 lbs |

| | | |
|--|------------|--------------|
| Consumer package, canister 4,5 ltr (274,6 in ³) Measures: sides & height 135 x 189 x 260 mm | net weight | gross weight |
| N110, N140, N150, N160 | 3,5 kg | 3,7 kg |
| N310, N320, N340, 3N37, 3N38 | 2,0 kg | 2,2 kg |
| N110, N120, N130, N133, N135, N140, N150, N160, N165, 24N41, 20N29 | 8,0 lbs | 8,4 lbs |
| N310, N320, N330, N340, N350, 3N37, 3N38 | 4,0 lbs | 4,4 lbs |

All Vihtavuori reloading powders are packed into bottles and canisters and further in cardboard boxes.

VIHTAVUORI MOBILE APPLICATION

This Edition of the Vihtavuori Reloading Guide is also available on www.vihtavuori.com – check also Apple App Store and Google Play store for the updated free of charge Vihtavuori RELOAD mobile app! Latest reloading information and the possibility to save your own reloading recipes, at hand everywhere you go. Reloading data now available also offline!



CUSTOMER SERVICE

Nammo Vihtavuori Oy
Ruumitehtaantie 80
FI-41330 VIHTAVUORI, Finland



<http://www.vihtavuori.com/en/contact-form.html>

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PS. Go like Vihtavuori Powders – now on Facebook and YouTube!