RELOADING GUIDE

2024

VIHTAVUORI®

The Power of Accuracy

POWDERS OF ACCURACY

Continued support for the reloading community

Vihtavuori is recognized as one of the world's most renowned reloading powder brands. We take pride in maintaining premium quality in everything we do, while prioritizing safety at all times. Vihtavuori offers 26 different reloading powder types to fit numerous calibers, firearms and shooting disciplines. Our skillful and effective reloading data production has generated accurate and reliable reloading data for more than 100 rifle and pistol calibers, with an impressive total of 4,600 data lines and counting.

Vihtavuori is also investing significantly in the future to continue to support the reloading community worldwide. We have been working hard to improve on production capacity at the factory. A new manufacturing process investment of € 30 million is currently being implemented and will significantly increase the production of N500 powders in 2025 and onwards.

We also focus efforts on securing raw material supply of highest quality. This includes manufacturing our own nitrocellulose on site to guarantee a premium product, further minimizing any risk for supply shortages.

The crisis in Ukraine causes a highly increased demand of products for the military sector. In order to support the freedom of the Western world, we continue to support the needs of the defense forces.

However, we are also striving to serve you, our reloading customer, as best we can. For that purpose, we have significantly increased our R&D engineering capacity to drive innovative solutions and new product development. As we begin our 102nd year of producing the best smokeless powder on the planet, know that we work hard every day to bring you the accuracy you deserve.

VIHTAVUORI

RELOAD

VIHTAVUORI RELOAD APP - YOUR MOBILE GUIDE TO RELOADING

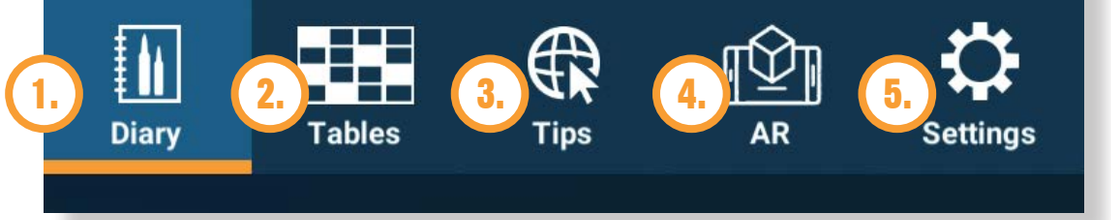
Every keen reloader needs a guide to check and save reloading data. The free of charge Vihtavuori Reload app helps you with reloading process and keeps track of your reloading recipes, both online and offline. Use the app to print out your load recipes to your email and create ammo loads for as many firearms and calibers you want. With Vihtavuori Reload you also have easy access to all the latest, safe Vihtavuori Reloading Data as well as other Vihtavuori information.

This app is all you need to load your own ammo!

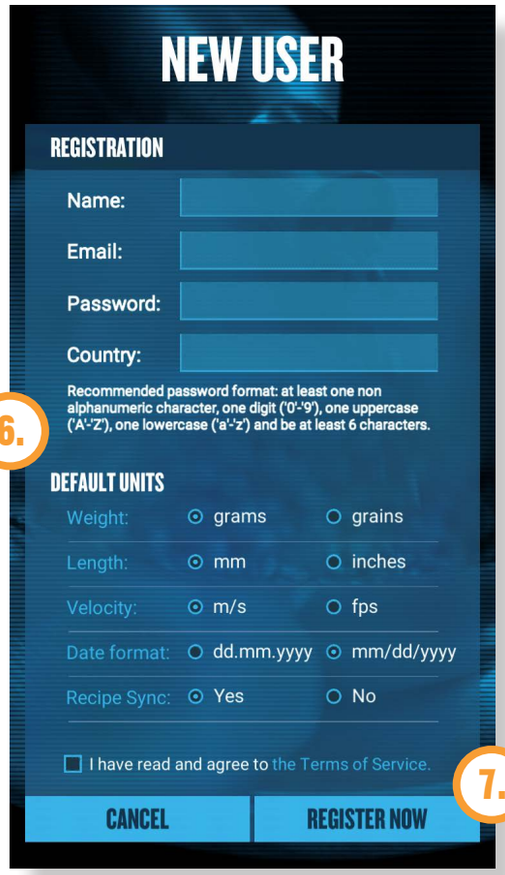
GET IT ON Google Play

Download on the App Store

QUICK GUIDE FOR USING THE APP

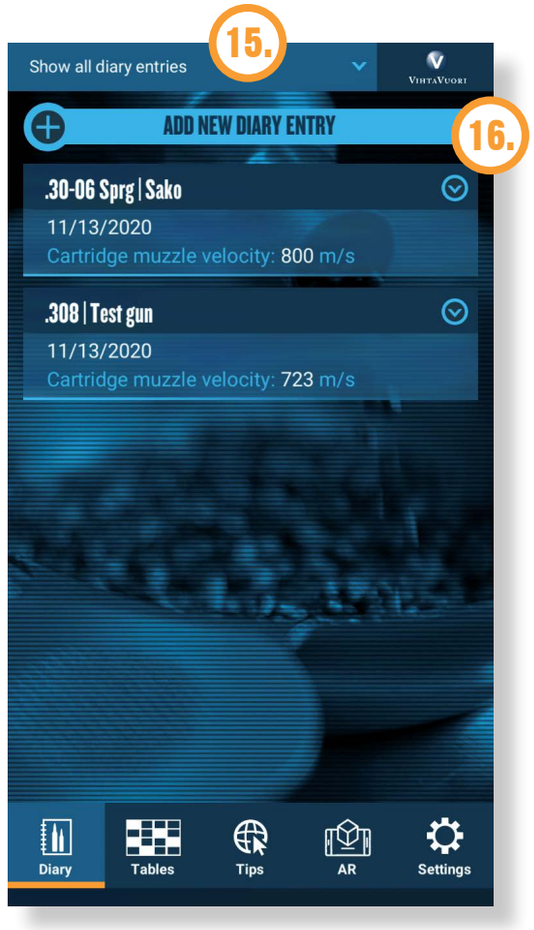


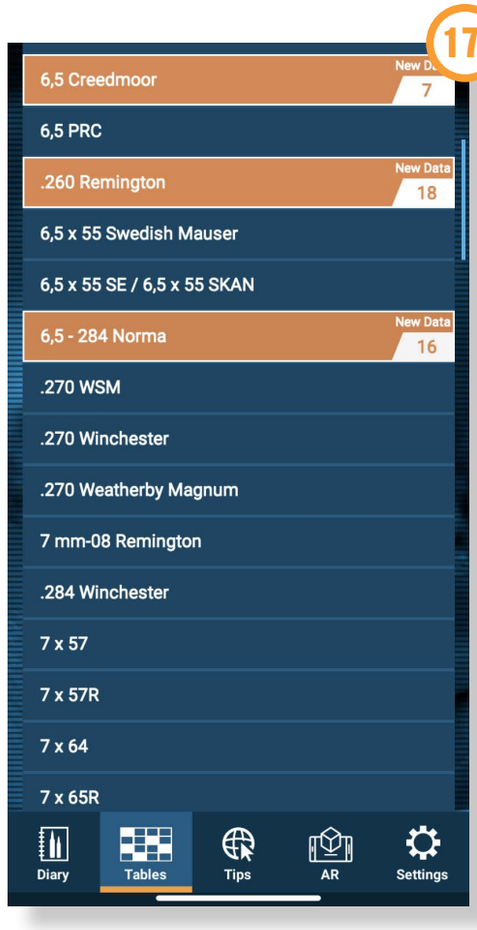
1) Store your recipes in the Diary section
2) Tables show all Vihtavuori Reload data
3) Link to reloading info on our web site
4) Try the AR ('Augmented reality') mode!
5) Your profile settings



6) Settings can also be modified on each recipe
7) After registration you can send saved recipes to your e-mail, modify app settings and access your saved data even when switching devices
8) Select weapon from your list
9) Add even more details to your recipe
10) Rate your recipe. Rating is only for your own use

11) Edit existing recipe
12) Create copy of selected recipe
13) Send selected recipe to your email
14) Delete selected recipe





15) View to all your recipes by weapon or caliber
16) Tap arrow to open/close your recipe
17) New Reloading Data highlighted: Whenever there is a reloading data update, new lines will be highlighted in the app in orange colour.

Did you know that if you have registered a profile in Vihtavuori Reload, you can access your data even if you lose or change your mobile device to a new one.

N100

series

PREMIUM 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 .222 Rem 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 .308 Win. 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.

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

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.

N150

Our N150 is a slow burning powder, well suited to most common mid-sized cartridges when used with heavier bullets in accuracy and hunting loads. An excellent choice for 185-220 grain bullets in the .30-06, 140-160 grain bullets in the 6.5x55, and 175-200 grain bullets in the .308 Win. Great for 6.5 Creedmoor. Combining Vihtavuori's latest decoppering technology and enhanced temperature stability, N150 is a tremendously versatile powder.

N160

A slow-burning powder well suited to a broad range of Magnums, and large capacity/small bore cartridges like the 6.5-284 Norma. It is an ideal combination when used with the 270 Win, .25-06 Rem and a variety of belted Magnums, and it is great for 6.5 Creedmoor as well. An excellent choice for lighter to mid-weight bullets in these cartridges, N160 is temperature stable and exceptionally clean burning.

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 good choice for the .338 Lapua Magnum.

N170

Our slowest burning N100 series powder, recommended for the very large capacity cases such as the .300 Rem Ultra Magnum and new trend calibers like the 6.5 PRC and 300 PRC. N170 is one of the slowest canister-grade powders readily available from any manufacturer on the market.

24N41

Vihtavuori 24N41 is a single-based treated rifle powder very similar to the 20N29. It has a very large grain size (length 2,3 mm by diameter 1,3 mm) and an extremely slow burning rate ideally suited to the .50 BMG. Of the two, 24N41 is slightly faster than 20N29, with a renewed relative burning rate of 39 for the 24N41 compared to 36 for the 20N29, when N110 is given the index 100.

20N29

Vihtavuori 20N29 was originally developed for .50 BMG and military use, and even the name 20N29 originates from the Finnish Army standards. 20N29 is a single-based, surface treated powder with grain dimensions of 2,3 mm length and 1,3 mm diameter. The burning rate is slower and grain size larger than those of the N100 series powders. 20N29 is primarily used in large caliber and magnum applications with heavy bullets and in long-range target shooting. It is ideally suited for the .50 BMG.

N300

series

PREMIUM 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.

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 and .44 S&W Special.

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 Magnum and the 40 S&W.

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 LR 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.

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

N500

series

PREMIUM HIGH ENERGY POWDERS

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.

N555

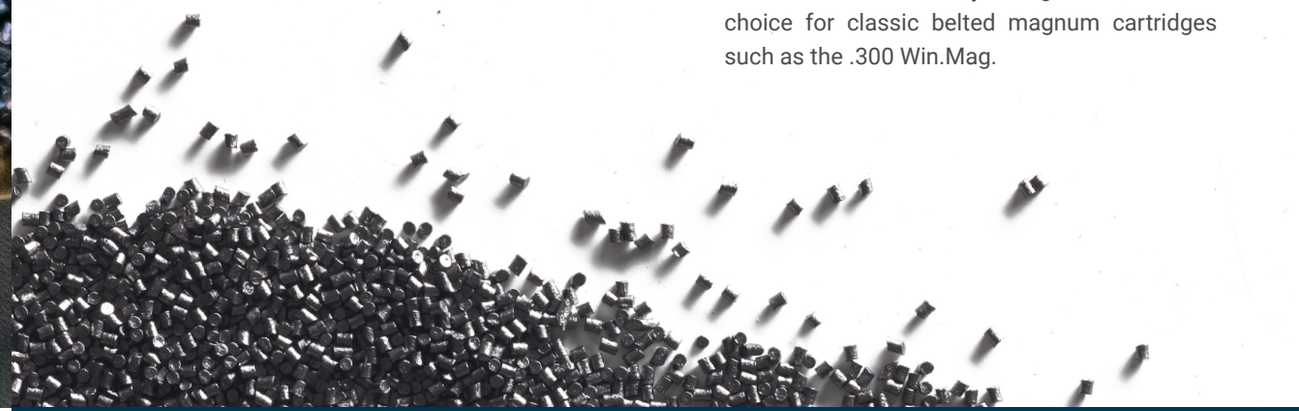
Vihtavuori's N555 rifle powder is designed for precision rifle platforms chambered in cartridges such as 6mm & 6.5 Creedmoor, .284 Winchester, .260 Remington, .30-06 Springfield, and for rifle calibers with large case volume and comparatively small bullet diameters, among others. Competitive shooters and hunters will benefit from its insensitivity in extreme weather conditions. N555 is the most temperature stable powder in its class, and features unprecedented performance in the 6.5 Creedmoor. It includes an anti-fouling agent that minimizes barrel fouling to extend the length of your competitive shooting stages. Its unmatched lot-to-lot consistency also eliminates costly range time re-developing your favorite loads.

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.

N568

N568 is the ideal choice for today's most popular large capacity magnum cartridges, such as the 6.5 PRC and 300 PRC and .338 Lapua Magnum. N568's slow burning characteristics and short-cut grains provide extremely consistent metering for long range competitive shooters, accuracy enthusiasts, and hunters alike. N568 excels with heavy-for-caliber projectiles and provides exceptional temperature stability and is insensitive to humidity changes. An excellent choice for classic belted magnum cartridges such as the .300 Win.Mag.



N565

N500 series powder developed specially for the 300 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 300 PRC, .300 Win Mag, and .300 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 6.5 PRC, 6.5x284, .300 Rem Ultra Mag, and .338 Lapua Magnum.

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 seven different reloading powders with different burning rates.

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PREFACE

Dear Vihtavuori customer,

The new Vihtavuori Reloading Guide **2024** 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 calibers:

Centerfire rifle updated data:

.223 Remington
6.5 Creedmoor
6.5 PRC
6.5 - 284 Norma
.308 Winchester
.30-06 Springfield
.300 Norma Magnum
.300 PRC
.300 Winchester Magnum
.338 Lapua Magnum
9.3 x 62
.50 Browning

New calibers - CF rifle:

.22 Nosler

New calibers - CF handgun:

.460 S&W Magnum

Centerfire handgun updated data:

.38 Special
.45 Colt

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 an letter A.

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 **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 app**. Latest reloading information and the possibilibity to save your own reloading recipes, at hand everywhere you go.

We wish you successful reloading with Vihtavuori powders.

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 18 and 19.

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

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 bum 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

STORE IN A COOL, DRY PLACE. Be sure the storage area selected is free from any possible sources of excess heat and is isolated from open flame, furnaces, hot water heaters, etc. Do not store smokeless powder where it will be exposed to the sun's rays. Avoid storage in areas where mechanical or electrical equipment is in operation. Restrict from the storage areas heat or sparks which may result from improper, defective or overloaded electrical circuits.

DO NOT STORE SMOKELESS POWDER IN THE SAME AREA WITH SOLVENTS, FLAMMABLE GASES OR HIGHLY COMBUSTIBLE MATERIALS. STORE ONLY IN DEPARTMENT OF TRANSPORTATION APPROVED CONTAINERS.

Do not transfer the powder from an approved container into one which is not approved.

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

Lead Exposure

A continuous lead exposure has been found out to create lead accumulation to living bodies, specially to the nervous system causing little by little serious physical impairment. Some unused reloading components as well as fired cases can contain lead or lead compounds, it is possible to a reloader to get exposed during reloading. Primers and bullets contain lead and it may be present as a residue in fired cartridge cases, too.

There are different ways lead may enter the body. However, the two most common are considered to be the mouth and the breathing. Therefore with simple precautions described underneath the possible lead exposure and its dangerous consequences can be avoided.

- 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.

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 18 AND 19 OF THIS GUIDE.

RIFLE RELOADING DATA

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
2,1	32	Sierra	Blitz King	57,1	2.248	N130	1,48	22.8	1106	3629	1,62	25.0	1213	3980
						N530	1,56	24.1	1070	3510	1,75	27.0	1225	4019
						N135	1,59	24.5	1112	3648	1,75	27.0	1228	4029
2,6	40	Hornady	V-Max	57,1	2.248	N133	1,50	23.1	1011	3317	1,64	25.3	1127	3698
						N530	1,50	23.1	1013	3323	1,67	25.8	1236	4055
						N140	1,70	26.2	1027	3369	1,82	28.1	1105	3625
3,2	50	Berger	HPBT	57,1	2.248	N133	1,40	21.6	857	2812	1,54	23.8	948	3110
						N530	1,43	22.1	866	2841	1,56	24.1	965	3166
						N140	1,57	24.2	884	2900	1,76	27.2	991	3251

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
2,6	40	Speer	Spire Point	43,5	1.713	N110	0,52	8.0	713	2338	0,65	10.1	813	2668
2,9	45	Speer	Spitzer	43,5	1.713	N110	0,48	7.3	654	2144	0,60	9.3	746	2448
3,2	50	Speer	Spitzer	43,5	1.713	N110	0,47	7.3	609	1997	0,56	8.7	693	2274
						N120	0,62	9.5	612	2008	0,74	11.3	724	2375
3,6	55	Speer	Spitzer	43,5	1.713	N110	0,41	6.4	561	1841	0,53F	8.2F	644	2111
						N120	0,58	9.0	574	1884	0,69	10.6	679	2229
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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
2,6	40	Sierra	Blitz King	46,5	1.831	N120	1,06	16.4	876	2874	1,12	17.3	924	3031
						N130	1,18	18.2	879	2884	1,25F	19.3F	931	3054
3,4	52	Sierra	MatchKing	46,5	1.831	N120	0,96	14.8	775	2543	1,05	16.2	806	2644
						N130	1,00	15.4	713	2339	1,12	17.3	814	2671
						N133	1,20	18.5	793	2602	1,25F	19.3F	823	2700
3,6	55	Lapua	FMJ	46,5	1.831	N120	0,92	14.2	732	2402	1,00	15.4	779	2556
						N130	1,00	15.4	748	2454	1,07	16.5	792	2598
						N133	1,18	18.2	774	2539	1,22F	18.8F	798	2618
3,6	55	Lapua	Soft Point	46,5	1.831	N120	0,86	13.3	718	2356	1,00	15.4	778	2552
						N130	1,06	16.4	752	2467	1,13	17.4	796	2612
						N133	1,18	18.2	764	2507	1,25F	19.3F	807	2648
F = Case full														

.224 Valkyrie

Test barrel:	610 mm (24"), 1 in 7" twist
Primers:	Small Rifle, Remington 7 1/2 BR
Cases:	Starline, trim-to length 40,39 mm (1.590")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
3,4	53	Hornady	V-Max	56,0	2.205	N133	1,48	22.8	921	3022	1,60	24.7	984	3228
						N135	1,55	23.9	933	3061	1,68	25.9	1000	3281
						N140	1,67	25.8	945	3100	1,81	27.9	1011	3317
4,0	62	Barnes	TTSX BT	55,0	2.165	N133	1,35	20.8	816	2677	1,46	22.5	877	2877
						N135	1,39	21.5	826	2710	1,55	23.9	897	2943
						N140	1,58	24.4	855	2805	1,72	26.5	925	3035
						N540	1,65	25.5	876	2874	1,76	27.2	942	3091
						N150	1,55	23.9	849	2785	1,72	26.5	918	3012
4,2	65	Sierra	SBT	54,5	2.146	N133	1,33	20.5	816	2677	1,45	22.4	872	2861
						N135	1,37	21.1	816	2677	1,53	23.6	883	2897
						N140	1,52	23.5	847	2779	1,66	25.6	908	2979
						N540	1,58	24.4	867	2844	1,72	26.5	930	3051
						N150	1,52	23.5	847	2779	1,68	25.9	911	2989
						N550	1,71	26.4	879	2884	1,83	28.2	942	3091
4,5	69	Lapua	OTM Scenar-L	54,4	2.142	N133	1,32	20.4	796	2612	1,43	22.1	851	2792
						N530	1,35	20.8	795	2608	1,48	22.8	871	2858
						N135	1,44	22.2	824	2703	1,53	23.6	877	2877
						N140	1,55	23.9	835	2740	1,65	25.5	889	2917
						N540	1,56	24.1	839	2753	1,62	25.0	885	2904
						N150	1,50	23.1	810	2657	1,65A	25.5A	882	2894
						N550	1,68	25.9	840	2756	1,76	27.2	893	2930
4,5	69	Nosler	Custom Competition HPBT	55,6	2.189	N133	1,40	21.6	818	2684	1,52	23.5	873	2864
						N135	1,47	22.7	828	2717	1,61	24.8	886	2907
						N140	1,63	25.2	853	2799	1,75	27.0	914	2999
						N540	1,68	25.9	872	2861	1,78	27.5	932	3058
						N150	1,63	25.2	852	2795	1,75C	27.0C	905	2969
4,5	69	Sierra	MatchKing	54,8	2.157	N133	1,33	20.5	817	2680	1,45	22.4	860	2822
						N135	1,45	22.4	833	2733	1,52	23.5	871	2858
						N140	1,58	24.4	845	2772	1,70	26.2	903	2963
						N540	1,60	24.7	854	2802	1,70	26.2	911	2989
						N150	1,58	24.4	848	2782	1,70A	26.2A	904	2966
						N550	1,70	26.2	846	2776	1,82C	28.1C	909	2982
4,5	70	Hornady	GMX	55,8	2.197	N135	1,32	20.4	760	2493	1,44	22.2	824	2703
						N140	1,42	21.9	781	2562	1,56	24.1	849	2785
						N150	1,38	21.3	753	2470	1,52	23.5	819	2687
						N550	1,55	23.9	798	2618	1,66	25.6	856	2808
5,0	77	Lapua	OTM Scenar-L	55,5	2.185	N135	1,30	20.1	747	2451	1,42	21.9	800	2625
						N140	1,43	22.1	767	2516	1,54	23.8	819	2687
						N540	1,50	23.1	798	2618	1,56	24.1	837	2746
						N150	1,45	22.4	775	2543	1,53	23.6	817	2680
						N550	1,57	24.2	783	2569	1,70	26.2	846	2776
5,2	80	Berger	VLD Target	57,4	2.260	N135	1,30	20.1	738	2421	1,41	21.8	781	2562
						N140	1,40	21.6	755	2477	1,52	23.5	806	2644
						N540	1,45	22.4	772	2533	1,56	24.1	831	2726
						N150	1,35	20.8	750	2461	1,52	23.5	802	2631
						N550	1,57	24.2	791	2595	1,69	26.1	849	2785
5,2	80	Nosler	Custom Competition HPBT	57,4	2.260	N135	1,35	20.8	741	2431	1,47	22.7	800	2625
						N140	1,49	23.0	771	2530	1,59	24.5	823	2700
						N540	1,58	24.4	807	2648	1,68	25.9	862	2828
						N150	1,50	23.1	780	2559	1,62	25.0	832	2730
						N550	1,65	25.5	809	2654	1,76	27.2	863	2831

.224 Valkyrie cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
5,5	85.5	Berger	Long Range Hybrid Target	57,4	2.260	N135	1,35	20.8	737	2418	1,40	21.6	758	2487
						N140	1,44	22.2	747	2451	1,55	23.9	794	2605
						N540	1,48	22.8	756	2480	1,56	24.1	808	2651
						N150	1,45	22.4	749	2457	1,54	23.8	790	2592
						N550	1,60	24.7	779	2556	1,68	25.9	825	2707
5,7	88	Hornady	ELD Match	57,4	2.260	N530	1,30	20.1	714	2343	1,40	21.6	769	2523
						N135	1,31	20.2	710	2329	1,40	21.6	751	2464
						N140	1,38	21.3	714	2343	1,52	23.5	779	2556
						N540	1,45	22.4	739	2425	1,58	24.4	803	2635
						N150	1,42	21.9	725	2379	1,55	23.9	780	2559
						N550	1,55	23.9	752	2467	1,66	25.6	810	2657
						N555	1,65	25.5	733	2405	1,70C	26.2C	754	2474
5,8	90	Berger	VLD Target	57,4	2.260	N135	1,35	20.8	713	2339	1,39	21.5	734	2408
						N140	1,40	21.6	710	2329	1,51	23.3	767	2516
						N540	1,45	22.4	742	2434	1,54	23.8	786	2579
						N150	1,40	21.6	715	2346	1,52	23.5	769	2523
						N550	1,56	24.1	747	2451	1,64	25.3	798	2618

A = Accuracy load C = Compressed load

.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						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
2,3	35	Hornady	V-Max	52,0	2.047	N110	0,93	14.4	986	3235	1,20	18.5	1109	3638
						N120	1,31	20.2	1036	3399	1,41	21.8	1128	3701
						N130	1,44	22.2	1053	3455	1,55	23.9	1137	3730
2,6	40	Sierra	Blitz King	54,0	2.126	N110	0,92	14.2	942	3091	1,12	17.3	1056	3465
						N120	1,32	20.4	922	3025	1,43	22.1	1004	3294
						N130	1,38	21.3	997	3271	1,45	22.4	1057	3468
2,9	45	Sierra	Soft Point	54,0	2.126	N120	1,22	18.8	926	3038	1,35	20.8	1021	3350
						N130	1,34	20.7	951	3120	1,46	22.5	1034	3392
						N133	1,43	22.1	944	3097	1,56F	24.1F	1021	3350
3,2	50	Hornady	SPSX	53,0	2.087	N120	1,20	18.5	896	2940	1,30	20.1	964	3163
						N130	1,30	20.1	912	2992	1,39	21.5	986	3235
						N133	1,38	21.3	908	2979	1,49	23.0	979	3212
3,2	50	Lapua	Naturalis N566	53,0	2.087	N120	1,09	16.8	868	2848	1,23	19.0	944	3097
						N130	1,21	18.7	886	2907	1,31	20.2	955	3133
						N133	1,33	20.5	906	2972	1,43	22.1	982	3222
						N530	1,35	20.8	880	2887	1,44	22.2	958	3143
3,3	51	Lapua	HPCE	54,0	2.126	N120	1,18	18.2	891	2923	1,30	20.1	966	3169
						N130	1,28	19.8	899	2949	1,38	21.3	977	3205
						N133	1,37	21.1	914	2999	1,50	23.1	1003	3291
3,4	52	Sierra	HPBT	54,0	2.126	N120	1,16	17.9	876	2874	1,27	19.6	957	3140
						N130	1,28	19.8	899	2949	1,38	21.3	975	3199
						N133	1,37	21.1	916	3005	1,50	23.1	998	3274
3,6	55	Lapua	FMJ	54,0	2.126	N120	1,15	17.7	848	2782	1,27	19.6	922	3025
						N130	1,26	19.4	870	2854	1,36	21.0	942	3091
						N133	1,36	21.0	875	2871	1,47	22.7	951	3120
						N135	1,38	21.3	891	2923	1,50F	23.1F	966	3169
3,6	55	Lapua	Soft Point	53,5	2.106	N120	1,19	18.4	858	2815	1,27	19.6	913	2995
						N130	1,26	19.4	871	2858	1,34	20.7	933	3061
						N133	1,35	20.8	883	2897	1,47	22.7	949	3114
						N135	1,40	21.6	896	2940	1,50	23.1	956	3136
3,9	60	Hornady	HP	54,0	2.126	N120	1,07	16.5	806	2644	1,20	18.5	881	2890

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

.222 Remington cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N130	1,21	18.7	822	2697	1,31	20.2	904	2966
						N133	1,30	20.1	845	2772	1,40	21.6	917	3009
						N135	1,33	20.5	853	2799	1,48F	22.8F	933	3061

F = Case full

.223 Remington

Test barrel:	620 mm (25”), 1 in 12” twist
Primers:	Small Rifle
Cases:	Lapua, trim-to length 44,50 mm (1.752”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
2,3	36	Barnes	HP FB	55,4	2.181	N130	1,37	21.1	1037	3402	1,56C	24.1C	1154	3786
						N133	1,48	22.8	1061	3481	1,68C	25.9C	1171	3842
						N135	1,60	24.7	1071	3514	1,70C	26.2C	1133	3717
						N140	1,70	26.2	1044	3425	1,75C	27.0C	1071	3514
						N540	1,67	25.8	1006	3301	1,80C	27.8C	1090	3576
2,6	40	Hornady	V-Max	56,5	2.224	N120	1,28	19.8	1020	3346	1,45	22.4	1121	3678
						N130	1,41	21.8	1035	3396	1,57	24.2	1131	3711
						N133	1,60	24.7	1072	3517	1,68	25.9	1122	3681
						N530	1,57	24.2	1029	3376	1,74	26.9	1142	3747
2,6	40	Nosler	BTLF	57,4	2.260	N120	1,23	19.0	987	3238	1,38	21.3	1085	3560
						N130	1,45	22.4	1023	3356	1,63C	25.2C	1131	3711
						N133	1,47	22.7	1025	3363	1,68C	25.9C	1135	3724
						N135	1,59	24.5	1051	3448	1,68C	25.9C	1101	3612
						N140	1,64	25.3	971	3186	1,74C	26.9C	1024	3360
2,6	40	Speer	Spire Point	52,7	2.075	N120	1,23	19.0	963	3159	1,49	23.0	1118	3668
						N130	1,46	22.5	1032	3386	1,65	25.5	1147	3763
						N133	1,54	23.8	1037	3402	1,68F	25.9F	1105	3625
2,9	45	Speer	Spitzer	54,0	2.126	N120	1,25	19.3	933	3061	1,48	22.8	1072	3517
						N130	1,44	22.2	991	3251	1,62	25.0	1092	3583
						N133	1,51	23.3	987	3238	1,68F	25.9F	1091	3579
						N135	1,64	25.3	1010	3314	1,68F	25.9F	1034	3392
3,2	50	Barnes	Varmint Grenade	55,9	2.201	N130	1,24	19.1	877	2877	1,39	21.5	969	3179
						N133	1,35	20.8	902	2959	1,50	23.1	992	3255
						N135	1,42	21.9	907	2976	1,59C	24.5C	1005	3297
						N140	1,52	23.5	903	2963	1,74C	26.9C	1011	3317
						N540	1,53	23.6	890	2920	1,70C	26.2C	999	3278
3,2	50	Fox Bullets	Classic Hunter	55,0	2.165	N130	1,29	19.9	906	2972	1,41	21.8	994	3261
						N133	1,35	20.8	916	3005	1,54	23.8	1019	3343
						N530	1,44	22.2	929	3048	1,61	24.8	1036	3399
						N135	1,50	23.1	951	3120	1,66	25.6	1043	3422
3,2	50	Lapua	Naturalis N566	56,0	2.205	N130	1,17	18.1	861	2825	1,40	21.6	987	3238
						N133	1,34	20.7	892	2927	1,56	24.1	1017	3337
						N530	1,36	21.0	888	2913	1,54	23.8	1006	3301
						N135	1,42	21.9	906	2972	1,66	25.6	1026	3366
3,2	50	Sierra	Blitzking	57,4	2.260	N130	1,37	21.1	942	3091	1,49	23.0	1023	3356
						N133	1,51	23.3	968	3176	1,64	25.3	1051	3448
						N530	1,50	23.1	949	3114	1,64	25.3	1038	3406
						N135	1,57	24.2	975	3199	1,70	26.2	1058	3471
						N140	1,65	25.5	951	3120	1,75C	27.0C	1016	3333
3,2	50	Speer	TNT-HP	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	Lapua	HPCE	57,0	2.244	N120	1,23	19.0	909	2982	1,37	21.1	991	3251

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

.223 Remington

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N130	1,35	20.8	930	3051	1,51	23.3	1018	3340
						N133	1,45	22.4	943	3094	1,61A	24.8A	1033	3389
						N530	1,53	23.6	963	3159	1,66	25.6	1052	3451
						N135	1,54	23.8	957	3140	1,68F	25.9F	1034	3392
3,4	52	Berger	FB Target	57,4	2.260	N120	1,20	18.5	896	2940	1,32	20.4	972	3189
						N130	1,35	20.8	921	3022	1,46	22.5	997	3271
						N133	1,46	22.5	938	3077	1,61	24.8	1024	3360
						N530	1,47	22.7	927	3041	1,64	25.3	1027	3369
						N135	1,55	23.9	956	3136	1,69	26.1	1037	3402
3,4	52	Berger	FB Varmint	57,4	2.260	N130	1,37	21.1	906	2972	1,52	23.5	1009	3310
						N133	1,49	23.0	929	3048	1,62	25.0	1019	3343
						N530	1,53	23.6	935	3068	1,67	25.8	1027	3369
						N135	1,56	24.1	931	3054	1,73	26.7	1028	3373
						N140	1,62	25.0	909	2982	1,70	26.2	959	3146
3,4	52	LOS	Tactic	55,7	2.193	N120	1,21	18.7	903	2963	1,31	20.2	979	3212
						N130	1,30	20.1	923	3028	1,45	22.4	1005	3297
						N133	1,42	21.9	943	3094	1,58C	24.4C	1031	3383
						N135	1,52	23.5	960	3150	1,65C	25.5C	1032	3386
3,4	52	Sierra	HPBT	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	957	3140	1,66F	25.6F	1039	3409
3,4	53	Hornady	V-Max	57,3	2.256	N130	1,35	20.8	922	3025	1,47	22.7	998	3274
						N133	1,48	22.8	938	3077	1,60	24.7	1017	3337
						N530	1,48	22.8	940	3084	1,60	24.7	1010	3314
						N135	1,55	23.9	955	3133	1,67	25.8	1029	3376
3,6	55	Barnes	MPG FB	55,0	2.165	N130	1,25	19.3	849	2785	1,40C	21.6C	935	3068
						N133	1,20	18.5	831	2726	1,35	20.8	923	3028
						N135	1,25	19.3	837	2746	1,42C	21.9C	929	3048
						N140	1,57	24.2	887	2910	1,65C	25.5C	925	3035
						N540	1,63	25.2	890	2920	1,80C	27.8C	974	3196
3,6	55	Barnes	TTSX BT	56,0	2.205	N130	1,34	20.7	878	2881	1,50	23.1	968	3176
						N133	1,25	19.3	859	2818	1,52	23.5	974	3196
						N135	1,38	21.3	877	2877	1,62C	25.0C	984	3228
						N140	1,62	25.0	904	2966	1,75C	27.0C	966	3169
						N540	1,63	25.2	903	2963	1,80C	27.8C	985	3232
3,6	55	Berger	FB Varmint	57,4	2.260	N130	1,34	20.7	877	2877	1,49	23.0	974	3196
						N133	1,45	22.4	894	2933	1,60	24.7	991	3251
						N530	1,50	23.1	905	2969	1,63	25.2	996	3268
						N135	1,54	23.8	901	2956	1,70	26.2	997	3271
						N140	1,60	24.7	889	2917	1,72	26.5	965	3166
3,6	55	Fox Bullets	Classic Hunter	55,0	2.165	N130	1,18	18.2	845	2772	1,33	20.5	935	3068
						N133	1,30	20.1	873	2864	1,46	22.5	964	3163
						N530	1,35	20.8	874	2867	1,51	23.3	975	3199
						N135	1,35	20.8	879	2884	1,55	23.9	981	3219
3,6	55	Hornady	FMJBT	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
						N133	1,43	22.1	928	3045	1,59	24.5	1006	3301
						N530	1,50	23.1	941	3087	1,62	25.0	1022	3353
						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	Hornady	V-Max	57,4	2.260	N130	1,32	20.4	857	2812	1,49	23.0	965	3166
						N133	1,39	21.5	848	2782	1,62	25.0	982	3222
						N530	1,49	23.0	892	2927	1,64	25.3	994	3261
						N135	1,52	23.5	884	2900	1,70	26.2	979	3212
						N140	1,64	25.3	884	2900	1,72	26.5	928	3045

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cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
3,6	55	Lapua	FMJ	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
						N133	1,43	22.1	911	2989	1,59	24.5	999	3278
						N530	1,51	23.3	931	3054	1,64	25.3	1015	3330
						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
3,6	55	Lapua	S569 FMJBT	57,0	2.244	N130	1,30	20.1	893	2930	1,43	22.1	969	3179
						N133	1,43	22.1	915	3002	1,58	24.4	996	3268
						N135	1,48	22.8	925	3035	1,65C	25.5C	1003	3291
						N140	1,63	25.2	932	3058	1,73C	26.7C	988	3241
						N540	1,61	24.8	921	3022	1,77C	27.3C	1009	3310
3,6	55	Lapua	Soft Point	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
3,9	60	Berger	FB Varmint	57,4	2.260	N133	1,39	21.5	848	2782	1,57	24.2	947	3107
						N530	1,45	22.4	860	2822	1,58	24.4	962	3156
						N135	1,49	23.0	860	2822	1,67	25.8	957	3140
						N140	1,55	23.9	859	2818	1,70	26.2	935	3068
						N540	1,61	24.8	883	2897	1,76	27.2	981	3219
3,9	60	Hornady	HP	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	Barnes	TAC-X BT	57,4	2.260	N133	1,34	20.7	832	2730	1,50	23.1	904	2966
						N530	1,40	21.6	821	2694	1,58	24.4	945	3100
						N135	1,36	21.0	798	2618	1,63	25.2	931	3054
						N140	1,52	23.5	821	2694	1,70	26.2	924	3031
						N540	1,55	23.9	840	2756	1,76	27.2	963	3159
4,0	62	Barnes	TTSX BT	57,0	2.244	N133	1,29	19.9	821	2694	1,44	22.2	904	2966
						N530	1,39	21.5	837	2746	1,51C	23.3C	925	3035
						N135	1,37	21.1	834	2736	1,51C	23.3C	921	3022
						N140	1,57	24.2	847	2779	1,70C	26.2C	907	2976
						N540	1,55	23.9	855	2805	1,74C	26.9C	959	3146
4,0	62	Nosler	Varmageddon FBHP	55,8	2.197	N130	1,26	19.4	818	2684	1,41	21.8	903	2963
						N133	1,33	20.5	834	2736	1,50	23.1	921	3022
						N135	1,43	22.1	852	2795	1,57C	24.2C	923	3028
						N140	1,55	23.9	859	2818	1,71C	26.4C	942	3091
						N540	1,55	23.9	856	2808	1,71C	26.4C	951	3120
4,0	62	Speer	FMJBT	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
4,0	62	Swift	Scirocco II	57,4	2.260	N530	1,37	21.1	811	2661	1,54	23.8	909	2982
						N135	1,36	21.0	784	2572	1,58	24.4	906	2972
						N140	1,52	23.5	804	2638	1,73	26.7	919	3015
						N540	1,54	23.8	829	2720	1,72	26.5	941	3087
4,2	65	Sierra	SBT	57,0	2.244	N130	1,23	19.0	819	2687	1,36	21.0	892	2927
						N133	1,34	20.7	833	2733	1,47	22.7	911	2989
						N135	1,40	21.6	843	2766	1,54	23.8	922	3025
						N140	1,54	23.8	856	2808	1,66	25.6	931	3054
						N540	1,52	23.5	844	2769	1,66	25.6	932	3058
4,5	69	Lapua	Scenar[1)]	57,4	2.260	N133	1,31	20.2	789	2589	1,42	21.9	849	2785
						N530	1,37	21.1	809	2654	1,47	22.7	869	2851

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Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						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
4,5	69	Sierra	HPBT[1)]	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	70	Hornady	GMX	56,9	2.240	N133	1,25	19.3	778	2552	1,31	20.2	813	2667
						N530	1,25	19.3	754	2474	1,37	21.1	834	2736
						N135	1,25	19.3	752	2467	1,41	21.8	835	2740
						N140	1,40	21.6	761	2497	1,59	24.5	862	2828
						N540	1,42	21.9	769	2523	1,58	24.4	870	2854
4,5	70	Nosler	RDF	57,4	2.260	N133	1,33	20.5	807	2648	1,48	22.8	889	2917
						N135	1,40	21.6	821	2694	1,54	23.8	901	2956
						N140	1,53	23.6	831	2726	1,69C	26.1C	916	3005
						N540	1,54	23.8	837	2746	1,67	25.8	921	3022
4,8	73	Berger	BT Target	57,4	2.260	N133	1,20	18.5	747	2451	1,41	21.8	822	2697
						N530	1,33	20.5	772	2533	1,50	23.1	887	2910
						N135	1,31	20.2	743	2438	1,51	23.3	855	2805
						N140	1,42	21.9	763	2503	1,64	25.3	875	2871
						N540	1,47	22.7	787	2582	1,65	25.5	899	2949
4,9	75	Berger	VLD Target	57,4	2.260	N133	1,21	18.7	732	2402	1,42	21.9	837	2746
						N530	1,35	20.8	776	2546	1,50	23.1	882	2894
						N135	1,35	20.8	763	2503	1,54	23.8	864	2835
						N140	1,44	22.2	771	2530	1,65	25.5	877	2877
						N540	1,47	22.7	786	786	1,68	25.9	903	2963
4,9	75	Hornady	BTHP[2)]	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
4,9	75	Hornady	ELD Match	57,4	2.260	N530	1,33	20.5	777	2549	1,51	23.3	887	2910
						N135	1,38	21.3	766	2513	1,58	24.4	876	2874
						N140	1,48	22.8	769	2523	1,70C	26.2C	889	2917
						N540	1,47	22.7	791	2595	1,67C	25.8C	901	2956
4,9	75	Swift	Scirocco II	57,4	2.260	N530	1,28	19.8	708	2323	1,45	22.4	814	2671
						N135	1,23	19.0	698	2290	1,45	22.4	795	2608
						N140	1,41	21.8	718	2356	1,62	25.0	815	2674
						N540	1,43	22.1	743	2438	1,64	25.3	846	2776
5,0	77	Berger	OTM Tactical	57,4	2.260	N133	1,15	17.7	732	2402	1,30	20.1	791	2595
						N135	1,15	17.7	712	2336	1,38	21.3	811	2661
						N140	1,43	22.1	772	2533	1,62C	25.0C	858	2815
						N540	1,45	22.4	775	2543	1,61C	24.8C	866	2841
						N150	1,40	21.6	785	2575	1,63C	25.2C	857	2812
						N550	1,55	23.9	777	2549	1,75C	27.0C	878	2881
5,0	77	Lapua	Scenar	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	Nosler	Custom Competition	57,4	2.260	N135	1,33	20.5	764	2507	1,48	22.8	841	2759
						N140	1,50	23.1	794	2605	1,62C	25.0C	862	2828
						N540	1,51	23.3	797	2615	1,63	25.2	873	2864
						N150	1,50	23.1	795	2608	1,66C	25.6C	865	2838
						N550	1,58	24.4	792	2598	1,75C	27.0C	879	2884
5,0	77	Sierra	HPBT[2)]	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

.223 Remington cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
5,0	77	Sierra	TMK	57,4	2.260	N530	1,31	20.2	744	2441	1,47	22.7	850	2789
						N135	1,29	19.9	724	2375	1,49	23.0	825	2707
						N140	1,44	22.2	744	2441	1,65	25.5	852	2795
						N540	1,46	22.5	755	2477	1,63	25.2	870	2854
5,2	80	Sierra	HPBT[3)]	64,8[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
5,2	80.5	Berger	Fullbore Target	57,0	2.244	N133	1,25	19.3	745	2444	1,36	21.0	804	2638
						N530	1,33	20.5	762	2500	1,46	22.5	835	2740
						N135	1,27	19.6	740	2428	1,43	22.1	820	2690
						N140	1,42	21.9	762	2500	1,58C	24.4C	839	2753
						N540	1,46	22.5	779	2556	1,61	24.8	862	2828
						N150	1,44	22.2	775	2543	1,60	24.7	851	2792
						N550	1,56	24.1	769	2523	1,74C	26.9C	853	2799
5,5	85	Barnes	BT Match	56,6[9)]	2.228	N135	1,22	18.8	704	2310	1,35	20.8	760	2493
						N140	1,35	20.8	724	2375	1,53C	23.6C	805	2641
						N540	1,43	22.1	753	2470	1,53	23.6	819	2687
						N150	1,39	21.5	737	2418	1,54C	23.8C	807	2648
5,5	85.5	Berger	Long Range Hybrid Target	59,0[5)]	2.323	N133	1,25	19.3	724	2375	1,38	21.3	793	2602
						N135	1,30	20.1	734	2408	1,43	22.1	804	2638
						N140	1,42	21.9	755	2477	1,55	23.9	826	2710
						N540	1,48	22.8	769	2523	1,60	24.7	837	2746
						N150	1,45	22.4	758	2487	1,60C	24.7C	823	2700
5,7	88	Hornady	ELD Match	59,0[4)]	2.323	N133	1,25	19.3	717	2352	1,38	21.3	780	2559
						N530	1,25	19.3	721	2365	1,41	21.8	794	2605
						N135	1,30	20.1	721	2365	1,42	21.9	785	2575
						N140	1,40	21.6	742	2434	1,52C	23.5C	802	2631
						N540	1,42	21.9	741	2431	1,57	24.2	819	2687
						N150	1,42	21.9	735	2411	1,50C	23.1C	774	2539
5,8	90	Berger	HPBT	62,4[6)]	2.457	N140	1,25	19.3	646	2119	1,41	21.8	735	2411
						N540	1,34	20.7	682	2238	1,49	23.0	759	2490
						N150	1,26	19.4	651	2136	1,46	22.5	741	2431
5,8	90	Sierra	HPBT	59,8[7)]	2.354	N140	1,25	19.3	640	2100	1,44	22.2	742	2434
						N540	1,34	20.7	678	2224	1,52	23.5	762	2500
						N150	1,24	19.1	648	2126	1,48	22.8	748	2454

A = Accuracy load C = Compressed 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") [4)] The cartridge overall length exceeds the CIP maximum. [5)] The cartridge overall length exceeds the CIP maximum. [6)] The cartridge overall length exceeds the CIP maximum. [7)] The cartridge overall length exceeds the CIP maximum. [8)] The cartridge overall length exceeds the CIP maximum. [9)] Test barrel twist 1 in 7"

.22 Nosler

Test barrel:	610 mm (24"), 1 in 8" twist
Primers:	Small Rifle
Cases:	Nosler, trim-to length 44,50 mm (1.752")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
3,2	50	Sierra	Blitzking	57,4	2.260	N133	1,75	27.0	1016	3333	1,87	28.9	1080	3543
						N135	1,79	27.6	1021	3350	1,95	30.1	1090	3576
						N140	1,95	30.1	1028	3373	2,06	31.8	1102	3615
						N540	2,01	31.0	1047	3435	2,13	32.9	1121	3678
3,6	55	Barnes	TTSX BT	57,4	2.260	N133	1,40	21.6	871	2858	1,60	24.7	961	3153
						N135	1,43	22.1	886	2907	1,65	25.5	970	3182
						N140	1,70	26.2	925	3035	1,92	29.6	1013	3323
						N540	1,85	28.5	974	3196	1,99	30.7	1046	3432

.22 Nosler cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
						N150	1,64	25.3	926	3038	1,82	28.1	1003	3291
						N550	1,97	30.4	973	3192	2,10	32.4	1047	3435
3,6	55	Lapua	S569 FMJBT	57,4	2.260	N133	1,62	25.0	961	3153	1,80	27.8	1035	3396
						N135	1,70	26.2	968	3176	1,89	29.2	1048	3438
						N140	1,85	28.5	978	3209	2,07	31.9	1065	3494
						N540	1,90	29.3	996	3268	2,08	32.1	1076	3530
						N150	1,85	28.5	983	3225	1,96	30.2	1041	3415
						N550	2,05	31.6	1001	3284	2,21F	34.1F	1080	3543
4,0	62	Barnes	TTSX BT	57,4	2.260	N135	1,40	21.6	843	2766	1,49	23.0	864	2835
						N140	1,52	23.5	833	2733	1,70	26.2	920	3018
						N540	1,71	26.4	902	2959	1,89	29.2	984	3228
						N150	1,50	23.1	871	2858	1,65	25.5	910	2986
						N550	1,80	27.8	905	2969	1,98	30.6	982	3222
4,0	62	Nosler	Varmageddon FBHP	56,0	2.205	N133	1,47	22.7	858	2815	1,64	25.3	923	3028
						N135	1,55	23.9	874	2867	1,71	26.4	935	3068
						N140	1,75	27.0	905	2969	1,92	29.6	975	3199
						N540	1,80	27.8	925	3035	1,97	30.4	1005	3297
						N150	1,68	25.9	891	2923	1,86	28.7	961	3153
						N550	1,94	29.9	927	3041	2,11	32.6	1011	3317
4,5	69	Lapua	OTM Scenar-L	57,4	2.260	N133	1,47	22.7	836	2743	1,60	24.7	899	2949
						N135	1,53	23.6	847	2779	1,70	26.2	919	3015
						N140	1,70	26.2	870	2854	1,86	28.7	943	3094
						N540	1,75	27.0	888	2913	1,92	29.6	968	3176
						N150	1,65	25.5	868	2848	1,83	28.2	935	3068
						N550	1,87	28.9	892	2927	2,02C	31.2C	973	3192
4,5	69	Sierra	TMK	57,4	2.260	N133	1,55	23.9	840	2756	1,65	25.5	905	2969
						N135	1,54	23.8	841	2759	1,70	26.2	908	2979
						N140	1,68	25.9	868	2848	1,79	27.6	924	3031
						N540	1,79	27.6	901	2956	1,92	29.6	969	3179
						N150	1,67	25.8	861	2825	1,84	28.4	933	3061
						N550	1,89	29.2	905	2969	2,03	31.3	976	3202
4,5	70	Nosler	RDF	57,4	2.260	N133	1,50	23.1	835	2740	1,67	25.8	902	2959
						N135	1,60	24.7	855	2805	1,76	27.2	924	3031
						N140	1,77	27.3	888	2913	1,87	28.9	945	3100
						N540	1,83	28.2	905	2969	1,93	29.8	967	3173
						N150	1,73	26.7	884	2900	1,89	29.2	949	3114
						N550	1,92	29.6	907	2976	2,03	31.3	974	3196
5,0	77	Berger	OTM Tactical	57,4	2.260	N133	1,32	20.4	753	2470	1,50	23.1	828	2717
						N135	1,37	21.1	762	2500	1,55	23.9	831	2726
						N140	1,60	24.7	804	2638	1,77	27.3	880	2887
						N540	1,70	26.2	841	2759	1,86	28.7	914	2999
						N150	1,57	24.2	806	2644	1,74	26.9	871	2858
						N550	1,80	27.8	850	2789	1,95	30.1	919	3015
5,0	77	Lapua	OTM Scenar-L	57,4	2.260	N133	1,40	21.6	780	2559	1,57	24.2	847	2779
						N135	1,48	22.8	789	2589	1,63	25.2	854	2802
						N140	1,65	25.5	821	2694	1,80	27.8	893	2930
						N540	1,73	26.7	854	2802	1,85	28.5	915	3002
						N150	1,60	24.7	818	2684	1,75	27.0	879	2884
						N550	1,81	27.9	785	2575	1,95	30.1	924	3031
5,5	85	Nosler	RDF	57,4	2.260	N135	1,33	20.5	709	2326	1,49	23.0	774	2539
						N140	1,52	23.5	758	2487	1,70	26.2	828	2717
						N540	1,62	25.0	791	2595	1,75	27.0	858	2815
						N150	1,49	23.0	753	2470	1,68	25.9	825	2707
						N550	1,73	26.7	799	2621	1,89	29.2	870	2854
						N555	1,85	28.5	802	2631	2,05C	31.6C	866	2841

C = Compressed load F = Case full

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
3,3	51	Lapua	HPCE	54,6	2.150	N530	2,22	34.3	1055	3461	2,59	40.0	1205	3953
						N135	2,10	32.4	1011	3317	2,61	40.3	1180	3871
						N140	2,49	38.4	1074	3524	2,83	43.7	1183	3881
3,6	55	Lapua	Soft Point	54,5	2.146	N530	2,14	33.0	1009	3310	2,48	38.3	1147	3763
						N135	2,09	32.3	1001	3284	2,49	38.4	1119	3671
						N140	2,24	34.6	996	3268	2,68	41.4	1140	3740
4,5	69	Lapua	Scenar	56,7	2.232	N140	2,29	35.3	933	3061	2,61	40.3	1030	3379
						N540	2,35	36.3	960	3150	2,68	41.4	1077	3533
						N150	2,33	36.0	947	3107	2,61	40.3	1048	3438
						N550	2,48	38.3	972	3189	2,84	43.8	1078	3537

.22 PPC-USA

Test barrel:	610 mm (24”), 1 in 14” twist
Primers:	Small Rifle
Cases:	Sako, trim-to length 38,30 mm (1.508”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
3,4	52	Sierra	HPBT	51,4	2.024	N120	1,33	20.5	919	3016	1,56	24.1	1039	3408
						N130	1,43	22.1	934	3063	1,66	25.6	1069	3507
						N133	1,51	23.3	947	3107	1,77	27.3	1087	3565
						N135	1,65	25.5	971	3185	1,90	29.2	1099	3607
3,6	55	Speer	Spitzer	51,8	2.039	N130	1,41	21.8	898	2946	1,69	26.1	1026	3367
						N133	1,45	22.4	901	2956	1,78	27.4	1039	3409
						N135	1,68	25.9	961	3151	1,93	29.7	1103	3617

.22-250 Remington

Test barrel:	580 mm (22”), 1 in 14” twist
Primers:	Large Rifle
Cases:	Lapua .22-250 Remington, trim-to length 48,30 mm (1.902”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
2,6	40	Sierra	Blitz King	58,9	2.319	N130	1,79	27.6	1097	3599	1,98	30.6	1194	3917
						N133	1,97	30.4	1099	3606	2,15	33.2	1205	3953
						N135	2,03	31.3	1097	3599	2,18	33.6	1207	3960
						N140	2,19	33.8	1111	3645	2,39	36.9	1211	3973
2,9	45	Sierra	SP	58,9	2.319	N130	1,66	25.6	1023	3356	1,99	30.7	1145	3757
						N133	1,87	28.9	1033	3389	2,10	32.4	1126	3694
						N135	1,87	28.9	1023	3356	2,18	33.6	1154	3786
						N150	2,06	31.8	1033	3389	2,32	35.8	1137	3730
3,2	50	Lapua	Naturalis N566	59,0	2.323	N135	1,62	25.0	913	2995	1,71	26.4	987	3238
						N140	1,81	27.9	936	3071	2,04	31.5	1036	3399
						N540	2,00	30.9	978	3209	2,21	34.1	1070	3510
						N150	1,82	28.1	944	3097	2,06	31.8	1043	3422
3,3	51	Lapua	HPCE	59,6	2.346	N133	1,75	27.0	969	3179	1,99	30.7	1064	3491
						N135	1,72	26.5	959	3146	1,96	30.2	1055	3461
						N140	1,99	30.7	988	3241	2,19	33.8	1087	3566
						N540	2,08	32.1	1001	3284	2,32	35.8	1105	3625
3,6	55	Lapua	FMJ	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

.22-250 Remington

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						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
3,6	55	Lapua	Soft Point	59,5	2.343	N135	1,62	25.0	902	2959	1,82	28.1	990	3248
						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
3,9	60	Hornady	HP	59,6	2.346	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
						N540	2,06	31.8	938	3077	2,27	35.0	1043	3422
						N150	1,91	29.5	907	2976	2,16	33.3	1012	3320
4,0	62	Barnes	TSX	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
4,5	69	Lapua	HPBT[1)]	59,6	2.346	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
						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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
4,4	68	Euber	HPFB	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
4,5	70	Sierra	HPBT	53,6	2.110	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
4,5	70	Sierra	HPBT	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
5,0	77	Lapua	HP	57,0	2.244	N135	1,81	27.9	880	2887	2,01	31.0	957	3140
						N140	1,94	29.9	882	2894	2,15	33.2	965	3166
						N540	2,00	30.9	888	2913	2,18	33.6	980	3215
5,0	77	Lapua	HP SJ	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
5,5	85	Barnes	TSX	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
5,8	90	Lapua	Naturalis	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

6 mm BR Norma

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
5,8	90	Lapua	Scenar	60,0	2.362	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
6,5	100	Lapua	Mega	55,3	2.177	N140	1,66	25.6	737	2419	1,88	29.0	825	2707
						N540	1,81	27.9	772	2533	2,01	31.0	857	2812
6,8	105	Lapua	Scenar	60,0	2.362	N140	1,67	25.8	746	2447	1,87	28.9	821	2694
						N540	1,75	27.0	756	2480	1,97	30.4	846	2776

A = Accuracy load

6 mm Creedmoor

Test barrel:	660 mm (26"), 1 in 8" twist
Primers:	Small Rifle
Cases:	Lapua, trim-to length 48,75 mm (1.919")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
3,6	55	Nosler	Ballistic Tip Varmint	64,5	2.539	N135	2,54	39.2	1111	3645	2,70	41.7	1196	3924
						N140	2,70	41.7	1126	3694	2,87	44.3	1210	3970
						N540	2,78	42.9	1138	3734	2,97	45.8	1240	4068
						N150	2,72	42.0	1112	3648	2,91	44.9	1200	3937
						N550	2,90	44.8	1131	3711	3,10F	47.8F	1236	4055
4,2	65	Hornady	V-Max	64,9	2.555	N140	2,41	37.2	1009	3310	2,69	41.5	1110	3642
						N540	2,54	39.2	1037	3402	2,76	42.6	1136	3727
						N150	2,45	37.8	1015	3330	2,71	41.8	1107	3632
						N550	2,72	42.0	1044	3425	2,94	45.4	1145	3757
4,5	70	Sierra	Blitz King	66,0	2.598	N140	2,54	39.2	1008	3307	2,71	41.8	1085	3560
						N540	2,58	39.8	1030	3379	2,77	42.7	1120	3675
						N150	2,54	39.2	1006	3301	2,74	42.3	1085	3560
						N550	2,77	42.7	1032	3386	2,92	45.1	1121	3678
5,2	80	Barnes	TTSX BT	63,0	2.480	N150	2,20	34.0	914	2999	2,44	37.7	994	3261
						N550	2,51	38.7	944	3097	2,70	41.7	1030	3379
						N160	2,62	40.4	934	3064	2,90	44.8	1025	3363
						N560	2,85	44.0	936	3071	3,10F	47.8F	1025	3363
5,7	87	Berger	VLD Hunting	67,8	2.669	N140	2,19	33.8	886	2907	2,47	38.1	971	3186
						N540	2,33	36.0	914	2999	2,55	39.4	1001	3284
						N150	2,21	34.1	891	2923	2,49	38.4	974	3196
						N550	2,52	38.9	927	3041	2,74	42.3	1013	3323
						N555	2,75	42.4	945	3100	3,00C	46.3C	1027	3369
						N160	2,72	42.0	929	3048	2,95	45.5	1011	3317
						N560	2,87	44.3	923	3028	3,12	48.1	1011	3317
5,8	90	Berger	BT Target	71,1	2.799	N140	2,36	36.4	873	2864	2,59	40.0	954	3130
						N540	2,42	37.3	903	2963	2,68	41.4	989	3245
						N150	2,35	36.3	875	2871	2,59	40.0	958	3143
						N550	2,60	40.1	911	2989	2,81	43.4	996	3268
						N555	2,83	43.7	932	3058	2,95C	45.5C	976	3202
						N160	2,85	44.0	906	2972	3,08	47.5	997	3271
5,8	90	Lapua	Naturalis	70,0	2.756	N540	2,27	35.0	877	2877	2,51	38.7	963	3159
						N150	2,16	33.3	845	2772	2,44	37.7	928	3045
						N550	2,49	38.4	894	2933	2,73	42.1	979	3212
						N160	2,51	38.7	863	2831	2,93	45.2	971	3186
						N560	2,87	44.3	899	2949	3,11	48.0	987	3238
5,8	90	Lapua	Scenar-L	70,0	2.756	N540	2,22	34.3	885	2904	2,46	38.0	971	3186
						N150	2,15	33.2	856	2808	2,38	36.7	929	3048
						N550	2,43	37.5	898	2946	2,67	41.2	988	3241
						N555	2,80	43.2	940	3084	2,95F	45.5F	988	3241
						N160	2,54	39.2	880	2887	2,85	44.0	971	3186
						N560	2,76	42.6	898	2946	3,02	46.6	991	3251

6 mm Creedmoor cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
5,8	90	Nosler	Ballistic Tip Hunting	69,5	2.736	N540	2,37	36.6	889	2917	2,59	40.0	975	3199
						N150	2,24	34.6	851	2792	2,48	38.3	929	3048
						N550	2,50	38.6	899	2949	2,74	42.3	986	3235
						N555	2,65	40.9	932	3058	2,95F	45.5F	979	3212
						N160	2,80	43.2	892	2927	3,02F	46.6F	978	3209
5,8	90	Swift	Scirocco II	70,5	2.776	N540	2,20	34.0	853	2799	2,46	38.0	946	3104
						N150	2,06	31.8	818	2684	2,33	36.0	899	2949
						N550	2,38	36.7	873	2864	2,66	41.1	968	3176
						N555	2,70	41.7	909	2982	2,93	45.2	978	3209
						N160	2,44	37.7	845	2772	2,79	43.1	942	3091
						N560	2,78	42.9	884	2900	3,05	47.1	979	3212
6,1	95	Sierra	MatchKing	70,0	2.756	N540	2,23	34.4	869	2851	2,44	37.7	951	3120
						N150	2,15	33.2	850	2789	2,37	36.6	920	3018
						N550	2,44	37.7	888	2913	2,68	41.4	975	3199
						N555	2,70	41.7	899	2949	2,92	45.1	978	3209
						N160	2,65	40.9	878	2881	2,87	44.3	960	3150
						N560	2,81	43.4	891	2923	3,05	47.1	981	3219
6,2	95	Berger	Classic Hunter	69,0	2.717	N540	2,13	32.9	840	2756	2,36	36.4	923	3028
						N150	2,03	31.3	825	2707	2,23	34.4	887	2910
						N550	2,30	35.5	857	2812	2,57	39.7	943	3094
						N555	2,68	41.4	896	2940	2,91	44.9	974	3196
						N160	2,25	34.7	821	2694	2,69	41.5	928	3045
						N560	2,65	40.9	864	2835	2,96	45.7	957	3140
6,2	95	Berger	VLD Hunting	68,6	2.701	N540	2,25	34.7	875	2871	2,48	38.3	960	3150
						N150	2,22	34.3	858	2815	2,46	38.0	937	3074
						N550	2,49	38.4	902	2959	2,67	41.2	977	3205
						N555	2,69	41.5	911	2989	2,92	45.1	988	3241
						N160	2,72	42.0	889	2917	2,97	45.8	972	3189
						N560	2,83	43.7	893	2930	3,04	46.9	979	3212
6,8	105	Berger	Hybrid Target	71,0	2.795	N540	2,08	32.1	806	2644	2,33	36.0	889	2917
						N150	1,94	29.9	774	2539	2,26	34.9	857	2812
						N550	2,27	35.0	821	2694	2,55	39.4	909	2982
						N555	2,55	39.4	847	2779	2,77	42.7	923	3028
						N160	2,30	35.5	805	2641	2,65	40.9	895	2936
						N560	2,63	40.6	834	2736	2,91	44.9	921	3022
6,8	105	Berger	VLD Target	71,0	2.795	N540	2,15	33.2	812	2664	2,38	36.7	897	2943
						N150	2,07	31.9	788	2585	2,32	35.8	865	2838
						N550	2,37	36.6	840	2756	2,59	40.0	917	3009
						N555	2,59	40.0	855	2805	2,82	43.5	929	3048
						N160	2,60	40.1	829	2720	2,86	44.1	909	2982
						N560	2,72	42.0	846	2776	2,95	45.5	929	3048
6,8	105	Lapua	Scenar	71,0	2.795	N540	2,07	31.9	803	2635	2,30	35.5	883	2897
						N150	1,95	30.1	764	2507	2,23	34.4	851	2792
						N550	2,27	35.0	825	2707	2,50	38.6	904	2966
						N555	2,60	40.1	858	2815	2,83	43.7	927	3041
						N160	2,34	36.1	805	2641	2,66	41.1	891	2923
						N560	2,61	40.3	834	2736	2,88	44.4	922	3025
						N565	2,73	42.1	847	2779	3,00	46.3	923	3028
7,0	108	Berger	BT Target	70,7	2.783	N540	1,97	30.4	789	2589	2,24	34.6	866	2841
						N150	1,89	29.2	757	2484	2,14	33.0	833	2733
						N550	2,16	33.3	804	2638	2,41	37.2	883	2897
						N160	2,40	37.0	841	2759	2,51	38.7	870	2854
						N560	2,59	40.0	825	2707	2,81	43.4	908	2979
7,0	108	Berger	Elite Hunter	71,0	2.795	N540	2,20	34.0	826	2710	2,41	37.2	894	2933
						N150	2,05	31.6	792	2598	2,30	35.5	858	2815
						N550	2,34	36.1	835	2740	2,58	39.8	907	2976

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

6 mm Creedmoor cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N555	2,60	40.1	854	2802	2,84	43.8	924	3031
						N160	2,60	40.1	831	2726	2,82	43.5	903	2963
						N560	2,66	41.1	835	2740	2,94	45.4	923	3028
7,0	108	Sierra	MatchKing	66,2	2.606	N540	2,08	32.1	804	2638	2,30	35.5	883	2897
						N150	1,98	30.6	774	2539	2,22	34.3	852	2795
						N550	2,27	35.0	820	2690	2,50	38.6	904	2966
						N160	2,41	37.2	813	2667	2,67	41.2	890	2920
						N560	2,63	40.6	834	2736	2,87	44.3	918	3012
7,1	109	Berger	Long Range Hybrid Target	71,0	2.795	N540	2,13	32.9	820	2690	2,40	37.0	886	2907
						N150	2,09	32.3	783	2569	2,30	35.5	853	2799
						N550	2,32	35.8	828	2717	2,54	39.2	902	2959
						N555	2,58	39.8	846	2776	2,82	43.5	917	3009
						N160	2,57	39.7	829	2720	2,82	43.5	896	2940
						N560	2,72	42.0	834	2736	2,96	45.7	922	3025
7,1	110	Sierra	MatchKing	71,0	2.795	N540	2,05	31.6	793	2602	2,27	35.0	876	2874
						N150	1,95	30.1	756	2480	2,19	33.8	835	2740
						N550	2,22	34.3	811	2661	2,46	38.0	892	2927
						N555	2,48	38.3	826	2710	2,71	41.8	900	2953
						N160	2,35	36.3	793	2602	2,65	40.9	879	2884
						N560	2,60	40.1	824	2703	2,81	43.4	903	2963
7,5	115	Berger	VLD Hunting	71,0	2.795	N540	2,04	31.5	767	2516	2,25	34.7	844	2769
						N150	1,95	30.1	744	2441	2,18	33.6	814	2671
						N550	2,22	34.3	786	2579	2,42	37.3	853	2799
						N555	2,45	37.8	805	2641	2,69	41.5	878	2881
						N160	2,30	35.5	772	2533	2,62	40.4	856	2808
						N560	2,55	39.4	800	2625	2,78	42.9	885	2904
7,5	115	Berger	VLD Target	71,1	2.799	N540	1,96	30.2	757	2484	2,21	34.1	832	2730
						N150	1,83	28.2	726	2382	2,15	33.2	810	2657
						N550	2,18	33.6	781	2562	2,43	37.5	858	2815
						N555	2,43	37.5	797	2615	2,68	41.4	874	2867
						N160	2,17	33.5	760	2493	2,54	39.2	847	2779
						N560	2,54	39.2	797	2615	2,81	43.4	883	2897

C = Compressed load F = Case full

.243 WSSM

Test barrel:	690 mm (27”), 1 in 10” twist
Primers:	Small Rifle
Cases:	Winchester, trim-to length 42,20 mm (1.660”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
5,0	77	Lapua	HP	59,4	2.339	N140	2,46	38.0	973	3192	2,74	42.3	1071	3514
						N540	2,52	38.9	988	3241	2,80	43.2	1096	3596
						N150	2,48	38.3	978	3209	2,84	43.8	1081	3547
5,8	90	Lapua	Naturalis	58,0	2.283	N540	2,34	36.1	896	2940	2,68	41.4	1001	3284
						N150	2,32	35.8	877	2877	2,66	41.1	979	3212
						N550	2,56	39.5	909	2982	2,84	43.8	1019	3343
6,5	100	Lapua	SP	57,0	2.244	N140	2,20	34.0	832	2730	2,46	38.0	914	2999
						N540	2,18	33.6	843	2766	2,55	39.4	946	3104
						N550	2,41	37.2	868	2848	2,75	42.4	968	3176

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

.243 Winchester

Test barrel:	580 mm (23”), 1 in 10” twist
Primers:	Large Rifle
Cases:	Lapua, trim-to length 51,80 mm (2.039”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
3,8	58	Hornady	V-Max	65,5	2.579	N135	2,31	35.6	1037	3402	2,55	39.3	1127	3698
						N140	2,53	39.0	1043	3422	2,80	43.2	1137	3730
						N540	2,45	37.8	1051	3448	2,87	44.3	1151	3776
						N550	2,65	40.9	1067	3501	2,88	44.4	1165	3822
4,2	65	Hornady	V-Max	68,6	2.701	N135	2,20	34.0	921	3022	2,49	38.4	1010	3314
						N140	2,46	38.0	930	3051	2,75	42.4	1030	3379
						N540	2,55	39.4	961	3153	2,81	43.4	1059	3474
						N150	2,37	36.6	934	3064	2,71	41.8	1032	3386
						N550	2,72	42.0	958	3143	2,94	45.4	1060	3478
						N555	2,94	45.4	973	3192	3,10C	47.8C	1028	3373
						N160	2,96	45.7	950	3117	3,23C	49.8C	1047	3435
4,5	70	Sierra	Blitz King	68,1	2.681	N135	2,17	33.5	896	2940	2,49	38.4	988	3241
						N140	2,37	36.6	913	2995	2,70	41.7	1009	3310
						N550	2,76	42.6	936	3071	2,96	45.7	1037	3402
4,9	75	Hornady	V-Max	66,8	2.630	N135	2,07	31.9	859	2818	2,31	35.6	945	3100
						N140	2,20	34.0	868	2848	2,53	39.0	966	3169
						N150	2,20	34.0	862	2828	2,52	38.9	957	3140
						N550	2,50	38.6	932	3058	2,81	43.4	1005	3297
						N555	2,80	43.2	925	3035	3,04C	46.9C	1018	3340
						N160	2,80	43.2	898	2946	3,04	46.9	987	3238
5,0	77	Lapua	HP	67,0	2.638	N135	1,99	30.7	855	2805	2,32	35.8	968	3176
						N140	2,23	34.4	883	2897	2,54	39.2	992	3255
						N150	2,24	34.6	881	2890	2,58	39.8	995	3264
						N550	2,57	39.7	918	3012	2,80	43.2	1032	3386
5,2	80	Fox Bullets	Classic Hunter	68,5	2.697	N540	2,25	34.7	854	2802	2,61	40.3	958	3143
						N150	1,95	30.1	833	2733	2,25	34.7	893	2930
						N550	2,39	36.9	853	2799	2,67	41.2	955	3133
						N555	2,70	41.7	880	2887	2,99	46.1	978	3209
5,2	80	Hornady	FMJ	67,0	2.638	N140	2,04	31.5	831	2726	2,41	37.2	949	3114
						N150	2,06	31.8	840	2756	2,43	37.5	947	3107
						N550	2,42	37.3	895	2936	2,79	43.1	1002	3287
						N160	2,54	39.2	890	2920	2,94	45.4	993	3258
5,5	85	Barnes	TSX	67,0	2.638	N540	2,19	33.8	857	2812	2,56	39.5	981	3219
						N150	2,15	33.2	828	2717	2,55	39.4	949	3114
						N550	2,56	39.5	934	3064	2,72	42.0	992	3255
						N160	2,65	40.9	860	2822	2,98	46.0	972	3189
5,5	85	Nosler	Partition	68,0	2.677	N540	2,17	33.5	860	2822	2,50	38.6	971	3186
						N150	1,90	29.3	801	2628	2,28	35.2	922	3025
						N550	2,36	36.4	866	2841	2,71	41.8	977	3205
						N160	2,42	37.3	846	2776	2,84	43.8	969	3179
5,6	87	Hornady	V-Max	68,3	2.689	N140	2,05	31.6	790	2592	2,35	36.3	883	2897
						N150	2,10	32.4	799	2621	2,37	36.6	879	2884
						N550	2,30	35.5	819	2687	2,64	40.7	929	3048
						N555	2,65	40.9	859	2818	2,88	44.4	941	3087
						N160	2,55	39.4	813	2667	2,88	44.4	908	2979
						N560	2,80	43.2	838	2749	3,05	47.1	929	3048
5,8	90	Berger	BT Target	68,4	2.693	N140	2,13	32.9	797	2615	2,42	37.3	880	2887
						N540	2,25	34.7	825	2707	2,56	39.5	913	2995
						N150	2,08	32.1	794	2605	2,38	36.7	880	2887
						N550	2,45	37.8	836	2743	2,70	41.7	919	3015
						N555	2,65	40.9	838	2749	2,91	44.9	931	3054

.243 Winchester cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N160	2,47	38.1	802	2631	2,92	45.1	905	2969
						N560	2,79	43.1	825	2707	3,02	46.6	914	2999
5,8	90	Lapua	Naturalis	67,0	2.638	N540	2,26	34.9	840	2756	2,53	39.0	945	3100
						N150	2,02	31.2	799	2621	2,39	36.9	903	2963
						N550	2,44	37.7	846	2776	2,72	42.0	952	3123
						N160	2,43	37.5	823	2700	2,85	44.0	942	3091
5,8	90	Lapua	Scenar	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
5,8	90	Sierra	FMJ	68,3	2.689	N540	2,17	33.5	842	2762	2,49	38.4	946	3104
						N150	1,98	30.6	805	2641	2,30	35.5	902	2959
						N550	2,31	35.6	848	2782	2,63	40.6	952	3123
						N160	2,41	37.2	836	2743	2,76	42.6	941	3087
5,8	90	Swift	Scirocco II	68,3	2.689	N550	2,17	33.5	788	2585	2,48	38.3	879	2884
						N555	2,20	34.0	786	2579	2,72	42.0	895	2936
						N160	1,81	27.9	714	2343	2,27	35.0	819	2687
						N165	2,20	34.0	768	2520	2,80	43.2	870	2854
						N560	2,46	38.0	776	2546	2,81	43.4	879	2884
6,2	95	Berger	Classic Hunter	68,1	2.681	N555	2,45	37.8	806	2644	2,75	42.4	898	2946
						N160	2,32	35.8	767	2516	2,67	41.2	862	2828
						N165	2,71	41.8	804	2638	2,98	46.0	889	2917
						N560	2,63	40.6	795	2608	2,89	44.6	887	2910
6,2	95	Norma	FMJ	63,7	2.508	N550	2,25	34.7	777	2549	2,56	39.5	868	2848
						N555	2,36	36.4	787	2582	2,75	42.4	884	2900
						N160	2,25	34.7	750	2461	2,65	40.9	844	2769
						N165	2,68	41.4	787	2582	2,93	45.2	867	2844
						N160	2,25	34.7	750	2461	2,65	40.9	844	2769
						N165	2,68	41.4	787	2582	2,93	45.2	867	2844
						N560	2,59	40.0	777	2549	2,85	44.0	866	2841
6,2	96	Brenneke	TOG	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
6,5	100	Speer	Grand Slam	68,3	2.689	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
						N160	2,23	34.4	769	2523	2,58	39.8	873	2864
6,8	105	Lapua	Scenar[1)]	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
7,0	108	Berger	BT Target	68,8	2.709	N550	2,14	33.0	747	2451	2,42	37.3	827	2713
						N555	2,30	35.5	750	2461	2,62	40.4	836	2743
						N160	2,20	34.0	723	2372	2,60	40.1	817	2680
						N165	2,51	38.7	747	2451	2,84	43.8	834	2736
						N560	2,52	38.9	749	2457	2,80	43.2	838	2749
7,0	108	Berger	Elite Hunter	68,8	2.709	N550	2,20	34.0	750	2461	2,49	38.4	837	2746
						N555	2,47	38.1	771	2530	2,71	41.8	849	2785
						N160	2,36	36.4	731	2398	2,71	41.8	824	2703
						N165	2,71	41.8	767	2516	2,96	45.7	843	2766
						N560	2,55	39.4	758	2487	2,81	43.4	840	2756
						N565	2,68	41.4	762	2500	2,94C	45.4C	843	2766
7,1	109	Berger	Long Range Hybrid Target	71,0[2)]	2.795	N550	2,19	33.8	742	2434	2,48	38.3	829	2720
						N555	2,32	35.8	743	2438	2,71	41.8	840	2756
						N160	2,06	31.8	698	2290	2,49	38.4	797	2615
						N165	2,46	38.0	734	2408	2,92	45.1	834	2736
						N560	2,47	38.1	745	2444	2,80	43.2	838	2749
						N565	2,59	40.0	751	2464	2,92	45.1	838	2749

C = Compressed load [1)] The test barrel rifle twist 1 in 8” [2)] The cartridge overall length exceeds the CIP maximum.

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

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
3,8	58	Hornady	V-Max	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
4,5	69	Sierra	MatchKing	63,0	2.480	N540	2,41	37.2	998	3274	2,66	41.1	1110	3642
						N150	2,21	34.1	939	3081	2,62	40.4	1066	3497
						N550	2,05	31.6	768	2520	2,82	43.5	1109	3638
5,0	77	Lapua	HP	64,0	2.520	N540	2,29	35.3	927	3041	2,58	39.8	1063	3488
						N150	2,26	34.9	911	2989	2,59	40.0	1028	3373
						N550	2,45	37.8	940	3084	2,74	42.3	1069	3507
5,8	90	Lapua	Naturalis	63,8	2.512	N540	2,08	32.1	846	2776	2,47	38.1	969	3179
						N150	2,01	31.0	812	2664	2,38	36.7	921	3022
						N550	2,24	34.6	851	2792	2,61	40.3	972	3189
5,8	90	Lapua	Scenar	69,0	2.717	N540	2,09	32.3	859	2818	2,43	37.5	988	3241
						N150	1,94	29.9	817	2680	2,35	36.3	942	3091
						N550	2,23	34.4	867	2844	2,60	40.1	993	3258
6,8	105	Lapua	Scenar	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
3,8	58	Hornady	V-Max	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
5,0	77	Lapua	HP	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
5,5	85	Nosler	Partition	70,4	2.772	N140	1,97	30.4	858	2815	2,49	38.4	983	3225
						N540	2,25	34.7	899	2949	2,65	40.9	1012	3320
						N150	2,11	32.6	868	2848	2,47	38.1	973	3192
						N550	2,41	37.2	903	2963	2,85	44.0	1022	3353
5,8	90	Lapua	Naturalis	70,4	2.772	N150	2,00	30.9	820	2690	2,50	38.6	932	3058
						N550	2,37	36.6	873	2864	2,88	44.4	1010	3314
						N160	2,40	37.0	869	2851	2,99	46.1	994	3261
						N165	2,83	43.7	875	2871	3,24	50.0	1001	3284
5,8	90	Lapua	Scenar	71,8	2.825	N150	2,20	34.0	867	2844	2,60	40.1	976	3202
						N550	2,52	38.9	902	2959	2,82	43.5	1010	3314
						N160	2,49	38.4	866	2841	3,00	46.3	994	3261
						N165	2,93	45.2	906	2972	3,30	50.9	1018	3340

.240 Weatherby Magnum

Test barrel:	600 mm (23½”), 1 in 10” twist
Primers:	Large Rifle Magnum
Cases:	Norma, trim-to length 63,20 mm (2.488”)

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
4,9	75	Hornady	HP	78,1	3.075	N150	2,94	45.4	995	3266	3,17	48.9	1076	3532
						N550	3,20	49.4	1028	3371	3,38	52.2	1111	3645
						N160	3,34	51.6	1010	3314	3,52	54.2	1094	3589
5,0	77	Lapua	HP	78,1	3.075	N150	2,97	45.8	990	3248	3,15	48.7	1055	3460
						N550	3,20	49.3	1014	3327	3,37	51.9	1095	3591
						N160	3,34	51.5	1005	3297	3,51	54.1	1084	3556
5,8	90	Lapua	Scenar	78,1	3.075	N550	2,98	46.0	939	3081	3,22	49.6	1013	3325
						N160	3,20	49.3	938	3077	3,41	52.6	1014	3327
						N165	3,47	53.6	949	3114	3,71	57.2	1031	3383
6,5	100	Lapua	Mega	78,1	3.075	N550	2,94	45.4	891	2923	3,16	48.7	966	3170
						N160	3,06	47.2	895	2936	3,26	50.3	956	3137
						N165	3,47	53.6	949	3114	3,62	55.8	989	3246
6,8	105	Speer	Spitzer	77,8	3.063	N160	2,83	43.6	852	2795	3,15	48.7	935	3068
						N165	3,33	51.3	895	2936	3,57	55.2	969	3180
						N560	3,23	49.8	887	2910	3,47	53.5	962	3157

.25-06 Remington

Test barrel:	580 mm (23”), 1 in 10” twist
Primers:	Large Rifle
Cases:	Remington, trim-to length 63,10 mm (2.484”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
5,6	87	Speer	SPBT	79,3	3.122	N140	2,35	36.2	876	2873	2,74	42.3	961	3153
						N150	2,51	38.7	892	2925	2,91	44.9	980	3215
						N160	3,15	48.6	935	3069	3,55	54.8	1020	3346
						N165	3,52	54.3	960	3149	3,95	60.9	1049	3442
6,5	100	Speer	SPBT	81,2	3.197	N140	2,60	40.0	873	2864	2,78	42.9	924	3031
						N150	2,66	41.0	878	2881	2,86	44.1	930	3051
						N160	3,24	50.0	911	2990	3,38	52.2	966	3169
						N165	3,44	53.0	922	3024	3,66	56.5	979	3212
						N560	3,16	48.8	900	2954	3,59	55.4	990	3248
						N170	3,55	54.7	885	2902	4,05	62.5	975	3199
7,8	120	Sierra	HPBT	80,0	3.155	N160	2,75	42.4	791	2597	3,09	47.7	871	2858
						N165	3,03	46.8	817	2681	3,38	52.2	889	2917
						N560	2,95	45.6	818	2685	3,33	51.4	903	2963
						N170	3,35	51.7	817	2682	3,81	58.8	904	2966
7,8	120	Speer	Spitzer	80,2	3.157	N150	1,95	30.1	692	2270	2,32	35.8	776	2546
						N160	2,50	38.6	759	2491	2,94	45.4	844	2769
						N165	2,69	41.5	777	2548	3,13	48.3	853	2799
						N560	2,81	43.3	798	2619	3,24	50.0	890	2920
						N170	3,17	48.9	802	2630	3,59	55.4	873	2864

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
6,5	100	Lapua	FMJ	53,0	2.087	N130	1,32	20.4	705	2313	1,54	23.8	784	2572
						N133	1,51	23.3	728	2388	1,72	26.5	811	2661
						N530	1,56	24.1	729	2392	1,79	27.6	829	2720
6,5	100	Lapua	Scenar	57,1	2.248	N130	1,40	21.6	674	2211	1,76	27.2	840	2756
						N133	1,57	24.2	728	2388	1,90	29.3	854	2802
						N530	1,60	24.7	729	2392	1,90	29.3	858	2815
7,0	108	Lapua	Scenar	57,1	2.248	N130	1,40	21.6	671	2201	1,69	26.1	791	2595
						N133	1,51	23.3	689	2260	1,80	27.8	804	2638
						N530	1,44	22.2	690	2264	1,73	26.7	821	2694
7,8	120	Barnes	TSX	53,0	2.087	N133	1,17	18.1	578	1896	1,58	24.4	678	2224
						N530	1,34	20.7	592	1942	1,62	25.0	707	2320
						N540	1,58	24.4	631	2070	1,88	29.0	751	2464
8,0	123	Lapua	Scenar	57,1	2.248	N133	1,36	21.0	609	1998	1,73	26.7	745	2444
						N530	1,47	22.7	635	2083	1,73	26.7	763	2503
						N135	1,29	19.9	593	1946	1,75	27.0	741	2431
8,8	136	Lapua	Scenar-L	57,1	2.248	N530	1,47	22.7	644	2113	1,65	25.5	725	2379
						N135	1,33	20.5	597	1959	1,65	25.5	701	2300
						N140	1,59	24.5	655	2149	1,83	28.2	731	2398
						N540	1,67	25.8	661	2169	1,83	28.2	741	2431
9,0	139	Lapua	Scenar	57,1	2.248	N530	1,40	21.6	606	1988	1,60	24.7	694	2277
						N135	1,23	19.0	547	1795	1,55	23.9	664	2178
						N140	1,57	24.2	620	2034	1,78	27.5	706	2316
						N540	1,64	25.3	642	2106	1,82	28.1	725	2379
9,1	140	Lapua	Naturalis N507	57,5	2.264	N530	1,41	21.8	595	1952	1,65	25.5	694	2277
						N140	1,42	21.9	579	1900	1,74	26.9	680	2231
						N540	1,59	24.5	616	2021	1,86	28.7	714	2343
9,3	144	Lapua	FMJBT	57,1	2.248	N530	1,40	21.6	610	2001	1,57	24.2	679	2228
						N135	1,19	18.4	553	1814	1,37	21.1	621	2037
						N140	1,49	23.0	640	2100	1,77	27.3	704	2310
						N540	1,60	24.7	638	2093	1,80	27.8	718	2356
10,1	156	Lapua	Mega	57,4	2.260	N530	1,28	19.8	539	1768	1,50	23.1	615	2018
						N140	1,31	20.2	513	1683	1,62	25.0	627	2057
						N540	1,38	21.3	537	1762	1,67	25.8	647	2123
						N150	1,30	20.1	511	1677	1,62	25.0	615	2018

6,5 x 47 Lapua

Test barrel:	700 mm (27½”), 1 in 8½” twist
Primers:	Small Rifle
Cases:	Lapua, trim-to length 46,80 mm (1.843”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
6,5	100	Lapua	FMJ	62,5	2.461	N133	1,91	29.5	778	2552	2,20	34.0	886	2907
						N135	1,91	29.5	765	2510	2,20	34.0	875	2871
						N140	2,15	33.2	801	2628	2,48	38.3	908	2979
6,5	100	Lapua	Scenar	69,5	2.736	N133	2,10	32.4	870	2854	2,26	34.9	925	3035
						N135	2,20	34.0	890	2920	2,31	35.6	930	3051
						N140	2,40	37.0	900	2953	2,56	39.5	950	3117
						N540	2,32	35.8	874	2867	2,64	40.7	992	3255
						N150	2,17	33.5	831	2726	2,53	39.0	954	3130
7,0	108	Lapua	Scenar	69,5	2.736	N133	1,96	30.2	807	2648	2,20	33.9	882	2894

6,5 x 47 Lapua cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
						N135	2,04	31.5	814	2671	2,23	34.4	885	2904
						N140	2,23	34.4	828	2717	2,51	38.7	910	2986
						N540	2,27	35.0	839	2753	2,55	39.4	943	3094
						N150	2,35	36.3	849	2785	2,63	40.6	930	3051
						N550	2,39	36.9	836	2743	2,68	41.4	948	3110
7,8	120	Barnes	TSX	64,5	2.539	N540	2,20	34.0	748	2454	2,48	38.3	846	2776
						N150	1,99	30.7	690	2264	2,43	37.5	830	2723
						N550	2,35	36.3	750	2461	2,70	41.7	872	2861
7,8	120	Lapua	Scenar-L	69,5	2.736	N140	1,80	27.8	731	2398	2,35	36.3	853	2799
						N540	2,14	33.0	772	2533	2,45	37.8	889	2917
						N150	2,06	31.8	744	2441	2,43	37.5	859	2818
						N550	2,31	35.6	776	2546	2,62	40.4	895	2936
8,0	123	Lapua	Scenar	69,5	2.736	N140	2,15	33.2	768	2520	2,36	36.4	840	2756
						N540	2,31	35.7	818	2685	2,57	39.7	907	2976
						N150	2,23	34.4	788	2585	2,45	37.8	855	2805
						N550	2,26	34.9	780	2559	2,57	39.7	878	2881
8,1	125	Nosler	Partition	65,0	2.559	N140	1,95	30.1	715	2346	2,35	36.3	820	2690
						N540	2,18	33.6	760	2493	2,44	37.7	858	2815
						N150	2,01	31.0	727	2385	2,40	37.0	829	2720
8,4	130	Barnes	TSX	64,5	2.539	N540	2,08	32.1	691	2267	2,42	37.3	819	2687
						N150	1,81	27.9	597	1959	2,31	35.6	765	2510
						N550	2,23	34.4	694	2277	2,60	40.1	821	2694
8,8	136	Lapua	Scenar-L	69,5	2.736	N140	1,80	27.8	731	2398	2,30	35.5	792	2598
						N540	2,12	32.7	732	2402	2,39	36.9	829	2720
						N150	2,03	31.3	699	2293	2,35	36.3	796	2612
						N550	2,29	35.3	735	2411	2,57	39.7	833	2733
9,0	139	Lapua	Scenar	69,5	2.736	N140	2,00	30.9	702	2302	2,25	34.7	773	2536
						N540	2,17	33.5	752	2468	2,42	37.4	836	2744
						N150	2,10	32.4	727	2384	2,33	36.0	787	2582
						N550	2,15	33.2	722	2369	2,44	37.7	815	2674
9,1	140	Lapua	Naturalis N563	66,0	2.598	N140	1,80	27.8	628	2060	2,11	32.6	738	2421
						N540	1,91	29.5	662	2172	2,21	34.1	774	2539
						N150	1,77	27.3	625	2051	2,11	32.6	738	2421
						N550	2,04	31.5	676	2218	2,37	36.6	786	2579
10,1	156	Lapua	Mega	63,2	2.488	N540	2,01	31.0	650	2133	2,26	34.9	753	2470
						N150	1,78	27.5	598	1962	2,12	32.7	710	2329
						N550	2,12	32.7	696	2283	2,43	37.5	769	2523

6,5 Creedmoor

Test barrel:	650 mm (25½”), 1 in 8” twist
Primers:	Small Rifle Magnum, Remington 7 1/2 BR, Federal 205
Cases:	Lapua, trim-to length 48,50 mm (1.909”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
6,1	95	Hornady	V-Max	68,0	2.677	N140	2,50	38.6	906	2972	2,73	42.1	981	3219
						N540	2,55	39.4	927	3041	2,79	43.1	1013	3323
						N150	2,50	38.6	916	3005	2,73	42.1	981	3219
						N550	2,76	42.6	933	3061	2,95	45.5	1018	3340
6,5	100	Barnes	TTSX BT	71,0	2.795	N140	2,20	34.0	802	2631	2,57	39.7	901	2956
						N540	2,40	37.0	850	2789	2,70	41.7	944	3097
						N150	2,15	33.2	811	2661	2,30	35.5	853	2799
						N550	2,62	40.4	867	2844	2,90C	44.8C	961	3153
						N160	2,70	41.7	870	2854	3,10C	47.8C	921	3022
6,5	100	Fox Bullets	Classic Hunter	69,0	2.717	N140	2,20	34.0	817	2680	2,54	39.2	920	3018

6,5 Creemoor

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N540	2,45	37.8	884	2900	2,69	41.5	969	3179
						N150	2,26	34.9	837	2746	2,54	39.2	924	3031
						N550	2,58	39.8	886	2907	2,86	44.1	981	3219
						N160	2,88	44.4	884	2900	3,12C	48.1C	961	3153
6,5	100	Lapua	FMJ	64,4	2.535	N140	2,34	36.1	840	2756	2,61	40.3	919	3015
						N540	2,44	37.7	863	2831	2,69	41.5	952	3123
						N150	2,29	35.3	814	2671	2,56	39.5	913	2995
						N550	2,68	41.4	884	2900	2,89	44.6	966	3169
						N555	2,90	44.8	906	2972	3,00F	46.3F	941	3087
6,5	100	Lapua	Scenar	68,0	2.677	N140	2,41	37.2	869	2851	2,74	42.3	979	3212
						N540	2,42	37.3	881	2890	2,74	42.3	1001	3284
						N150	2,39	36.9	862	2828	2,73	42.1	977	3205
7,0	108	Lapua	Scenar	68,0	2.677	N540	2,31	35.6	843	2766	2,64	40.7	970	3182
						N150	2,18	33.6	816	2677	2,63	40.6	936	3071
						N550	2,48	38.3	845	2772	2,83	43.7	972	3189
7,8	120	Barnes	TTSX BT	70,8	2.787	N140	2,00	30.9	736	2415	2,21	34.1	770	2526
						N150	1,80	27.8	678	2224	2,08	32.1	748	2454
						N550	2,24	34.6	751	2464	2,65	40.9	860	2822
						N555	2,61	40.3	803	2635	2,89	44.6	877	2877
						N160	2,35	36.3	762	2500	2,40	37.0	776	2546
7,8	120	Berger	BT Target	71,0	2.795	N140	2,17	33.5	758	2487	2,42	37.3	830	2723
						N540	2,30	35.5	803	2635	2,55	39.4	881	2890
						N150	2,18	33.6	767	2516	2,45	37.8	841	2759
						N550	2,44	37.7	810	2657	2,72	42.0	894	2933
						N555	2,77	42.7	843	2766	2,93C	45.2C	883	2897
						N160	2,72	42.0	809	2654	3,01C	46.5C	887	2910
7,8	120	Hornady	CX	67,5	2.657	N540	2,30	35.5	778	2552	2,50	38.6	848	2782
						N150	2,05	31.6	703	2306	2,33	36.0	789	2589
						N550	2,42	37.3	780	2559	2,65	40.9	859	2818
						N555	2,70	41.7	807	2648	3,00C	46.3C	877	2877
						N160	2,50	38.6	763	2503	2,97C	45.8C	859	2818
						N560	2,90	44.8	802	2631	3,17C	48.9C	886	2907
7,8	120	Hornady	GMX	70,5	2.776	N140	2,00	30.9	714	2343	2,28	35.2	800	2625
						N540	2,18	33.6	755	2477	2,44	37.7	854	2802
						N150	1,90	29.3	707	2320	2,27	35.0	800	2625
						N550	2,35	36.3	776	2546	2,63	40.6	869	2851
7,8	120	Lapua	Scenar-L	68,0	2.677	N540	2,18	33.6	790	2592	2,52	38.9	895	2936
						N150	2,03	31.3	756	2480	2,47	38.1	870	2854
						N550	2,38	36.7	804	2638	2,73	42.1	913	2995
						N555	2,67	41.2	838	2749	2,94C	45.4C	912	2992
7,8	120	Nosler	Ballistic Tip	69,5	2.736	N540	2,24	34.6	786	2579	2,51	38.7	867	2844
						N150	2,05	31.6	738	2421	2,36	36.4	821	2694
						N550	2,36	36.4	791	2595	2,64	40.7	874	2867
						N555	2,68	41.4	826	2710	2,96	45.7	900	2953
						N160	2,55	39.4	778	2552	2,89	44.6	871	2858
7,8	120	Sako	Blade 657H	71,0	2.795	N140	2,15	33.2	714	2343	2,43	37.5	797	2615
						N540	2,34	36.1	770	2526	2,58	39.8	857	2812
						N150	2,02	31.2	686	2251	2,32	35.8	781	2562
						N550	2,50	38.6	782	2566	2,72	42.0	868	2848
						N555	2,75	42.4	804	2638	2,95C	45.5C	862	2828
8,0	123	Fox Bullets	Classic Hunter	69,5	2.736	N140	2,01	31.0	696	2283	2,29	35.3	790	2592
						N540	2,15	33.2	752	2467	2,38	36.7	837	2746
						N150	1,97	30.4	700	2297	2,25	34.7	791	2595
						N550	2,25	34.7	757	2484	2,53	39.0	847	2779
						N555	2,53	39.0	788	2585	2,83	43.7	869	2851

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

6,5 Creedmoor

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N160	2,45	37.8	749	2457	2,79	43.1	845	2772
						N560	2,60	40.1	766	2513	2,87	44.3	853	2799
8,0	123	Lapua	Scenar	68,0	2.677	N540	2,31	35.6	799	2621	2,62	40.4	903	2963
						N150	2,22	34.3	769	2523	2,58	39.8	876	2874
						N550	2,46	38.0	802	2631	2,78	42.9	911	2989
						N555	2,67	41.2	834	2736	2,93C	45.2C	903	2963
8,2	127	Barnes	LRX BT	69,8	2.748	N140	2,05	31.6	703	2306	2,31	35.6	771	2530
						N540	2,20	34.0	740	2428	2,44	37.7	822	2697
						N150	2,05	31.6	689	2260	2,33	36.0	772	2533
						N550	2,35	36.3	757	2484	2,58	39.8	836	2743
						N555	2,60	40.1	775	2543	2,97C	45.8C	863	2831
						N160	2,50	38.6	738	2421	2,84	43.8	830	2723
						N560	2,70	41.7	765	2510	3,01	46.5	855	2805
8,4	129	Hornady	Interlock SP	68,5	2.697	N140	2,07	31.9	710	2329	2,33	36.0	785	2575
						N540	2,20	34.0	756	2480	2,48	38.3	835	2740
						N150	2,10	32.4	711	2333	2,35	36.3	783	2569
						N550	2,40	37.0	776	2546	2,63	40.6	848	2782
						N555	2,65	40.9	795	2608	2,91F	44.9F	870	2854
						N160	2,57	39.7	756	2480	2,86	44.1	831	2726
						N560	2,72	42.0	782	2566	3,00	46.6	861	2825
8,4	130	Barnes	TSX	69,0	2.717	N540	1,94	29.9	679	2228	2,33	36.0	804	2638
						N150	1,70	26.2	616	2021	2,22	34.3	769	2523
						N550	2,03	31.3	695	2280	2,50	38.6	819	2687
8,4	130	Berger	AR Hybrid OTM Tactical	68,0	2.677	N150	2,10	32.4	744	2441	2,37	36.6	816	2677
						N550	2,43	37.5	779	2556	2,63	40.6	856	2808
						N555	2,60	40.1	794	2605	2,86	44.1	869	2851
						N160	2,61	40.3	784	2572	2,86	44.1	858	2815
						N560	2,79	43.1	788	2585	3,06	47.2	876	2874
8,4	130	Berger	VLD Target	71,0	2.795	N540	2,21	34.1	765	2510	2,45	37.8	847	2779
						N150	2,10	32.4	738	2421	2,34	36.1	809	2654
						N550	2,37	36.6	779	2556	2,62	40.4	857	2812
						N555	2,65	40.9	806	2644	2,86	44.1	869	2851
						N160	2,61	40.3	784	2572	2,85	44.0	857	2812
						N560	2,78	42.9	790	2592	3,03	46.8	875	2871
						N565	2,88	44.4	795	2608	3,16	48.8	874	2867
8,4	130	Swift	Scirocco II	67,3	2.650	N150	2,03	31.3	728	2388	2,29	35.3	802	2631
						N550	2,32	35.8	753	2470	2,55	39.4	830	2723
						N555	2,55	39.4	782	2566	2,84	43.8	851	2792
						N160	2,50	38.6	790	2592	2,71	41.8	822	2697
						N165	2,85	44.0	795	2608	2,90F	44.8F	808	2651
						N560	2,67	41.2	765	2510	3,04	46.9	857	2812
8,7	135	Hornady	A-TIP	71,0	2.795	N150	2,05	31.6	718	2356	2,32	35.8	784	2572
						N555	2,56	39.5	786	2579	2,80	43.2	852	2795
						N160	2,50	38.6	760	2493	2,74	42.3	821	2694
						N165	2,80	43.2	790	2592	3,10C	47.8C	862	2828
						N560	2,70	41.7	777	2549	2,97	45.8	860	2822
						N565	2,80	43.2	773	2536	3,10C	47.8C	842	2762
8,8	136	Lapua	Scenar-L	68,0	2.677	N540	2,10	32.4	739	2425	2,44	37.7	840	2756
						N150	2,08	32.1	724	2375	2,48	38.3	833	2733
						N550	2,32	35.8	756	2480	2,66	41.1	865	2838
						N555	2,60	40.1	791	2595	2,86C	44.1C	860	2822
						N160	2,59	40.0	770	2526	2,98C	46.0C	870	2854
9,0	139	Fox Bullets	Classic Hunter	69,5	2.736	N140	1,80	27.8	613	2011	2,08	32.1	702	2303
						N540	2,00	30.9	677	2221	2,20	34.0	757	2484
						N150	1,82	28.1	625	2051	2,07	31.9	709	2326

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

6,5 Creedmoor cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N550	2,08	32.1	687	2254	2,34	36.1	776	2546
						N555	2,33	36.0	721	2365	2,62	40.4	799	2621
						N160	2,29	35.3	683	2241	2,58	39.8	772	2533
						N560	2,38	36.7	698	2290	2,66	41.1	788	2585
9,0	139	Lapua	Scenar	69,0	2.717	N540	2,00	30.9	713	2339	2,38	36.7	817	2680
						N150	1,90	29.3	690	2264	2,30	35.5	793	2602
						N550	2,20	34.0	735	2411	2,57	39.7	841	2759
						N555	2,45	37.8	762	2500	2,76	42.6	838	2749
						N160	2,14	33.0	700	2297	2,73	42.1	833	2733
						N560	2,62	40.4	754	2474	2,88	44.4	832	2730
9,1	140	Berger	Hybrid Target	69,0	2.717	N150	2,03	31.3	710	2329	2,29	35.3	778	2552
						N550	2,29	35.3	745	2444	2,53	39.0	816	2677
						N555	2,60	40.1	779	2556	2,81	43.4	835	2740
						N160	2,41	37.2	744	2441	2,71	41.8	813	2667
						N560	2,66	41.1	758	2487	2,94	45.4	837	2746
						N565	2,77	42.7	767	2516	3,05F	47.1F	833	2733
9,1	140	Lapua	Naturalis N563	69,2	2.724	N540	1,88	29.0	671	2201	2,20	34.0	769	2523
						N150	1,67	25.8	605	1985	2,05	31.6	713	2339
						N550	1,98	30.6	678	2224	2,33	36.0	776	2546
9,1	140	Nosler	Accubond	71,0	2.795	N540	1,96	30.2	685	2247	2,30	35.5	790	2592
						N150	1,87	28.9	664	2178	2,27	35.0	770	2526
						N550	2,08	32.1	697	2287	2,48	38.3	808	2651
9,1	140	Nosler	Ballistic Tip	68,8	2.709	N540	2,09	32.3	706	2316	2,33	36.0	777	2549
						N150	1,94	29.9	660	2165	2,19	33.8	732	2402
						N550	2,23	34.4	717	2352	2,45	37.8	787	2582
						N555	2,42	37.3	736	2415	2,72	42.0	808	2651
						N160	2,37	36.6	701	2300	2,67	41.2	780	2559
						N560	2,57	39.7	741	2431	2,87	44.3	818	2684
9,2	142	Sierra	HPBT	68,5	2.697	N150	1,97	30.4	684	2244	2,22	34.3	752	2467
						N550	2,30	35.5	737	2418	2,53	39.0	812	2664
						N555	2,50	38.6	748	2454	2,72	42.0	818	2684
						N160	2,38	36.7	718	2356	2,68	41.4	801	2628
						N560	2,63	40.6	752	2467	2,86	44.1	828	2717
						N565	2,75	42.4	751	2464	3,04	46.9	829	2720
9,3	143	Hornady	ELD-X	68,8	2.709	N150	1,98	30.6	695	2280	2,23	34.4	763	2503
						N550	2,24	34.6	741	2431	2,44	37.7	801	2628
						N555	2,45	37.8	742	2434	2,70	41.7	812	2664
						N160	2,36	36.4	729	2392	2,68	41.4	801	2628
						N560	2,63	40.6	749	2457	2,91	44.9	833	2733
						N565	2,74	42.3	760	2493	3,05	47.1	824	2703
9,3	144	Berger	Long Range Hybrid Target	71,0	2.795	N150	2,00	30.9	681	2234	2,29	35.3	750	2461
						N550	2,30	35.5	739	2425	2,53	39.0	808	2651
						N555	2,57	39.7	778	2552	2,80	43.2	837	2746
						N160	2,50	38.6	722	2369	2,79	43.1	804	2638
						N560	2,70	41.7	767	2516	2,89	44.6	835	2740
						N565	2,80	43.2	775	2543	3,05C	47.1C	837	2746
9,3	144	Lapua	FMJBT	69,0	2.717	N540	1,85	28.5	674	2211	2,26	34.9	788	2585
						N150	1,79	27.6	662	2172	2,29	35.3	781	2562
						N550	2,03	31.3	695	2280	2,44	37.7	812	2664
						N555	2,40	37.0	732	2402	2,67	41.2	802	2631
						N160	2,17	33.5	683	2241	2,61	40.3	782	2566
						N560	2,57	39.7	737	2418	2,86	44.1	823	2700
						N565	2,69	41.5	749	2457	2,96	45.7	821	2694
9,9	153	Hornady	A-TIP	70,7	2.783	N160	2,25	34.7	685	2247	2,51	38.7	742	2434
						N165	2,40	37.0	684	2244	2,86	44.1	785	2575

6,5 Creedmoor cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N560	2,45	37.8	704	2310	2,75	42.4	787	2582
						N565	2,65	40.9	726	2382	2,96C	45.7C	797	2615
9,9	153.5	Berger	Long Range Hybrid Target	71,0	2.795	N540	2,08	32.1	701	2300	2,33	36.0	770	2526
						N150	1,97	30.4	671	2201	2,22	34.3	739	2425
						N550	2,26	34.9	709	2326	2,47	38.1	776	2546
						N555	2,45	37.8	729	2392	2,70	41.7	798	2618
						N160	2,42	37.3	714	2343	2,68	41.4	783	2569
						N165	2,72	42.0	746	2448	3,04C	46.9C	817	2680
						N560	2,60	40.1	723	2372	2,84	43.8	800	2625
						N565	2,70	41.7	737	2418	3,03C	46.8C	807	2648
10,1	156	Berger	EOL Elite Hunter	71,0	2.795	N550	2,25	34.7	692	2270	2,51C	38.7C	770	2526
						N555	2,60	40.1	739	2425	2,82C	43.5C	790	2592
						N160	2,50	38.6	706	2316	2,74C	42.3C	760	2493
						N165	2,75	42.4	712	2336	3,05C	47.1C	791	2595
						N560	2,67	41.2	721	2365	2,92C	45.1C	800	2625
						N565	2,80	43.2	730	2395	3,00C	46.3C	784	2572
10,1	156	Lapua	Mega	68,5	2.697	N540	1,83	28.2	635	2083	2,20	34.0	739	2425
						N150	1,71	26.4	603	1978	2,17	33.5	727	2385
						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
10,1	156	Norma	Vulkan	69,0	2.717	N140	1,82	28.1	629	2064	2,05	31.6	690	2264
						N540	1,82	28.1	632	2073	2,13	32.9	714	2343
						N150	1,76	27.2	618	2028	1,99	30.7	680	2231
						N550	1,98	30.6	656	2152	2,30	35.5	739	2425
						N160	2,23	34.4	676	2218	2,52	38.9	749	2457
						N560	2,40	37.0	689	2260	2,66	41.1	764	2507
						N565	2,52	38.9	703	2306	2,80	43.2	770	2526

C = Compressed load F = Case full

6,5 PRC

Test barrel:	610 mm (24”), 1 in 8” twist
Primers:	Large Rifle Magnum, Federal 215
Cases:	Lapua, trim-to length 51,18 mm (2.015”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
8,4	129	Hornady	Interlock SP	71,0	2.795	N555	2,90	44.8	823	2700	3,26	50.3	896	2940
						N165	3,00	46.3	813	2667	3,35	51.7	891	2923
						N560	3,15	48.6	844	2769	3,43	52.9	916	3005
						N565	3,25	50.2	834	2736	3,64	56.2	916	3005
						N170	3,35	51.7	824	2703	3,70	57.1	897	2943
						N570	3,24	50.0	839	2753	3,76	58.0	935	3068
8,4	130	Berger	VLD Target	75,0	2.953	N555	3,13	48.3	852	2795	3,40	52.5	921	3022
						N165	3,44	53.1	860	2822	3,73	57.6	932	3058
						N560	3,30	50.9	857	2812	3,55	54.8	927	3041
						N565	3,45	53.2	863	2831	3,70	57.1	933	3061
						N170	3,54	54.6	845	2772	3,84	59.3	917	3009
						N570	3,62	55.9	872	2861	3,96	61.1	954	3130
8,7	135	Hornady	A-TIP	75,0	2.953	N555	2,90	44.8	816	2677	3,30	50.9	895	2936
						N160	2,90	44.8	812	2664	3,13	48.3	868	2848
						N165	3,25	50.2	831	2726	3,56	54.9	903	2963
						N560	3,15	48.6	831	2726	3,45	53.2	906	2972
						N565	3,37	52.0	836	2743	3,72	57.4	914	2999
						N568	3,60	55.6	839	2753	3,95C	61.0C	905	2969
8,8	136	Lapua	Scenar-L	75,0	2.953	N165	2,80	43.2	783	2569	3,20	49.4	849	2785

6,5 PRC

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N565	3,07	47.4	808	2651	3,47	53.6	889	2917
						N170	2,97	45.8	770	2526	3,47	53.6	859	2818
						N568	3,27	50.5	813	2667	3,76	58.0	900	2953
9,0	139	Fox Bullets	Classic Hunter	69,5	2.736	N165	2,81	43.4	749	2457	3,32	51.2	853	2799
						N565	3,11	48.0	794	2605	3,47	53.6	876	2874
						N170	3,23	49.8	774	2539	3,61	55.7	860	2822
						N570	3,40	52.5	823	2700	3,74	57.7	900	2953
9,0	139	Lapua	GB458 Scenar	74,2	2.921	N165	2,90	44.8	781	2562	3,26	50.3	847	2779
						N565	3,00	46.3	791	2595	3,42	52.8	873	2864
						N170	2,90	44.8	763	2503	3,45	53.2	854	2802
						N568	3,25	50.2	801	2628	3,67	56.6	882	2894
						N570	3,15	48.6	814	2671	3,49	53.9	892	2927
						24N41	3,21	49.5	772	2533	3,63	56.0	853	2799
9,1	140	Hornady	ECX	70,0	2.756	N565	3,00	46.3	754	2474	3,40	52.5	839	2753
						N170	3,12	48.1	740	2428	3,58	55.2	835	2740
						N568	3,15	48.6	755	2477	3,61C	55.7C	845	2772
						N570	3,00	46.3	760	2493	3,35	51.7	845	2772
9,1	140	Hornady	GMX	71,5	2.815	N165	2,80	43.2	754	2474	3,07	47.4	812	2664
						N565	2,90	44.8	760	2493	3,24	50.0	836	2743
						N170	2,98	46.0	737	2418	3,38	52.2	824	2703
						N568	3,09	47.7	763	2503	3,48	53.7	847	2779
						N570	3,02	46.6	783	2569	3,35	51.7	862	2828
						24N41	3,17	48.9	745	2444	3,68C	56.8C	838	2749
9,1	140	Hornady	SST	74,5	2.933	N565	3,00	46.3	794	2605	3,46	53.4	878	2881
						N170	3,25	50.2	808	2651	3,53	54.5	864	2835
						N568	3,28	50.6	806	2644	3,75	57.9	888	2913
						N570	3,15	48.6	813	2667	3,65	56.3	901	2956
9,1	140	Lapua	Naturalis N563	69,5	2.736	N165	2,80	43.2	759	2490	3,03	46.8	792	2598
						N565	2,88	44.4	749	2457	3,23	49.8	828	2717
						N170	2,80	43.2	744	2441	3,15	48.6	794	2605
						N568	3,15	48.6	767	2516	3,50	54.0	844	2769
						N570	2,95	45.5	774	2539	3,29	50.8	846	2776
						24N41	2,90	44.8	714	2343	3,40	52.5	801	2628
9,2	142	Sierra	HPBT	74,5	2.933	N170	3,00	46.3	776	2546	3,27	50.5	817	2680
						N570	3,00	46.3	802	2631	3,41	52.6	865	2838
						20N29	3,30	50.9	783	2569	3,95F	61.0F	856	2808
9,3	144	Berger	Long Range Hybrid Target	75,0	2.953	N165	2,85	44.0	761	2497	3,25	50.2	840	2756
						N565	3,20	49.4	820	2690	3,51	54.2	862	2828
						N170	3,19	49.2	771	2530	3,55	54.8	844	2769
						N568	3,40	52.5	809	2654	3,82	59.0	870	2854
						N570	3,40	52.5	830	2723	3,61	55.7	883	2897
						24N41	3,25	50.2	776	2546	3,63	56.0	835	2740
9,3	144	Lapua	FMJBT	72,5	2.854	N555	3,00	46.3	804	2638	3,18	49.1	844	2769
						N160	3,00	46.3	813	2667	3,08	47.5	830	2723
						N165	3,08	47.5	785	2575	3,40	52.5	856	2808
						N560	3,00	46.3	783	2569	3,33	51.4	860	2822
						N565	3,16	48.8	793	2602	3,49	53.9	864	2835
						N170	3,18	49.1	767	2516	3,52	54.3	843	2766
						N568	3,41	52.6	794	2605	3,81	58.8	873	2864
						N570	3,21	49.5	801	2628	3,58	55.2	878	2881
						24N41	3,28	50.6	766	2513	3,72	57.4	845	2772
9,9	153	Hornady	A-TIP	75,0	2.953	N165	2,89	44.6	743	2438	3,23	49.8	811	2661
						N565	2,98	46.0	748	2454	3,38	52.2	825	2707
						N170	3,14	48.5	741	2431	3,47	53.6	813	2667
						N568	3,16	48.8	752	2467	3,70	57.1	839	2753

6,5 PRC

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N570	3,02	46.6	765	2510	3,41	52.6	838	2749
						24N41	3,38	52.2	751	2464	3,80	58.6	828	2717
10,1	156	Berger	EOL Elite Hunter	75,0	2.953	N165	3,23	49.8	786	2579	3,50	54.0	851	2792
						N565	3,35	51.7	797	2615	3,62	55.9	858	2815
						N170	3,50	54.0	789	2589	3,76	58.0	850	2789
						N568	3,65	56.3	803	2635	3,90C	60.2C	857	2812
						N570	3,50	54.0	806	2644	3,81C	58.8C	878	2881

C = Compressed load F = Case full

.260 Remington

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

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
5,8	90	Speer	TNT	66,0	2.598	N140	2,58	39.8	913	2995	2,81	43.4	996	3268
						N540	2,75	42.4	960	3150	2,90	44.8	1017	3337
						N150	2,61	40.3	930	3051	2,84	43.8	1007	3304
						N550	2,83	43.7	948	3110	3,03	46.8	1031	3383
6,5	100	Fox Bullets	Classic Hunter	71,0	2.795	N140	2,35	36.3	824	2703	2,65	40.9	918	3012
						N540	2,53	39.0	873	2864	2,79	43.1	962	3156
						N150	2,36	36.4	832	2730	2,69	41.5	925	3035
						N160	2,95	45.5	874	2867	3,30C	50.9C	974	3196
6,5	100	Lapua	FMJ	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
6,5	100	Lapua	Scenar	69,0	2.717	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
6,5	100	Sierra	HPFB	67,5	2.657	N140	2,30	35.5	825	2708	2,59	39.9	906	2973
						N540	2,39	36.9	831	2725	2,67	41.2	912	2992
						N150	2,31	35.7	813	2669	2,61	40.3	892	2926
7,0	108	Lapua	Scenar	71,0	2.795	N540	2,35	36.2	802	2631	2,58	39.9	877	2876
						N150	2,28	35.1	791	2594	2,54	39.1	865	2837
						N160	2,66	41.0	814	2670	2,92	45.0	898	2947
7,8	120	Barnes	TTSX BT	70,4	2.772	N140	2,13	32.9	710	2329	2,45	37.8	805	2641
						N540	2,21	34.1	749	2457	2,51	38.7	848	2782
						N150	1,91	29.5	672	2205	2,40	37.0	800	2625
7,8	120	Berger	BT Target	71,0	2.795	N540	2,29	35.3	792	2598	2,57	39.7	876	2874
						N150	2,19	33.8	765	2510	2,49	38.4	847	2779
						N550	2,52	38.9	801	2628	2,76	42.6	886	2907
						N160	2,73	42.1	810	2657	2,97	45.8	885	2904
7,8[1)]	120	Lapua	Scenar-L	71,0	2.795	N540	2,29	35.3	739	2425	2,58	39.8	855	2805
						N150	2,32	35.8	761	2497	2,55	39.4	834	2736
						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
7,8	120	Nosler	Ballistic Tip	71,1	2.799	N140	2,18	33.6	750	2461	2,51	38.7	834	2736
						N150	2,20	34.0	755	2477	2,52	38.9	837	2746
						N160	2,78	42.9	806	2644	3,06	47.2	885	2904
7,8	120	Speer	SP	71,0	2.795	N540	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	Lapua	Scenar	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

.260 Remington cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N160	2,67	41.2	767	2516	2,89	44.6	841	2759
8,2	127	Barnes	LRX BT	71,0	2.795	N140	2,04	31.5	674	2211	2,37	36.6	768	2520
						N540	2,25	34.7	723	2372	2,48	38.3	808	2651
						N150	2,03	31.3	680	2231	2,33	36.0	765	2510
						N550	2,38	36.7	747	2451	2,65	40.9	833	2733
						N160	2,50	38.6	735	2411	2,89	44.6	822	2697
						N560	2,78	42.9	763	2503	3,09	47.7	847	2779
						N565	2,92	45.1	770	2526	3,23C	49.8C	840	2756
8,4	130	Barnes	TSX	70,8	2.787	N540	2,17	33.5	720	2362	2,44	37.7	810	2657
						N550	2,26	34.9	717	2352	2,59	40.0	816	2677
						N160	2,32	35.8	702	2303	2,75	42.4	808	2651
8,5	130	Berger	Hybrid OTM Tactical	71,0	2.795	N540	2,22	34.3	762	2500	2,51	38.7	844	2769
						N150	2,17	33.5	746	2448	2,46	38.0	821	2694
						N550	2,45	37.8	777	2549	2,70	41.7	855	2805
						N160	2,71	41.8	786	2579	2,97	45.8	862	2828
8,5	130	Berger	VLD Target	71,0	2.795	N140	2,11	32.6	739	2425	2,38	36.7	814	2671
						N540	2,19	33.8	761	2497	2,48	38.3	843	2766
						N150	2,09	32.3	741	2431	2,42	37.3	815	2674
						N550	2,46	38.0	778	2552	2,69	41.5	856	2808
						N555	2,59	40.0	792	2598	2,84	43.8	864	2835
8,5	130	Swift	Scirocco II	71,0	2.795	N140	2,06	31.8	719	2359	2,32	35.8	785	2575
						N540	2,12	32.7	734	2408	2,45	37.8	819	2687
						N150	2,02	31.2	722	2369	2,34	36.1	795	2608
						N550	2,30	35.5	742	2434	2,60	40.1	828	2717
						N560	2,74	42.3	762	2500	3,00	46.3	846	2776
8,8	135	Berger	Classic Hunter	71,0	2.795	N540	2,13	32.9	736	2415	2,42	37.3	819	2687
						N150	2,09	32.3	721	2365	2,37	36.6	799	2621
						N550	2,42	37.3	758	2487	2,65	40.9	833	2733
						N160	2,59	40.0	757	2484	2,85	44.0	830	2723
						N560	2,79	43.1	768	2520	3,02	46.6	846	2776
8,8[1)]	136	Lapua	Scenar-L	71,0	2.795	N550	2,47	38.1	755	2477	2,70	41.7	835	2740
						N555	2,60	40.1	769	2523	2,87C	44.3C	854	2802
						N160	2,71	41.8	758	2487	2,99C	46.1C	841	2759
						N560	2,82	43.5	762	2500	3,10C	47.8C	843	2766
9,0	139	Lapua	Scenar	71,0	2.795	N550	2,40	37.0	756	2480	2,56	39.5	810	2657
						N555	2,59	40.0	759	2490	2,85C	44.0C	834	2736
						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
9,1	140	Berger	Elite Hunter	71,0	2.795	N150	2,05	31.6	702	2303	2,34	36.1	781	2562
						N550	2,35	36.3	738	2421	2,57	39.7	811	2661
						N160	2,53	36.3	736	2415	2,79	43.1	811	2661
						N560	2,75	42.4	753	2470	2,99	46.1	834	2736
						N565	2,81	43.4	757	2484	3,17	48.9	838	2749
9,1	140	Berger	VLD Target	71,0	2.795	N540	2,12	32.7	724	2375	2,44	37.7	806	2644
						N150	2,11	32.6	712	2336	2,37	36.6	783	2569
						N550	2,39	36.9	744	2441	2,60	40.1	814	2671
						N160	2,61	40.3	751	2464	2,87	44.3	824	2703
						N560	2,72	42.0	750	2461	2,99	46.1	833	2733
						N565	2,82	43.5	756	2480	3,13	48.3	833	2733
9,1	140	Hornady	GMX	71,0	2.795	N140	1,85	28.5	581	1906	2,20	34.0	685	2247
						N540	2,10	32.4	671	2201	2,42	37.3	760	2493
						N150	1,85	28.5	583	1913	2,18	33.6	683	2241
						N550	2,25	34.7	677	2221	2,57	39.7	771	2530
						N555	2,43	37.5	696	2283	2,85C	44.0C	792	2598
						N560	2,75	42.4	723	2372	3,09C	47.7C	813	2667

.260 Remington cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
9,1	140	Lapua	Naturalis N507	73,3	2.886	N550	2,17	33.5	688	2257	2,54	39.2	776	2546
						N160	2,25	34.7	673	2208	2,61	40.3	766	2513
						N560	2,47	38.1	681	2234	2,84	43.8	779	2556
9,1	140	Lapua	Naturalis N563	70,0	2.756	N150	1,90	29.3	667	2188	2,20	34.0	747	2451
						N550	2,17	33.5	704	2310	2,49	38.4	793	2602
						N555	2,37	36.6	721	2365	2,69	41.5	797	2615
						N160	2,20	34.0	689	2260	2,62	40.4	787	2582
						N560	2,57	39.7	720	2362	2,92	45.1	817	2680
9,1[1)]	140	Nosler	Accubond	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
9,1	140	Swift	A-Frame	71,0	2.795	N550	2,04	31.5	670	2198	2,42	37.3	764	2507
						N160	1,85	28.5	627	2057	2,48	38.3	752	2467
						N560	2,40	37.0	700	2297	2,84	43.8	799	2621
						N565	2,59	40.0	724	2375	2,92	45.1	801	2628
9,3	144	Berger	Long Range Hybrid Target	71,0	2.795	N540	2,18	33.6	731	2398	2,47	38.1	803	2635
						N150	2,10	32.4	697	2287	2,35	36.3	767	2516
						N550	2,37	36.6	741	2431	2,60	40.1	813	2667
						N555	2,62	40.4	759	2490	2,93C	45.2C	833	2733
						N160	2,63	40.6	740	2428	2,90C	44.8C	813	2667
						N560	2,78	42.9	750	2461	3,07F	47.4F	832	2730
9,3	144	Lapua	FMJBT	71,0	2.795	N550	2,15	33.2	677	2221	2,49	38.4	768	2520
						N555	2,41	37.2	727	2385	2,66	41.1	799	2621
						N160	2,33	36.0	680	2231	2,66	41.1	762	2500
						N560	2,56	39.5	786	2579	2,90	44.8	780	2559
						N565	2,70	41.7	736	2415	2,99	46.1	812	2664
9,9	153.5	Berger	Long Range Hybrid Target	71,0	2.795	N540	2,12	32.7	691	2267	2,40	37.0	768	2520
						N150	2,00	30.9	664	2178	2,27	35.0	729	2392
						N550	2,30	35.5	707	2320	2,53	39.0	780	2559
						N555	2,60	40.1	734	2408	2,89C	44.6C	804	2638
						N160	2,60	40.1	710	2329	2,83C	43.7C	778	2552
						N560	2,75	42.4	709	2326	3,03C	46.8C	805	2641
10,1	155	Lapua	Mega	69,5	2.736	N160	2,14	33.0	651	2134	2,41	37.1	711	2332
						N165	2,52	38.8	673	2208	2,83	43.7	755	2478
						N560	2,37	36.6	651	2137	2,72	42.0	735	2412

C = Compressed load F = Case full [1)] Test barrel 600 mm (23½"), 1 in 9" twist

6,5 x 55 Swedish Mauser

Test barrel:	670 mm (26½"), 1 in 8½" twist
Primers:	Large Rifle
Cases:	Lapua, trim-to length 54,80 mm (2.157")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
5,5	85	Sierra	HP	71,1	2.799	N150	2,88	44.5	937	3073	3,03	46.8	1013	3323
6,5	100	Lapua	FMJ	70,0	2.756	N530	2,34	36.1	880	2887	2,53	39.0	938	3077
						N135	2,21	34.1	802	2631	2,55A	39.3A	894	2933
						N140	2,38	36.7	810	2657	2,75	42.4	910	2986
						N540	2,71	41.8	910	2986	2,90	44.8	973	3192
						N150	2,45	37.8	823	2700	2,79	43.0	920	3018
						N160	3,08	47.5	862	2828	3,39	52.3	946	3104
6,5	100	Lapua	Scenar	75,0	2.953	N530	2,35	36.3	899	2949	2,54	39.2	951	3120
						N135	2,15	33.2	790	2592	2,44	37.6	889	2917
						N140	2,32	35.8	790	2592	2,64	40.7	915	3002
						N540	2,35	36.3	790	2592	2,70	41.7	924	3031

6,5 x 55 SE

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N150	2,37	36.6	793	2602	2,69A	41.5A	870	2853
						N550	2,58	39.8	790	2592	2,97	45.8	938	3077
						N160	2,78	42.9	790	2592	3,01	46.4	928	3045
6,5	100	Sierra	HP	72,4	2.850	N140	2,62	40.4	860	2822	2,78	42.8	911	2990
						N540	2,65	40.9	858	2815	2,88	44.4	938	3078
						N150	2,69	41.5	860	2822	2,86	44.1	915	3003
						N550	2,82	43.5	884	2900	3,03	46.8	960	3150
						N160	3,13	48.3	878	2881	3,33	51.4	942	3090
7,0	108	Lapua	Scenar	78,0	3.071	N530	2,29	35.3	859	2818	2,48	38.3	912	2992
						N140	2,44	37.6	806	2644	2,64	40.8	880	2887
						N540	2,50	38.6	827	2713	2,69	41.5	897	2943
						N150	2,56	39.5	830	2723	2,69	41.5	870	2853
						N550	2,72	42.0	853	2798	2,94	45.4	936	3070
						N555	2,97	45.8	900	2953	3,16C	48.8C	957	3140
						N160	2,80	43.2	820	2690	3,05	47.1	920	3018
						N165	3,16	48.8	860	2822	3,28F	50.7F	902	2959
						N560	3,19	49.2	867	2843	3,35	51.7	950	3117
7,8	120	Barnes	TSX	71,2	2.803	N160	2,72	42.0	815	2674	2,99	46.1	886	2907
						N165	3,24	50.0	862	2828	3,40	52.5	909	2982
						N560	3,06	47.2	838	2749	3,25	50.2	902	2959
7,8	120	Lapua	Scenar-L	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
						N555	2,89	44.6	852	2795	3,05	47.1	904	2966
						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
7,8	120	Sierra	HPBT	76,8	3.024	N140	2,47	38.1	755	2477	2,63	40.5	852	2795
						N540	2,49	38.4	773	2536	2,69	41.5	818	2684
						N150	2,55	39.3	770	2526	2,71	41.7	839	2753
						N550	2,63	40.6	800	2625	2,88	44.5	888	2914
						N160	2,97	45.8	825	2707	3,29	50.7	907	2975
						N560	3,12	48.1	823	2700	3,41	52.7	932	3056
8,0	123	Lapua	Scenar	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
						N555	2,86	44.1	841	2759	3,04	46.9	899	2949
						N160	2,69	41.5	807	2648	2,92	45.1	869	2851
						N560	3,03	46.8	841	2759	3,19	49.2	898	2946
8,4	130	Barnes	TSX	74,5	2.930	N160	2,29	35.3	726	2382	2,72	42.0	814	2671
						N165	3,08	47.5	808	2651	3,32	51.2	870	2854
						N560	2,92	45.1	796	2612	3,14	48.5	860	2822
8,4	130	Norma	HPBT	80,0	3.150	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
						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
8,8	136	Lapua	Scenar-L	78,0	3.071	N540	2,39	36.9	785	2575	2,59	40.0	836	2743
						N150	2,29	35.3	753	2470	2,46	38.0	803	2635
						N550	2,57	39.7	800	2625	2,73	42.1	841	2759
						N555	2,75	42.4	803	2635	2,94	45.4	857	2812
						N160	2,73	42.1	778	2552	2,93	45.2	840	2756
						N165	3,02	46.6	813	2667	3,20	49.4	861	2825

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

6,5 x 55 SE

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N560	2,90	44.8	802	2631	3,07	47.4	857	2812
9,0	139	Lapua	Scenar	78,0	3.071	N540	2,35	36.3	764	2507	2,53	39.0	819	2687
						N150	2,12	32.7	706	2316	2,28	35.2	761	2497
						N550	2,37	36.6	737	2418	2,59	40.0	805	2641
						N555	2,66	41.1	784	2572	2,84	43.8	833	2733
						N160	2,40	37.0	732	2402	2,67	41.2	790	2592
						N165	2,86	44.1	766	2513	3,10	47.8	833	2733
						N560	2,73	42.1	736	2415	3,06	47.2	826	2710
9,0	139	Norma	HPBT	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
						N165	3,00	46.3	765	2510	3,23	49.9	833	2732
						N560	2,88	44.4	753	2470	3,20	49.4	846	2777
9,1	140	Berger	Hybrid Target	80,0	3.150	N150	2,10	32.4	692	2270	2,33	36.0	752	2467
						N550	2,40	37.0	729	2392	2,64	40.7	796	2612
						N160	2,44	37.7	715	2346	2,69	41.5	772	2533
						N165	2,85	44.0	754	2474	3,06	47.2	810	2657
						N560	2,84	43.8	761	2497	3,07	47.4	826	2710
						N565	2,93	45.2	773	2536	3,14	48.5	830	2723
9,1	140	Lapua	Naturalis N563	75,0	2.953	N540	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
						N165	2,55	39.4	751	2464	3,00	46.3	813	2667
						N560	2,71	41.8	763	2503	2,96	45.7	824	2703
9,1	140	Sierra	HPBT	79,0	3.110	N150	2,35	36.3	703	2306	2,54	39.1	765	2511
						N550	2,58	39.8	749	2457	2,73	42.1	806	2644
						N160	2,81	43.4	759	2490	3,03	46.7	819	2687
						N165	3,00	46.3	766	2513	3,24	50.0	834	2735
						N560	2,93	45.2	779	2556	3,13	48.3	844	2770
9,1	140	Swift	A-Frame	78,0	3.071	N150	1,65	25.5	585	1919	1,96	30.2	663	2175
						N160	1,57	24.2	560	1837	2,02	31.2	659	2162
						N560	2,25	34.7	668	2192	2,79	43.1	769	2523
						N565	2,58	39.8	716	2349	2,87	44.3	775	2543
9,3	144	Lapua	FMJBT	79,0	3.110	N150	2,04	31.5	659	2163	2,40	37.0	768	2520
						N160	2,64	40.7	717	2352	2,85	44.0	816	2677
						N165	2,70	41.7	720	2362	3,18	49.1	837	2746
						N560	2,91	44.8	756	2479	3,15	48.6	850	2789
						N170	3,08	47.5	715	2346	3,41C	52.6C	815	2674
						N570	3,11	48.0	750	2461	3,22F	49.7F	785	2575
10,0	155	Sierra	HPBT	79,0	3.110	N150	2,10	32.4	653	2142	2,33	36.0	711	2331
						N550	2,36	36.4	689	2260	2,60	40.1	746	2447
						N160	2,64	40.7	698	2290	2,97	45.9	769	2522
						N165	2,75	42.4	690	2264	3,08	47.6	769	2522
						N560	2,66	41.0	702	2303	2,93	45.2	779	2556
						N170	2,90	44.7	677	2221	3,32C	51.2C	779	2555
10,1	156	Lapua	Mega	73,0	2.874	N165	2,74	42.3	677	2222	3,17	49.0	755	2478
						N560	2,72	42.0	685	2248	3,11	48.0	773	2537
						N170	3,03	46.8	682	2238	3,32C	51.2C	746	2447
						N570	3,02	46.6	730	2395	3,20F	49.4F	774	2539

A = Accuracy load C = Compressed load F = Case full

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

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

Test barrel:	Sauer STR 200
Primers:	Large Rifle
Cases:	Lapua, trim-to length 54,80 mm (2.157”)

WARNING: This reloading data is intended to use at modern rifles in good condition such as Sauer, Sako or Blaser chambered to 6,5 x 55 SKAN or 6,5 x 55 SE
WARNING: DO NOT USE with Krag-Jörgensen, Mauser M1896 or similar rifles.
This data has max loads set at pressure of 380 MPa!
NOTE: Data contains velocity information for standard barrel lengths of Sauer STR200 rifles

Barrel length: 670 mm, 26½”

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Lapua	Scenar GB504	75,0	2.953	N530	2,07	31.9	800	2625	2,54	39.2	951	3120
						N135	2,18	33.6	800	2625	2,44	37.7	889	2917
						N140	2,35	36.3	800	2625	2,64	40.7	915	3002
						N540	2,40	37.0	800	2625	2,70	41.7	924	3031
						N150	2,42	37.3	800	2625	2,69	41.5	870	2854
						N550	2,60	40.1	800	2625	2,97	45.8	938	3077
						N160	2,80	43.2	800	2625	3,01	46.5	928	3045
7,0	108	Lapua	GB464 Scenar	78,0	3.071	N140	2,32	35.8	796	2610	2,70	41.7	890	2921
						N540	2,66	41.1	842	2762	2,95	45.5	942	3091
						N150	2,39	36.9	800	2624	2,78	42.9	898	2947
						N550	2,80	43.2	849	2785	3,04	46.9	940	3084
						N555	2,97	45.8	878	2881	3,16	48.8	935	3068
						N160	2,81	43.4	837	2745	3,16	48.8	929	3047
						N560	3,14	48.5	831	2726	3,50	54.0	949	3114
7,8	120	Lapua	GB547 Scenar-L	77,0	3.031	N135	2,08	32.1	739	2425	2,43	37.5	829	2720
						N140	2,18	33.6	761	2497	2,59	40.0	844	2769
						N540	2,32	35.8	800	2625	2,81	43.4	890	2920
						N150	2,31	35.6	751	2464	2,65	40.9	841	2759
						N550	2,62	40.4	816	2677	2,95	45.5	894	2933
						N555	2,89	44.6	836	2743	3,20	49.4	915	3002
						N160	2,84	43.8	772	2533	3,07	47.4	857	2812
						N560	3,03	46.8	810	2657	3,32	51.2	901	2956
8,0	123	Lapua	GB489 Scenar	78,0	3.071	N140	2,20	34.0	750	2462	2,55	39.4	833	2734
						N540	2,47	38.1	788	2586	2,79	43.1	881	2892
						N150	2,24	34.6	741	2432	2,60	40.1	830	2724
						N550	2,67	41.2	805	2641	2,94	45.4	883	2895
						N555	2,86	44.1	812	2664	3,17	48.9	909	2982
						N160	2,71	41.8	763	2502	3,02	46.6	845	2773
						N560	3,04	46.9	801	2628	3,27	50.5	888	2913
8,8	136	Lapua	GB546 Scenar-L	78,0	3.071	N540	2,39	36.9	736	2415	2,72	42.0	841	2759
						N150	2,29	35.3	711	2333	2,58	39.8	821	2694
						N550	2,57	39.7	757	2484	2,80	43.2	856	2808
						N555	2,75	42.4	789	2589	3,09	47.7	877	2877
						N160	2,73	42.1	741	2431	3,05	47.1	852	2795
						N165	3,02	46.6	779	2556	3,30C	50.9C	868	2848
						N560	2,90	44.8	786	2579	3,20	49.4	884	2900
9,0	139	Lapua	GB458 Scenar	78,0	3.071	N150	2,12	32.7	696	2284	2,40	37.0	781	2563
						N550	2,37	36.6	738	2421	2,72	42.0	825	2705
						N555	2,66	41.1	769	2523	2,99	46.1	873	2864
						N160	2,41	37.2	723	2373	2,84	43.8	817	2679
						N165	2,86	44.1	758	2488	3,25	50.2	847	2777
						N560	2,87	44.3	771	2529	3,18	49.1	866	2842

Barrel length: 700 mm, 27½”

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,0	108	Lapua	GB464 Scenar	78,0	3.071	N140	2,32	35.8	804	2639	2,70	41.7	900	2953
						N540	2,66	41.1	852	2795	2,95	45.5	953	3128
						N150	2,39	36.9	809	2654	2,78	42.9	908	2980
						N550	2,80	43.2	858	2815	3,04	46.9	948	3109
						N555	2,97	45.8	889	2917	3,16	48.8	945	3100
						N160	2,81	43.4	844	2769	3,16	48.8	937	3074
						N560	3,14	48.5	839	2753	3,50	54.0	959	3146
7,8	120	Lapua	GB547 Scenar-L	77,0	3.031	N135	2,08	32.1	744	2441	2,43	37.5	834	2736
						N140	2,18	33.6	767	2516	2,59	40.0	849	2785
						N540	2,32	35.8	801	2628	2,81	43.4	898	2946
						N150	2,31	35.6	754	2474	2,65	40.9	848	2782
						N550	2,62	40.4	820	2690	2,95	45.5	904	2966
						N555	2,89	44.6	842	2762	3,20	49.4	931	3054
						N160	2,84	43.8	784	2572	3,07	47.4	874	2867
						N560	3,03	46.8	820	2690	3,32	51.2	916	3005
8,0	123	Lapua	GB489 Scenar	78,0	3.071	N140	2,20	34.0	755	2477	2,55	39.4	838	2750
						N540	2,47	38.1	795	2607	2,79	43.1	889	2915
						N150	2,24	34.6	748	2454	2,60	40.1	838	2749
						N550	2,67	41.2	816	2676	2,94	45.4	894	2934
						N555	2,86	44.1	833	2733	3,17	48.9	922	3025
						N160	2,71	41.8	779	2557	3,02	46.6	864	2835
						N560	3,04	46.9	814	2669	3,27	50.5	902	2958
8,8	136	Lapua	GB546 Scenar-L	78,0	3.071	N540	2,39	36.9	742	2434	2,72	42.0	846	2776
						N150	2,29	35.3	718	2356	2,58	39.8	824	2703
						N550	2,57	39.7	763	2503	2,80	43.2	862	2828
						N555	2,75	42.4	795	2608	3,09	47.7	884	2900
						N160	2,73	42.1	748	2454	3,05	47.1	857	2812
						N165	3,02	46.6	787	2582	3,30	50.9	876	2874
						N560	2,90	44.8	794	2605	3,20	49.4	892	2927
9,0	139	Lapua	GB458 Scenar	78,0	3.071	N150	2,12	32.7	699	2295	2,40	37.0	785	2575
						N550	2,37	36.6	743	2438	2,72	42.0	830	2724
						N555	2,66	41.1	775	2543	2,99	46.1	881	2890
						N160	2,41	37.2	730	2395	2,84	43.8	824	2704
						N165	2,86	44.1	765	2508	3,25	50.2	854	2801
						N560	2,87	44.3	776	2546	3,18	49.1	872	2862

Barrel length: 740 mm, 29”

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,0	108	Lapua	GB464 Scenar	78,0	3.071	N140	2,32	35.8	816	2677	2,70	41.7	913	2995
						N540	2,66	41.1	865	2838	2,95	45.5	968	3176
						N150	2,39	36.9	821	2694	2,78	42.9	922	3025
						N550	2,80	43.2	870	2854	3,04	46.9	961	3153
						N555	2,97	45.8	900	2953	3,16	48.8	957	3140
						N160	2,81	43.4	854	2802	3,16	48.8	948	3110
						N560	3,14	48.5	850	2789	3,50	54.0	972	3189
7,8	120	Lapua	GB547 Scenar-L	77,0	3.031	N135	2,08	32.1	752	2467	2,43	37.5	842	2762
						N140	2,18	33.6	774	2539	2,59	40.0	856	2808
						N540	2,32	35.8	807	2648	2,81	43.4	907	2976
						N150	2,31	35.6	761	2497	2,65	40.9	856	2808
						N550	2,62	40.4	827	2713	2,95	45.5	917	3009
						N555	2,89	44.6	852	2795	3,20	49.4	946	3104
						N160	2,84	43.8	791	2595	3,07	47.4	899	2949

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

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N560	3,03	46.8	828	2717	3,32	51.2	932	3058
8,0	123	Lapua	GB489 Scenar	78,0	3.071	N140	2,20	34.0	761	2497	2,55	39.4	845	2772
						N540	2,47	38.1	803	2635	2,79	43.1	898	2946
						N150	2,24	34.6	757	2484	2,60	40.1	848	2782
						N550	2,67	41.2	830	2723	2,94	45.4	910	2986
						N555	2,86	44.1	841	2759	3,17	48.9	940	3084
						N160	2,71	41.8	802	2631	3,02	46.6	889	2917
						N560	3,04	46.9	830	2723	3,27	50.5	920	3018
8,8	136	Lapua	GB546 Scenar-L	78,0	3.071	N540	2,39	36.9	749	2457	2,72	42.0	852	2795
						N150	2,29	35.3	726	2382	2,58	39.8	830	2723
						N550	2,57	39.7	769	2523	2,80	43.2	870	2854
						N555	2,75	42.4	803	2635	3,09	47.7	895	2936
						N160	2,73	42.1	755	2477	3,05	47.1	865	2838
						N165	3,02	46.6	795	2608	3,30	50.9	885	2904
						N560	2,90	44.8	801	2628	3,20	49.4	901	2956
9,0	139	Lapua	GB458 Scenar	78,0	3.071	N150	2,12	32.7	704	2310	2,40	37.0	790	2592
						N550	2,37	36.6	750	2461	2,72	42.0	838	2749
						N555	2,66	41.1	784	2572	2,99	46.1	869	2851
						N160	2,41	37.2	735	2411	2,84	43.8	830	2723
						N165	2,86	44.1	773	2536	3,25	50.2	863	2831
						N560	2,87	44.3	783	2569	3,18	49.1	880	2887

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						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Lapua	FMJ	70,0	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	Lapua	Scenar	75,0	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
7,0	108	Lapua	Scenar	79,0	3.110	N550	2,97	45.8	920	3018	3,39	52.3	1027	3368
						N160	3,08	47.5	906	2972	3,49	53.9	1008	3308
						N165	3,52	54.3	922	3025	4,04	62.4	1042	3419
						N560	3,47	53.5	927	3041	3,81	58.9	1031	3384
7,1	110	Lehigh Defense	Match Solid Bullet	76,5	3.012	N555	2,93	45.2	869	2851	3,51	54.2	965	3166
						N165	2,96	45.7	849	2785	3,40	52.5	943	3094
						N560	2,99	46.1	857	2812	3,47	53.6	970	3182
						N565	3,15	48.6	862	2828	3,82C	59.0C	979	3212
						N570	3,40	52.5	886	2907	3,85C	59.4C	973	3192
7,8	120	Lapua	Scenar-L	79,0	3.110	N550	2,83	43.7	822	2697	3,26	50.3	940	3084
						N160	2,86	44.1	801	2628	3,53	54.5	930	3051
						N165	3,40	52.5	834	2736	3,80	58.6	942	3091
						N560	3,32	51.2	831	2726	3,73	57.6	956	3136
8,0	123	Lapua	Scenar	79,0	3.110	N160	2,59	40.0	795	2608	3,29	50.8	925	3035
						N165	3,03	46.8	830	2723	3,65	56.4	947	3106
						N560	3,28	50.6	867	2844	3,65	56.3	963	3158
8,2	127	Barnes	LRX BT	77,5	3.051	N160	2,78	42.9	806	2644	3,07	47.4	876	2874
						N165	2,97	45.8	823	2700	3,35	51.7	902	2959
						N560	3,03	46.8	827	2713	3,38	52.2	912	2992
						N565	3,27	50.5	849	2785	3,55	54.8	921	3022

6,5 - 284 Norma

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
8,4	129	Hornady	Interlock SP	72,9	2.870	N555	3,04	46.9	833	2733	3,36	51.9	906	2972
						N165	3,00	46.3	813	2667	3,60	55.6	909	2982
						N560	3,22	49.7	841	2759	3,57	55.1	925	3035
						N565	3,37	52.0	848	2782	3,71	57.3	924	3031
						N570	3,62	55.9	867	2844	3,85C	59.4C	920	3018
8,4	130	Nosler	RDF	79,0	3.110	N555	2,99	46.1	829	2720	3,41	52.6	907	2976
						N160	2,88	44.4	809	2654	3,26	50.3	886	2907
						N165	3,20	49.4	836	2743	3,66	56.5	913	2995
						N560	3,25	50.2	847	2779	3,58	55.2	925	3035
						N565	3,45	53.2	852	2795	3,77	58.2	927	3041
						N570	3,71	57.3	880	2887	3,80C	58.6C	898	2946
8,8	136	Lapua	Scenar-L	79,0	3.110	N550	2,75	42.4	770	2526	3,13	48.3	879	2884
						N160	2,83	43.7	754	2474	3,38	52.2	868	2848
						N165	3,26	50.3	783	2569	3,65	56.3	892	2927
						N560	3,22	49.7	795	2608	3,62	55.9	935	3068
9,0	139	Lapua	Scenar	79,0	3.110	N160	2,80	43.2	772	2533	3,06	47.2	835	2740
						N560	3,12	48.1	793	2602	3,63	56.0	919	3015
9,1	140	Berger	Hybrid Target	81,0	3.189	N555	2,85	44.0	796	2612	3,21	49.5	865	2838
						N160	2,75	42.4	782	2566	3,10	47.8	856	2808
						N165	3,00	46.3	797	2615	3,43	52.9	882	2894
						N560	3,00	46.3	807	2648	3,32	51.2	883	2897
						N565	3,18	49.1	822	2697	3,52	54.3	895	2936
						N570	3,45	53.2	848	2782	3,77	58.2	922	3025
9,1	140	Hornady	BTHP Match	78,0	3.071	N555	2,88	44.4	789	2589	3,23	49.8	862	2828
						N160	2,68	41.4	760	2493	3,06	47.2	839	2753
						N165	2,96	45.7	782	2566	3,33	51.4	857	2812
						N560	3,06	47.2	807	2648	3,40	52.5	885	2904
						N565	3,22	49.7	810	2657	3,57	55.1	886	2907
						N570	3,48	53.7	836	2743	3,80C	58.6C	905	2969
9,1	140	Hornady	ELD Match	79,0	3.110	N165	2,70	41.7	764	2507	3,02	46.6	815	2674
						N565	3,05	47.1	794	2605	3,52	54.3	878	2881
						N568	3,34	51.5	801	2628	3,80C	58.6C	879	2884
						N570	3,45	53.2	869	2851	3,65	56.3	900	2953
9,1	140	Hornady	SST	77,0	3.031	N555	2,80	43.2	780	2559	3,24	50.0	859	2818
						N160	2,65	40.9	753	2470	3,01	46.5	826	2710
						N165	2,90	44.8	777	2549	3,38	52.2	859	2818
						N560	3,10	47.8	806	2644	3,42	52.8	878	2881
						N565	3,17	48.9	803	2635	3,57	55.1	881	2890
						N570	3,40	52.5	825	2707	3,80C	58.6C	897	2943
9,1	140	Lapua	Naturalis N507	74,7	2.941	N160	2,87	44.3	753	2470	3,20	49.4	824	2703
						N165	3,17	48.9	768	2520	3,55	54.8	864	2835
						N560	3,21	49.5	786	2579	3,55	54.8	875	2871
9,1	140	Lapua	Naturalis N563	75,0	2.953	N550	2,58	39.8	737	2418	3,01	46.5	832	2730
						N160	2,61	40.3	713	2339	3,12	48.1	826	2710
						N165	2,57	39.7	702	2303	3,43	52.9	851	2792
						N560	2,88	44.4	737	2418	3,44	53.1	861	2825
9,1	140	Nosler	RDF	79,2	3.118	N555	2,85	44.0	788	2585	3,22	49.7	863	2831
						N165	3,07	47.4	801	2628	3,42	52.8	871	2858
						N560	3,15	48.6	817	2680	3,43	52.9	885	2904
						N565	3,18	49.1	804	2638	3,56	54.9	880	2887
						N568	3,45	53.2	815	2674	3,82C	59.0C	877	2877
						N570	3,45	53.2	833	2733	3,85C	59.4C	910	2986
9,2	142	Nosler	Accubond Long Range	79,0	3.110	N165	2,90	44.8	774	2539	3,28	50.6	849	2785
						N560	3,00	46.3	795	2608	3,28	50.6	865	2838
						N565	3,06	47.2	797	2615	3,48	53.7	871	2858

6,5 - 284 Norma cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N568	3,38	52.2	803	2635	3,75C	57.9C	866	2841
						N570	3,30	50.9	813	2667	3,76	58.0	895	2936
9,3	144	Berger	Long Range Hybrid Target	81,2	3.197	N160	3,00	46.3	803	2635	3,28	50.6	868	2848
						N165	3,35	51.7	829	2720	3,60	55.6	897	2943
						N560	3,10	47.8	811	2661	3,39	52.3	882	2894
						N565	3,27	50.5	808	2651	3,60	55.6	881	2890
						N570	3,65	56.3	840	2756	3,85C	59.4C	887	2910
9,3	144	Lapua	FMJBT	79,0	3.110	N160	2,80	43.2	783	2569	3,14	48.5	841	2759
						N165	2,90	44.7	766	2513	3,61	55.7	875	2871
						N560	3,18	49.1	802	2631	3,43	52.9	876	2874
						N570	3,54	54.6	798	2618	3,70F	57.1F	830	2723
9,9	153	Hornady	A-TIP	80,3	3.161	N555	2,70	41.7	743	2438	3,08	47.5	820	2690
						N160	2,60	40.1	726	2382	2,89	44.6	792	2598
						N165	3,10	47.8	783	2569	3,39	52.3	844	2769
						N560	2,90	44.8	764	2507	3,21	49.5	834	2736
						N565	3,16	48.8	786	2579	3,46	53.4	854	2802
						N568	3,40	52.5	791	2595	3,75C	57.9C	864	2835
						N570	3,20	49.4	792	2598	3,68	56.8	877	2877
9,9	153.5	Berger	Long Range Hybrid Target	81,5	3.209	N555	2,60	40.1	722	2369	2,98	46.0	795	2608
						N165	3,10	47.8	783	2569	3,39	52.3	850	2789
						N560	2,80	43.2	746	2448	3,06	47.2	811	2661
						N565	3,20	49.4	789	2589	3,50	54.0	861	2825
						N170	2,75	42.4	713	2339	3,20	49.4	794	2605
						N568	3,40	52.5	798	2618	3,75C	57.9C	850	2789
						N570	3,00	46.3	767	2516	3,42	52.8	839	2753
10,1	156	Berger	EOL Elite Hunter	80,5	3.169	N555	2,88	44.4	760	2493	3,17	48.9	821	2694
						N165	3,20	49.4	774	2539	3,47	53.6	840	2756
						N560	3,12	48.1	777	2549	3,43	52.9	850	2789
						N565	3,18	49.1	775	2543	3,50	54.0	843	2766
						N568	3,43	52.9	776	2546	3,76C	58.0C	850	2789
						N570	3,35	51.7	789	2589	3,71C	57.3C	865	2838
10,1	156	Lapua	Mega	74,0	2.913	N560	3,09	47.7	755	2477	3,45	53.2	841	2759
						N570	3,46	53.4	781	2562	3,65	56.3	808	2651
10,4	160	Hornady	Interlock	77,0	3.031	N165	2,76	42.6	707	2320	3,20	49.4	785	2575
						N565	3,18	49.1	762	2500	3,50	54.0	830	2723
						N570	3,38	52.2	784	2572	3,71C	57.3C	857	2812

C = Compressed load F = Case full

.270 WSM

Test barrel:	520 mm (20½"), 1 in 9" twist
Primers:	Large Rifle Magnum
Cases:	Winchester, trim-to length 53,10 mm (2.091")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
5,8	90	Sierra	HP	68,6	2.701	N160	4,00	61.7	1021	3350	4,47	69.0	1130	3707
						N165	4,59	70.8	1041	3415	4,75F	73.3F	1083	3553
						N560	4,39	67.7	1020	3346	4,78	73.8	1135	3724
9,1	140	Barnes	XFB	71,0	2.795	N160	3,20	49.4	800	2625	3,71	57.2	899	2949
						N165	3,75	57.9	832	2730	4,10	63.3	913	2995
						N560	3,49	53.9	806	2644	3,93	60.6	918	3012
10,4	160	Nosler	Partition	71,0	2.795	N160	3,20	49.4	737	2418	3,47	53.5	825	2707
						N165	3,30	50.9	769	2523	3,90	60.2	863	2831
						N560	3,36	51.8	774	2539	3,82	58.9	873	2864

F = Case full

.270 Winchester

Test barrel:	620 mm (24⅜"), 1 in 10" twist
Primers:	Large Rifle
Cases:	Remington, trim-to length 64,30 mm (2.531")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Speer	Spitzer	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	Sierra	MatchKing	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	Remington	SP	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	Rhino	Solid Shank	83,0	3.268	N555	3,30	50.9	873	2864	3,53	54.5	930	3051
						N160	3,20	49.4	833	2733	3,52	54.3	905	2969
						N165	3,60	55.6	873	2864	3,83	59.1	932	3058
						N560	3,40	52.5	852	2795	3,67	56.6	924	3031
8,4	130	Speer	SPBT	83,0	3.268	N165	3,54	54.6	850	2787	4,02	62.0	942	3089
8,4	130	Swift	Scirocco II	84,6	3.331	N555	3,26	50.3	874	2867	3,53	54.5	940	3084
						N160	2,95	45.5	818	2684	3,51	54.2	912	2992
						N165	3,50	54.0	876	2874	3,90C	60.2C	951	3120
						N560	3,50	54.0	863	2831	3,82C	59.0C	946	3104
						N565	3,60	55.6	863	2831	3,92C	60.5C	935	3068
8,8	135	Sierra	HPBT	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	Barnes	TSX	81,5	3.209	N550	2,44	37.7	737	2418	3,01	46.5	860	2822
						N165	2,90	44.8	772	2533	3,42	52.8	862	2828
						N560	3,12	48.1	798	2618	3,48	53.7	882	2894
9,1	140	Rhino	Solid Shank	83,0	3.268	N160	3,05	47.1	792	2598	3,42	52.8	873	2864
						N165	3,40	52.5	823	2700	3,68	56.8	893	2930
						N560	3,25	50.2	813	2667	3,56	54.9	893	2930
9,1	140	Swift	A-Frame	82,0	3.228	N550	2,63	40.6	758	2487	3,08	47.5	859	2818
						N165	3,05	47.1	790	2592	3,59	55.4	867	2844
						N560	3,12	48.1	789	2589	3,60	55.6	888	2913
9,7	150	Barnes	TSX	82,0	3.228	N550	2,44	37.7	712	2336	2,93	45.2	821	2694
						N165	2,71	41.8	713	2339	3,27	50.5	819	2687
						N560	2,90	44.8	746	2448	3,36	51.9	847	2779
9,7	150	Nosler	Ballistic Tip	83,5	3.287	N160	2,92	45.1	730	2395	3,39	52.3	842	2762
						N165	3,10	47.8	734	2408	3,74	57.7	870	2854
						N560	3,13	48.3	742	2434	3,66	56.5	870	2854
9,7	150	Swift	A-Frame	84,6	3.331	N555	2,90	44.8	786	2579	3,26	50.3	857	2812
						N160	2,75	42.4	745	2444	3,10	47.8	817	2680
						N165	3,10	47.8	786	2579	3,59	55.4	864	2835
						N560	3,20	49.4	795	2608	3,59	55.4	880	2887
						N565	3,30	50.9	801	2628	3,65	56.3	871	2858
10,4	160	Nosler	Partition	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 load may cause excessive chamber pressure and must not be used!

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Remington	PSP	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	Remington	PSPCL	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	Sierra	HPBT	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	Nosler	Partition	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, .308 Win. necked down, trim-to length 51,5 mm (2.028")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,8	120	Sierra	SP	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
						N540	2,68	41.4	867	2844	2,95	45.5	956	3136
						N150	2,71	41.8	861	2825	2,97	45.8	936	3071
8,4	130	Sierra	HPBT	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
						N540	2,63	40.6	850	2789	2,83	43.7	918	3012
						N150	2,62	40.4	825	2707	2,85	44.0	899	2949
9,1	140	Nosler	Ballistic Tip	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
						N540	2,54	39.2	801	2628	2,77	42.7	877	2877
						N150	2,55	39.4	791	2595	2,79	43.1	861	2825
9,7	150	Barnes	TSX	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
						N160	2,85	44.0	755	2477	3,05	47.1	807	2648
9,7	150	Lapua	Scenar-L	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
						N550	2,44	37.7	746	2448	2,71	41.8	833	2733
9,7	150	Sierra	MatchKing	69,5	2.736	N140	2,26	34.9	728	2388	2,57	39.7	813	2667
						N540	2,44	37.7	762	2500	2,69	41.5	843	2766
						N150	2,36	36.4	737	2418	2,69	41.5	824	2703
						N550	2,65	40.9	769	2523	2,88	44.4	851	2792
10,1	155	Lapua	Naturalis N564	70,0	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	2539
						N160	2,59	40.0	708	2323	2,92	45.1	788	2585
10,4	160	Lapua	Naturalis	69,5	2.736	N540	2,16	33.3	693	2274	2,38	36.7	761	2497

7 mm-08 Remington

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N150	2,04	31.5	659	2162	2,31	35.6	730	2395
						N550	2,32	35.8	697	2287	2,55	39.4	766	2513
						N160	2,49	38.4	704	2310	2,74	42.3	767	2516
10,4	160	Sierra	SBT	70,5	2.776	N540	2,24	34.6	717	2352	2,53	39.0	793	2602
						N150	2,19	33.8	694	2277	2,49	38.4	766	2513
						N550	2,43	37.5	716	2349	2,71	41.8	802	2631
						N160	2,66	41.1	723	2372	2,97	45.8	806	2644
10,9	168	Sierra	HPBT	70,9	2.791	N540	2,34	36.1	723	2372	2,59	40.0	794	2605
						N150	2,21	34.1	680	2231	2,58	39.8	778	2552
						N550	2,55	39.4	729	2392	2,77	42.7	798	2618
						N160	2,85	44.0	753	2470	2,95	45.5	781	2562
11,3	175	Barnes	TSX	69,5	2.736	N150	2,03	31.3	606	1988	2,34	36.1	688	2257
						N550	2,38	36.7	650	2133	2,69	41.5	736	2415
						N560	2,79	43.1	675	2215	3,12	48.1	752	2467
11,7	180	Lapua	Scenar-L	71,0	2.795	N140	1,96	30.2	630	2067	2,22	34.3	701	2300
						N150	2,09	32.3	650	2133	2,25	34.7	706	2316
						N550	2,30	35.5	676	2218	2,56	39.5	749	2457
						N160	2,49	38.4	689	2260	2,85	44.0	761	2497

.284 Winchester

Test barrel:	610 mm (24"), 1 in 10" twist
Primers:	Large Rifle, Remington 9 1/2
Cases:	Peterson, trim-to length 55,12 mm (2.170")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,8	120	Hornady	V-Max	71,1	2.799	N140	2,80	43.2	836	2743	3,18	49.1	927	3041
						N540	2,90	44.8	852	2795	3,24	50.0	954	3130
						N150	2,89	44.6	846	2776	3,23	49.8	933	3061
						N550	3,18	49.1	871	2858	3,50	54.0	966	3169
						N555	3,47	53.6	898	2946	3,82	59.0	981	3219
						N160	3,60	55.6	894	2933	3,91F	60.3F	968	3176
9,1	140	Nosler	E-Tip[1)]	73,5	2.894	N150	2,58	39.8	749	2457	3,09	47.7	844	2769
						N550	3,05	47.1	789	2589	3,38	52.2	884	2900
						N555	3,30	50.9	798	2618	3,71C	57.3C	905	2969
						N160	3,20	49.4	784	2572	3,75	57.9	887	2910
						N560	3,55	54.8	798	2618	3,99C	61.6C	906	2972
9,7	150	Berger	Classic Hunter	71,0	2.795	N140	2,70	41.7	783	2569	3,00	46.3	850	2789
						N540	2,57	39.7	768	2520	3,07	47.4	872	2861
						N150	2,57	39.7	763	2503	3,08	47.5	853	2799
						N550	3,01	46.5	795	2608	3,35	51.7	887	2910
						N555	3,29	50.8	813	2667	3,64	56.2	901	2956
						N160	3,50	54.0	830	2723	3,75	57.9	897	2943
						N560	3,60	55.6	818	2684	3,88	59.9	897	2943
9,7	150	Hornady	ELD-X[1)]	74,0	2.913	N150	2,60	40.1	762	2500	2,99	46.1	834	2736
						N550	3,00	46.3	797	2615	3,30	50.9	869	2851
						N555	3,30	50.9	822	2697	3,62	55.9	890	2920
						N160	3,28	50.6	793	2602	3,62	55.9	872	2861
						N560	3,50	54.0	796	2612	3,90	60.2	893	2930
9,7	150	Lapua	Scenar-L	73,5[1)]	2.894	N540	2,60	40.1	757	2484	3,02	46.6	855	2805
						N150	2,55	39.4	754	2474	3,00	46.3	835	2740
						N550	2,92	45.1	783	2569	3,24	50.0	868	2848
						N555	3,20	49.4	806	2644	3,51	54.2	882	2894

.284 Winchester cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
						N160	3,24	50.0	785	2575	3,60	55.6	873	2864
						N560	3,38	52.2	789	2589	3,74	57.7	887	2910
10,1	155	Lapua	Naturalis N564	72,5[1)]	2.854	N540	2,55	39.4	709	2326	2,88	44.4	793	2602
						N150	2,55	39.4	718	2356	2,80	43.2	761	2497
						N550	2,85	44.0	740	2428	3,17	48.9	818	2684
						N555	3,05	47.1	750	2461	3,48	53.7	840	2756
						N160	2,61	40.3	672	2205	3,40	52.5	809	2654
						N560	3,30	50.9	750	2461	3,70	57.1	841	2759
10,5	162	Hornady	ELD Match[1)]	74,0	2.913	N150	2,60	40.1	754	2474	2,93	45.2	808	2651
						N550	2,87	44.3	760	2493	3,22	49.7	843	2766
						N555	3,15	48.6	778	2552	3,49	53.9	853	2799
						N160	3,20	49.4	766	2513	3,56	54.9	847	2779
						N560	3,40	52.5	771	2530	3,78	58.3	859	2818
10,9	168	Berger	Classic Hunter	71,0	2.795	N150	2,62	40.4	724	2375	2,97	45.8	801	2628
						N550	2,95	45.5	754	2474	3,23	49.8	832	2730
						N555	3,20	49.4	769	2523	3,59	55.4	851	2792
						N160	3,16	48.8	754	2474	3,53	54.5	837	2746
						N560	3,39	52.3	755	2477	3,81	58.8	851	2792
10,9	168	Sierra	HPBT	71,0	2.795	N550	2,81	43.4	742	2434	3,15	48.6	825	2707
						N555	3,10	47.8	762	2500	3,44	53.1	838	2749
						N160	3,13	48.3	748	2454	3,48	53.7	831	2726
						N560	3,35	51.7	757	2484	3,76	58.0	851	2792
11,3	175	Berger	Elite Hunter[1)]	74,0	2.913	N550	2,83	43.7	728	2388	3.17	48.9	810	2657
						N555	3,12	48.1	747	2451	3,52	54.3	829	2720
						N160	3,18	49.1	741	2431	3,51	54.2	821	2694
						N560	3,33	51.4	742	2434	3,75	57.9	836	2743
11,7	180	Lapua	Scenar-L	74,0[1)]	2.913	N150	2,55	39.4	706	2316	2,70	41.7	737	2418
						N550	2,67	41.2	692	2270	3,01	46.5	777	2549
						N555	2,96	45.7	715	2346	3,28	50.6	791	2595
						N160	2,95	45.5	699	2293	3,31	51.1	780	2559
						N165	3,30	50.9	722	2369	3,74C	57.7C	808	2651
						N560	3,20	49.4	726	2382	3,58	55.2	811	2661
						N565	3,35	51.7	741	2431	3,74	57.7	808	2651

C = Compressed load F = Case full [1)] The cartridge overall length exceeds the CIP maximum.

7 x 57

Test barrel:	550 mm (22”), 1 in 9½” twist
Primers:	Large Rifle
Cases:	Sako, trim-to length 56,80 mm (2.236”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
7,8	120	Sierra	Spitzer	76,5	3.012	N135	2,67	41.1	814	2670	2,87	44.2	880	2887
						N140	2,82	43.5	824	2704	3,06	47.2	897	2942
						N150	2,85	44.0	828	2717	3,09	47.6	898	2946
9,1	140	Nosler	Ballistic Tip	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	Sierra	SPBT	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	Speer	Mag-Tip	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
7,8	120	Sierra	Spitzer	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	Nosler	Ballistic Tip	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	Barnes	TSX	76,5	3.012	N540	2,38	36.7	696	2283	2,58	39.8	759	2490
						N150	2,23	34.4	663	2175	2,51	38.7	729	2392
						N550	2,58	39,8	702	2303	2,77	42.7	767	2516
9,7	150	Brenneke	TOG	76,5	3.012	N540	2,33	36.0	700	2297	2,67	41.2	772	2533
						N150	2,32	35.8	685	2247	2,57	39.7	738	2421
						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	Lapua	Scenar-L	76,5	3.012	N540	2,40	37.0	727	2385	2,58	39.8	780	2559
						N150	2,33	36.0	707	2320	2,57	39.7	768	2520
						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	Lapua	Naturalis	75,0	2.953	N140	2,17	33.5	643	2110	2,41	37.2	701	2300
						N540	2,26	34.9	645	2116	2,53	39.0	715	2346
						N150	2,08	32.1	603	1978	2,47	38.1	702	2303
10,4	160	Sierra	SPBT	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	Barnes	TSX	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	Speer	Mag-Tip	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:	Norma, trim-to length 63,80 mm (2.512”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
7,8	120	Nosler	Ballistic Tip	82,0	3.228	N540	3,03	46.8	888	2913	3,34	51.5	982	3222
						N150	2,94	45.4	863	2831	3,24	50.0	946	3104
						N550	3,16	48.8	884	2900	3,55	54.8	983	3225
						N160	3,52	54.3	892	2927	3,70C	57.1C	930	3051
9,1	140	Swift	A-Frame	81,4	3.205	N540	2,74	42.3	788	2585	3,15	48.6	887	2910
						N150	2,66	41.1	766	2513	3,10	47.8	856	2808
						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	Barnes	TSX	83,8	3.299	N540	2,74	42.3	753	2470	3,06	47.2	846	2776
						N150	2,65	40.9	721	2365	2,99	46.1	813	2667
						N550	2,94	45.4	765	2510	3,24	50.0	855	2805
						N160	3,19	49.2	760	2493	3,61	55.7	861	2825
						N560	3,52	54.3	787	2582	3,91	60.3	892	2927
9,7	150	Lapua	Scenar-L	84,0	3.307	N540	2,71	41.8	779	2556	3,03	46.8	866	2841
						N150	2,64	40.7	757	2484	3,01	46.5	845	2772

7 x 64 cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						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
9,7	150	Nosler	Partition	83,8	3.299	N540	2,68	41.4	774	2539	3,14	48.5	871	2858
						N150	2,66	41.1	758	2487	3,09	47.7	843	2766
						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
10,1	155	Lapua	Naturalis N564	83,0	3.268	N150	2,60	40.1	736	2415	2,96	45.7	816	2677
						N550	2,81	43.4	750	2461	3,16	48.8	840	2756
						N160	3,19	49.2	764	2507	3,52	54.3	837	2746
						N560	3,33	51.4	747	2451	3,71	57.3	866	2841
10,4	160	Nosler	Accubond	84,0	3.307	N540	2,64	40.7	746	2448	3,04	46.9	835	2740
						N150	2,56	39.5	731	2398	2,99	46.1	810	2657
						N550	2,92	45.1	759	2490	3,20	49.4	839	2753
						N160	3,27	50.5	767	2516	3,60C	55.6C	854	2802
11,3	174	Barnes	TSX	81,3	3.201	N540	2,44	37.7	655	2149	2,95	45.5	765	2510
						N550	2,78	42.9	675	2215	3,24	50.0	784	2572
						N160	3,04	46.9	676	2218	3,47	53.6	781	2562
11,3	174	Sierra	Game King	84,0	3.307	N540	2,57	39.7	718	2356	2,98	46.0	803	2635
						N550	2,84	43.8	733	2405	3,09	47.7	805	2641
						N160	3,12	48.1	737	2418	3,41	52.6	812	2664
						N165	3,40	52.5	752	2467	3,75C	57.9C	823	2700
						N560	3,31	51.1	750	2461	3,70	57.1	837	2746
11,5	177	Brenneke	TIG	82,3	3.240	N540	2,53	39.0	687	2254	2,92	45.1	774	2539
						N550	2,81	43.4	701	2300	3,11	48.0	783	2569
						N160	3,06	47.2	703	2306	3,46	53.4	791	2595
						N165	3,43	52.9	724	2375	3,80C	58.6C	815	2674
						N560	3,31	51.1	730	2395	3,72	57.4	814	2671
11,7	180	Lapua	Scenar-L	84,0	3.307	N540	2,57	39.7	702	2303	2,86	44.1	781	2562
						N550	2,75	42.4	701	2300	3,02	46.6	787	2582
						N160	3,04	46.9	716	2349	3,40	52.5	799	2621
						N165	3,41	52.6	743	2438	3,60	55.6	789	2589
						N560	3,20	49.4	701	2300	3,66	56.6	821	2694

C = Compressed load

7 x 65R

Test barrel:	660 mm (26”), 1 in 9” twist
Primers:	Large Rifle
Cases:	Lapua, trim-to length 64,8 mm (2.551”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,8	120	Nosler	Ballistic Tip	83,5	3.287	N540	3,01	46.5	886	2907	3,27	50.5	966	3169
						N150	2,89	44.6	852	2795	3,15	48.6	931	3054
						N550	3,18	49.1	883	2897	3,42	52.8	964	3163
						N160	3,50	54.0	885	2904	3,72	57.4	958	3143
9,1	140	Swift	A-Frame	82,3	3.240	N540	2,76	42.6	787	2582	3,12	48.1	872	2861
						N150	2,66	41.1	757	2484	2,98	46.0	831	2726
						N550	3,01	46.5	799	2621	3,24	50.0	871	2858
9,7	150	Barnes	TSX	83,5	3.287	N540	2,73	42.1	754	2474	3,00	46.3	834	2736
						N150	2,59	40.0	716	2349	2,90	44.8	796	2612
						N550	2,90	44.8	765	2510	3,15	48.6	841	2759
						N160	3,20	49.4	756	2480	3,49	53.9	835	2740
						N560	3,49	53.9	783	2569	3,74	57.7	863	2831

7 x 65R cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
9,7	150	Lapua	Scenar-L	82,3	3.240	N540	2,70	41.7	783	2569	3,00	46.3	856	2808
						N150	2,62	40.4	756	2480	2,94	45.4	829	2720
						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
						N560	3,40	52.5	797	2615	3,67	56.6	875	2871
9,7	150	Nosler	Partition	83,5	3.287	N540	2,67	41.2	770	2526	3,05	47.1	849	2785
						N150	2,64	40.7	750	2461	2,96	45.7	820	2690
						N550	2,99	46.1	788	2585	3,24	50.0	856	2808
10,1	156	Lapua	Naturalis	83,5	3.287	N540	2,71	41.8	742	2434	2,94	45.4	809	2654
						N150	2,59	40.0	714	2343	2,84	43.8	777	2549
						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	Nosler	Accubond	83,5	3.287	N540	2,71	41.8	744	2441	2,95	45.5	811	2661
						N150	2,57	39.7	715	2346	2,90	44.8	785	2575
						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
11,3	175	Barnes	TSX	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	175	Sierra	Game King	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
						N165	3,45	53.2	762	2500	3,74	57.7	828	2717
						N560	3,33	51.4	748	2454	3,59	55.4	822	2697
11,5	177	Brenneke	TIG	83,5	3.287	N160	3,05	47.1	700	2297	3,37	52.0	773	2536
						N165	3,44	53.1	732	2402	3,72	57.4	800	2625
						N560	3,35	51.7	730	2395	3,66	56.5	806	2644
11,7	180	Lapua	Scenar-L	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
						N165	3,41	52.6	752	2467	3,68	56.8	815	2674
						N560	3,31	51.1	741	2431	3,58	55.2	810	2657

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,1	110	Speer	TNT-HP	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	Nosler	Partition	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	Hornady	Interbond	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	Lapua	Naturalis	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

7 mm WSM

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
10,4	160	Sierra	SBT	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

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 load may cause excessive chamber pressure and must not be used!

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
9,1	140	Swift	A-Frame	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
						N560	3,84	59.3	852	2795	4,36	67.3	966	3169
9,7	150	Lapua	Scenar-L	83,5	3.287	N160	3,27	50.5	794	2605	3,87	59.7	893	2930
						N165	3,72	57.4	820	2690	4,28	66.1	925	3035
						N560	3,86	59.6	847	2779	4,32	66.7	951	3120
9,7	150	Nosler	Partition	83,5	3.287	N160	3,53	54.5	824	2703	3,94	60.8	912	2992
						N165	3,82	59.0	847	2779	4,32	66.7	931	3054
						N560	3,89	60.0	851	2792	4,35	67.1	948	3110
10,1	155	Lapua	Naturalis N564	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	Lapua	Naturalis	81,8	3.220	N160	3,15	48.6	753	2470	3,76	58.0	859	2818
						N165	3,65	56.3	786	2579	4,08	63.0	868	2848
						N560	3,67	56.6	843	2766	4,03	62.2	943	3094
10,4	160	Speer	Grand Slam	82,0	3.228	N160	3,31	51.1	784	2572	3,99	61.6	880	2887
						N165	3,83	59.1	812	2664	4,41	68.1	909	2982
						N560	3,91	60.3	823	2700	4,45	68.7	925	3035
10,9	168	Sierra	HPBT	83,5	3.287	N160	3,26	50.3	767	2516	3,86	59.6	862	2828
						N165	3,61	55.7	788	2585	4,14	63.9	853	2799
						N560	3,75	57.9	811	2661	4,26	65.7	903	2963
						N170	3,78	58.3	778	2552	4,52	69.8	887	2910
11,3	175	Sierra	SBT	83,5	3.287	N160	3,09	47.7	737	2418	3,64	56.2	826	2710
						N165	3,41	52.6	746	2448	4,06	62.7	854	2802
						N560	3,66	56.5	791	2595	4,18	64.5	885	2904
						N170	3,73	57.6	761	2497	4,35	67.1	862	2828
11,7	180	Berger	Hybrid Target	83,5	3.287	N160	3,12	48.1	731	2398	3,51	54.2	797	2615
						N560	3,43	52.9	764	2507	3,87	59.7	843	2766
						N565	3,60	55.6	787	2582	4,06	62.7	853	2799
11,7	180	Lapua	Scenar-L	83,5	3.287	N160	2,78	42.9	678	2224	3,24	50.0	765	2510
						N165	2,87	44.3	679	2228	3,48	53.7	783	2569
						N560	3,10	47.8	728	2388	3,45	53.2	808	2651
						N170	3,12	48.1	678	2224	3,79	58.5	806	2644
12,6	195	Berger	Elite Hunter	83,5	3.287	N165	3,56	54.9	736	2415	3,94	60.8	800	2625
						N560	3,66	56.5	755	2477	4,04	62.3	827	2713
						N565	3,72	57.4	758	2487	4,13	63.7	829	2720
						N170	3,69	56.9	736	2415	4,07	62.8	804	2638

7 mm Weatherby Magnum

Test barrel:	660 mm (26”), 1 in 9” twist
Primers:	Large Rifle Magnum
Cases:	Weatherby, trim-to length 64,50 mm (2.539”)

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

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Hornady	HP	81,5	3.209	N160	4,76	73.5	1071	3512	5,10	78.7	1149	3770
						N560	4,98	76.8	1085	3561	5,30	81.8	1170	3839
7,8	120	Sierra	Spitzer	82,5	3.248	N160	4,52	69.8	989	3245	4,83	74.5	1057	3468
						N165	4,89	75.5	1003	3290	5,20	80.2	1072	3517
						N560	4,79	73.9	1009	3310	5,07	78.2	1079	3540
10,4	160	Sierra	Spitzer	82,5	3.248	N160	4,09	63.1	853	2799	4,39	67.7	912	2992
						N165	4,41	68.0	864	2834	4,69	72.4	924	3031
						N560	4,26	65.7	868	2846	4,53	69.9	927	3041
10,9	168	Sierra	HPBT	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,8	120	Nosler	Ballistic Tip	88,5	3.484	N160	5,39	83.2	1015	3330	5,83	90.0	1107	3632
						N165	5,59	86.3	1046	3432	6,06	93.5	1143	3750
						N560	5,76	88.9	1020	3346	6,15	94.9	1123	3684
10,4	160	Lapua	Naturalis	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	Sierra	MatchKing	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	Swift	A-Frame	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Speer	Plinker	42,5	1.673	N110	0,88	13.6	610	2001	0,97	15.0	669	2196
7,1	110	Speer	Spire Point	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
6,5	100	Lapua	HPCE / OTCE	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
8,0	123	Lapua	FMJ	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
8,1	125	Nosler	Accubond	51,4	2.024	N105	0,66	10.2	518	1699	0,77	11.9	577	1893
						N110	0,89	13.7	580	1903	0,99	15.3	617	2024
8,1	125	Sierra	MatchKing	56,1	2.209	N105	0,66	10.2	531	1742	0,76	11.7	552	1811
						N110	0,92	14.2	568	1864	1,02	15.7	613	2011
9,7	150	Lapua	LockBase	57,0	2.244	N120	0,60	9.3	317	1040	1,27	19.6	615	2018
10,0	155	Lapua	Scenar / OTM Scenar-L	57,0	2.244	N120	0,62	9.6	316	1037	1,19	18.4	588	1929
10,85	167	Lapua	Scenar	57,0	2.244	N120	0,61	9.4	313	1027	1,17	18.1	561	1841
12,0	185	Lapua	Scenar	57,0	2.244	N120	0,66	10.2	318	1043	1,09	16.8	522	1713
13,0	200	Lapua	FMJBT	57,0	2.244	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

.308 Winchester

Test barrel:	610 mm (24”), 1 in 12” twist
Primers:	Large Rifle
Cases:	Lapua, trim-to length 51,00 mm (2.008”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
3,7	57	Lapua	ALS[1)]	67,0	2.638	N110	1,78	27.5	1061	3481	2,24	34.5	1217	3993
6,5	100	Lapua	HPCE / OTCE	67,0	2.638	N110	1,32	20.4	711	2333	1,80	27.8	870	2854
						N120	1,98	30.6	812	2663	2,33	36.0	930	3051
						N130	2,18	33.7	852	2794	2,60	40.1	976	3203
						N133	2,63	40.6	918	3012	2,95F	45.5F	1023	3356
						N530	2,68	41.4	915	3002	3,01	46.5	1044	3425
						N135	2,47	38.1	865	2837	2,99	46.1	992	3255
7,1	110	Barnes	TSX FB	68,5	2.697	N130	2,46	38.0	880	2887	2,70	41.7	953	3127
						N133	2,70	41.7	910	2986	2,94	45.4	983	3225
						N530	2,82	43.5	913	2995	3,05	47.1	998	3274
						N135	2,80	43.2	914	2999	3,00	46.3	971	3186
7,1	110	Fox Bullets	Classic Hunter	68,5	2.697	N133	2,40	37.0	865	2838	2,70	41.7	946	3104
						N135	2,57	39.7	883	2897	2,93	45.2	971	3186
						N140	3,00	46.3	925	3035	3,15C	48.6C	974	3196
7,1	110	Hornady	GMX	71,0	2.795	N130	2,40	37.0	868	2848	2,61	40.3	938	3077
						N133	2,63	40.6	883	2897	2,89F	44.6F	966	3169
						N530	2,66	41.1	881	2890	2,95	45.5	978	3209
						N135	2,74	42.3	893	2930	3,00C	46.3C	972	3189
						N540	2,97	45.8	893	2930	3,17C	48.9C	954	3130
7,1	110	Hornady	V-Max	68,5	2.697	N130	2,41	37.2	875	2871	2,61	40.3	939	3081
						N133	2,63	40.6	897	2943	2,84	43.8	964	3163
						N530	2,73	42.1	905	2969	2,95	45.5	972	3189
						N135	2,76	42.6	915	3002	3,01	46.5	980	3215
						N140	2,98	46.0	912	2992	3,20C	49.4C	975	3199
7,1	110	Nosler	Varmageddon	66,0	2.598	N120	2,26	34.9	868	2848	2,43	37.5	931	3054
						N130	2,50	38.6	890	2920	2,69	41.5	954	3130
						N133	2,75	42.4	913	2995	3,00F	46.3F	990	3248

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

.308 Winchester cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
7,5	115	Lehigh Defense	Controlled Chaos Copper	70,0	2.756	N130	2,50	38.6	870	2854	2,68	41.4	936	3071
						N133	2,70	41.7	890	2920	2,93C	45.2C	960	3150
						N135	2,85	44.0	902	2959	3,15C	48.6C	972	3189
						N140	3,04	46.9	898	2946	3,25C	50.2C	955	3133
7,8	120	Sako	Blade 633A	71,0	2.795	N133	2,56	39.5	829	2720	2,83	43.7	912	2992
						N530	2,65	40.9	842	2762	2,89	44.6	929	3048
						N135	2,70	41.7	844	2769	2,97C	45.8C	928	3045
						N140	2,90	44.8	851	2792	3,11C	48.0C	923	3028
						N540	2,95	45.5	861	2825	3,23C	49.8C	948	3110
						N150	2,90	44.8	849	2785	3,10C	47.8C	901	2956
8,0	123	Lapua	FMJ	66,9	2.634	N120	2,08	32.1	812	2664	2,39	36.9	896	2940
						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
8,1	125	Hornady	ECX	69,3	2.728	N133	2,15	33.2	786	2579	2,47	38.1	860	2822
						N135	2,25	34.7	787	2582	2,61	40.3	875	2871
						N140	2,75	42.4	835	2740	3,03	46.8	912	2992
						N540	2,80	43.2	841	2759	3,13C	48.3C	929	3048
						N150	2,77	42.7	839	2753	3,05C	47.1C	910	2986
8,1	125	Hornady	SST	69,3	2.728	N130	2,40	37.0	829	2720	2,59	40.0	895	2936
						N133	2,60	40.1	850	2789	2,79	43.1	914	2999
						N135	2,75	42.4	857	2812	2,99	46.1	927	3041
						N140	2,95	45.5	862	2828	3,18	49.1	931	3054
						N540	2,95	45.5	852	2795	3,21	49.5	937	3074
8,1	125	Nosler	Accubond	69,8	2.748	N130	2,38	36.7	828	2717	2,61	40.3	900	2953
						N133	2,62	40.4	857	2812	2,83	43.7	922	3025
						N135	2,75	42.4	864	2835	3,03C	46.8C	936	3071
						N140	2,90	44.8	861	2825	3,21C	49.5C	936	3071
						N540	2,97	45.8	871	2858	3,25C	50.2C	954	3130
8,1	125	Nosler	Ballistic Tip	70,0	2.756	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
8,1	125	Sierra	TMK	71,0	2.795	N130	2,28	35.2	812	2664	2,55	39.4	884	2900
						N133	2,57	39.7	840	2756	2,75	42.4	900	2953
						N530	2,51	38.7	833	2733	2,85	44.0	929	3048
						N135	2,62	40.4	841	2759	2,81	43.4	908	2979
						N140	2,80	43.2	836	2743	3,06	47.2	910	2986
8,5	130	Barnes	TSX BT	70,7	2.783	N130	2,29	35.3	797	2615	2,53	39.0	868	2848
						N133	2,50	38.6	822	2697	2,70	41.7	885	2904
						N530	2,62	40.4	830	2723	2,84	43.8	900	2953
						N135	2,60	40.1	829	2720	2,83	43.7	898	2946
						N140	2,81	43.4	835	2740	3,05	47.1	907	2976
9,1	140	LOS	Hunting Tactic	70,5	2.776	N135	2,55	39.4	812	2664	2,76	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
9,5	147	Brenneke	TUG	66,5	2.618	N133	2,25	34.7	728	2388	2,48	38.3	793	2602
						N135	2,32	35.8	728	2388	2,59	40.0	805	2641
						N140	2,53	39.0	739	2425	2,83C	43.7C	821	2694
						N540	2,62	40.4	755	2477	2,92C	45.1C	843	2766
						N150	2,60	40.1	749	2457	2,92C	45.1C	827	2713
						N550	2,80	43.2	754	2474	3,17C	48.9C	848	2782
9,7	150	Barnes	MPG FB	71,0	2.795	N130	2,30	35.5	731	2398	2,41	37.2	799	2621
						N133	2,27	35.0	731	2398	2,51	38.7	803	2635

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

.308 Winchester

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N135	2,40	37.0	746	2448	2,67	41.2	814	2671
						N140	2,65	40.9	763	2503	2,90	44.8	838	2749
						N540	2,67	41.2	772	2533	2,95	45.5	851	2792
						N150	2,70	41.7	778	2552	2,99C	46.1C	847	2779
						N550	2,80	43.2	756	2480	3,20C	49.4C	858	2815
9,7	150	Barnes	TTSX BT	71,0	2.795	N135	2,28	35.2	725	2379	2,67	41.2	823	2700
						N140	2,54	39.2	754	2474	2,94C	45.4C	842	2762
						N540	2,57	39.7	761	2497	3,03C	46.8C	860	2822
						N150	2,60	40.1	764	2507	2,98C	46.0C	846	2776
						N550	2,78	42.9	757	2484	3,10C	47.8C	837	2746
9,7	150	Fox Bullets	Classic Hunter	67,0	2.638	N530	2,30	35.5	748	2454	2,57	39.7	822	2697
						N135	2,20	34.0	731	2398	2,42	37.3	790	2592
						N140	2,58	39.8	756	2480	2,82	43.5	825	2707
						N540	2,70	41.7	778	2552	2,98C	46.0C	858	2815
						N150	2,60	40.1	766	2513	2,91C	44.9C	840	2756
						N550	2,85	44.0	774	2539	3,10C	47.8C	831	2726
9,7	150	Fox Bullets	Target	68,5	2.697	N130	2,20	34.0	734	2408	2,43	37.5	802	2631
						N133	2,30	35.5	741	2431	2,57	39.7	816	2677
						N135	2,40	37.0	757	2484	2,68	41.4	827	2713
						N140	2,70	41.7	779	2556	2,99C	46.1C	852	2795
						N150	2,76	42.6	790	2592	3,04C	46.9C	859	2818
9,7	150	Hornady	FMJ-BT	71,0	2.795	N130	2,35	36.3	769	2523	2,56	39.5	829	2720
						N133	2,60	40.1	796	2612	2,78	42.9	849	2785
						N135	2,70	41.7	799	2621	2,88	44.4	853	2799
						N140	2,85	44.0	807	2648	3,07C	47.4C	864	2835
						N540	2,85	44.0	805	2641	3,12C	48.1C	880	2887
						N150	2,90	44.8	808	2651	3,11C	48.0C	868	2848
						N550	3,10	47.8	815	2674	3,25C	50.2C	853	2799
9,7	150	Hornady	GMX	71,0	2.795	N135	2,35	36.3	719	2359	2,57	39.7	795	2608
						N140	2,53	39.0	735	2411	2,79	43.1	810	2657
						N540	2,60	40.1	744	2441	2,83	43.7	827	2713
						N150	2,55	39.4	736	2415	2,82	43.5	811	2661
9,7	150	Hornady	SST	69,4	2.732	N133	2,40	37.0	762	2500	2,58	39.8	820	2690
						N530	2,46	38.0	772	2533	2,64	40.7	836	2743
						N135	2,53	39.0	774	2539	2,67	41.2	831	2726
						N140	2,65	40.9	767	2516	2,86	44.1	838	2749
						N540	2,71	41.8	788	2585	2,92	45.1	859	2818
						N150	2,70	41.7	778	2552	2,91C	44.9C	839	2753
9,7	150	Lapua	LockBase	70,0	2.756	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
						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
9,7	150	Lapua	Mega E469	65,2	2.567	N135	2,35	36.3	747	2451	2,68	41.4	842	2762
						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
9,7	150	LOS	Tactic	70,6	2.780	N530	2,38	36.7	773	2536	2,64	40.7	853	2799
						N135	2,46	38.0	782	2566	2,68	41.4	843	2766
						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
9,7	150	Norma	FMJ	68,4	2.693	N130	2,02	31.2	720	2362	2,36	36.4	802	2631
						N133	2,32	35.8	757	2484	2,53	39.0	822	2697
						N530	2,40	37.0	763	2503	2,58	39.8	827	2713
						N135	2,45	37.8	774	2539	2,67	41.2	834	2736
						N140	2,63	40.6	781	2562	2,86	44.1	849	2785

.308 Winchester

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
9,7	150	Nosler	AccuBond	71,0	2.795	N133	2,38	36.7	763	2503	2,62	40.4	826	2710
						N135	2,53	39.0	768	2520	2,77	42.7	837	2746
						N140	2,74	42.3	783	2569	2,96	45.7	848	2782
						N540	2,80	43.2	798	2618	3,06C	47.2C	871	2858
						N150	2,76	42.6	798	2618	2,98C	46.0C	857	2812
						N550	2,97	45.8	802	2631	3,27C	50.5C	877	2877
9,7	150	Red Moose	TARVAS	69,2	2.724	N135	2,50	38.6	791	2595	2,70	41.7	852	2795
						N140	2,65	40.9	787	2582	2,94	45.4	865	2838
						N540	2,77	42.7	808	2651	3,02C	46.6C	878	2881
						N150	2,75	42.4	803	2635	2,99C	46.1C	861	2825
						N550	2,95	45.5	809	2654	3,10C	47.8C	851	2792
9,7	150	Sako	Blade 645A	71,0	2.795	N133	2,20	34.0	700	2297	2,50	38.6	788	2585
						N135	2,37	36.6	732	2402	2,61	40.3	801	2628
						N140	2,60	40.1	756	2480	2,84	43.8	822	2697
						N540	2,65	40.9	768	2520	2,86	44.1	834	2736
						N150	2,60	40.1	753	2470	2,90	44.8	824	2703
						N550	2,80	43.2	767	2516	3,10C	47.8C	847	2779
9,7	150	Sierra	HPBT	71,0	2.795	N130	2,33	36.0	765	2510	2,55	39.4	826	2710
						N133	2,52	38.9	782	2566	2,73	42.1	843	2766
						N135	2,65	40.9	793	2602	2,85	44.0	850	2789
						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
9,7	150	Sierra	SPBT	70,0	2.756	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
9,7	150	Swift	Scirocco II	71,0	2.795	N135	2,28	35.2	746	2448	2,48	38.3	799	2621
						N140	2,50	38.6	757	2484	2,75	42.4	822	2697
						N540	2,55	39.4	772	2533	2,77	42.7	833	2733
						N150	2,55	39.4	770	2526	2,78	42.9	827	2713
						N550	2,75	42.4	763	2503	2,98	46.0	831	2726
9,7	150	Woodleigh	Weldcore PP	71,0	2.795	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
						N540	2,63	40.6	768	2520	2,93	45.2	854	2802
10,0	155	Berger	Hybrid Target	71,0	2.795	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
						N540	2,64	40.7	768	2520	2,85	44.0	842	2762
						N150	2,61	40.3	761	2497	2,84	43.8	829	2720
						N550	2,76	42.6	759	2490	3,01	46.5	840	2756
10,0	155	Brenneke	TAG	69,6	2.740	N140	2,66	41.1	765	2510	2,94	45.4	845	2772
						N540	2,69	41.5	776	2546	2,99	46.1	871	2858
						N150	2,74	42.3	772	2533	3,00	46.3	848	2782
10,0	155	Hornady	BTHP	71,0	2.795	N130	2,30	35.5	753	2470	2,48	38.3	807	2648
						N133	2,50	38.6	773	2536	2,68	41.4	829	2720
						N135	2,55	39.4	771	2530	2,81	43.4	838	2749
						N140	2,72	42.0	779	2556	2,98C	46.0C	849	2785
						N540	2,77	42.7	790	2592	3,02	46.6	862	2828
						N150	2,78	42.9	793	2602	2,99C	46.1C	855	2805
						N550	3,00	46.3	791	2595	3,24C	50.0C	863	2831
10,0	155	Hornady	ELD Match	71,1	2.799	N133	2,40	37.0	764	2507	2,57	39.7	818	2684
						N135	2,49	38.4	770	2526	2,68	41.4	828	2717
						N140	2,61	40.3	775	2543	2,86	44.1	841	2759
						N540	2,65	40.9	782	2566	2,88	44.4	848	2782

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Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N150	2,70	41.7	791	2595	2,90C	44.8C	844	2769
						N550	2,85	44.0	788	2585	3,11C	48.0C	857	2812
10,0	155	Lapua	Scenar / OTM Scenar-L	71,0	2.795	N530	2,24	34.6	727	2385	2,66	41.0	844	2769
						N135	2,23	34.4	687	2254	2,64	40.7	804	2638
						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	46.8	818	2683
						N550	2,88	44.4	794	2605	3,25F	50.2F	901	2956
10,0	155	LOS	Hunting	69,9	2.752	N140	2,62	40.4	766	2513	2,88	44.4	836	2743
						N540	2,66	41.1	779	2556	2,90	44.8	855	2805
						N150	2,68	41.4	776	2546	2,94	45.4	846	2776
10,0	155	Sierra	HPBT	71,0	2.795	N135	2,28	35.1	712	2337	2,68	41.3	815	2674
						N140	2,40	37.0	717	2354	2,86	44.2	827	2712
						N540	2,46	37.9	712	2337	2,92	45.1	838	2750
						N150	2,63	40.6	752	2466	3,01	46.5	850	2790
						N550	2,76	42.5	756	2479	3,22C	49.7C	880	2888
10,0	155	Sierra	TMK	71,0	2.795	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
						N540	2,62	40.4	766	2513	2,83	43.7	839	2753
						N150	2,63	40.6	761	2497	2,85	44.0	826	2710
						N550	2,78	42.9	765	2510	3,01	46.5	841	2759
10,5	162	Sako	Blade 656A	71,0	2.795	N140	2,35	36.3	700	2297	2,62F	40.4F	768	2520
						N540	2,45	37.8	717	2352	2,76	42.6	797	2615
						N150	2,40	37.0	694	2277	2,67	41.2	763	2503
						N550	2,70	41.7	729	2392	3,04C	46.9C	813	2667
10,7	165	Barnes	TSX	71,0	2.795	N140	2,45	37.8	702	2303	2,79	43.1	815	2674
						N150	2,52	38.9	715	2346	2,89	44.6	824	2703
						N550	2,71	41.8	726	2382	3,05	47.1	833	2733
10,7	165	Brenneke	TOG	68,5	2.697	N135	2,01	31.0	613	2011	2,25	34.7	677	2221
						N140	2,49	38.4	729	2392	2,73	42.1	788	2585
						N540	2,53	39.0	736	2415	2,82	43.5	820	2690
						N150	2,51	38.7	719	2359	2,81	43.4	794	2605
10,7	165	Fox Bullets	Target	68,5	2.697	N140	2,60	40.1	731	2398	2,79C	43.1C	795	2608
						N540	2,70	41.7	758	2487	2,93C	45.2C	820	2690
						N150	2,63	40.6	738	2421	2,91C	44.9C	808	2651
10,7	165	Hornady	ECX	71,0	2.795	N135	2,14	33.0	651	2136	2,43	37.5	730	2395
						N140	2,40	37.0	686	2251	2,73	42.1	765	2510
						N540	2,55	39.4	715	2346	2,81	43.4	791	2595
						N150	2,40	37.0	691	2267	2,74	42.3	771	2530
						N550	2,73	42.1	724	2375	3,01C	46.5C	800	2625
10,7	165	Hornady	GMX	71,0	2.795	N140	2,46	38.0	682	2238	2,67	41.2	756	2480
						N540	2,41	37.2	685	2247	2,70	41.7	777	2549
						N150	2,42	37.3	681	2234	2,70	41.7	761	2497
						N550	2,61	40.3	699	2293	2,93	45.2	790	2592
10,7	165	Hornady	SST	70,5	2.776	N130	2,10	32.4	699	2293	2,25	34.7	745	2444
						N133	2,22	34.3	701	2300	2,41	37.2	761	2497
						N135	2,33	36.0	714	2343	2,51	38.7	772	2533
						N140	2,52	38.9	731	2398	2,75	42.4	791	2595
						N540	2,60	40.1	752	2467	2,82	43.5	817	2680
						N150	2,54	39.2	738	2421	2,77	42.7	802	2631
						N550	2,72	42.0	747	2451	2,98	46.0	819	2687
10,7	165	LOS	Solid Brass Tactic	71,0	2.795	N130	2,15	33.2	724	2375	2,38	36.7	786	2579
						N133	2,35	36.3	742	2434	2,58	39.8	801	2628
						N135	2,50	38.6	752	2467	2,77C	42.7C	816	2677
						N140	2,66	41.1	760	2493	2,93C	45.2C	828	2717

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Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N540	2,75	42.4	779	2556	3,03C	46.8C	852	2795
						N150	2,73	42.1	774	2539	2,95C	45.5C	827	2713
10,7	165	Red Moose	TARVAS	69,2	2.724	N140	2,60	40.1	759	2490	2,82	43.5	819	2687
						N540	2,65	40.9	757	2484	2,92	45.1	834	2736
						N150	2,65	40.9	755	2477	2,89	44.6	818	2684
						N550	2,83	43.7	767	2516	3,09C	47.7C	836	2743
10,7	165	Rhino	Solid Shank	67,5	2.657	N140	2,56	39.5	736	2415	2,78	42.9	796	2612
						N540	2,60	40.1	739	2425	2,85	44.0	808	2651
						N150	2,69	41.5	758	2487	2,85	44.0	808	2651
						N550	2,86	44.1	745	2444	3,07	47.4	813	2667
10,7	165	Sierra	SBT	69,9	2.752	N135	2,38	36.7	726	2382	2,59	40.0	786	2579
						N140	2,55	39.4	742	2434	2,81	43.4	808	2651
						N540	2,63	40.6	754	2474	2,88	44.4	827	2713
						N150	2,62	40.4	743	2438	2,85	44.0	807	2648
						N550	2,80	43.2	761	2497	3,05F	47.1F	831	2726
10,7	165	Speer	SPBT	71,0	2.795	N133	2,38	36.8	715	2345	2,72	41.9	809	2653
						N135	2,48	38.3	724	2376	2,86	44.1	824	2703
						N140	2,60	40.1	729	2390	3,00	46.3	838	2750
						N150	2,66	41.0	735	2411	3,10	47.9	842	2761
						N550	2,86	44.1	760	2495	3,19	49.3	850	2789
10,7	165	Swift	Scirocco II	71,0	2.795	N140	2,39	36.9	715	2346	2,63	40.6	777	2549
						N540	2,44	37.7	716	2349	2,69	41.5	786	2579
						N150	2,47	38.1	723	2372	2,70	41.7	782	2566
						N550	2,68	41.4	724	2375	2,93	45.2	797	2615
10,8	166	CopperBear	EXHBT	67,5	2.657	N135	2,20	34.0	679	2228	2,30	35.5	710	2329
						N140	2,40	37.0	685	2247	2,72	42.0	765	2510
						N540	2,50	38.6	707	2320	2,77	42.7	784	2572
						N150	2,40	37.0	691	2267	2,70	41.7	762	2500
						N550	2,66	41.1	713	2339	3,01C	46.5C	801	2628
10,85	167	Lapua	Scenar	71,0	2.795	N135	2,38	36.7	739	2425	2,59	40.0	813	2667
						N140	2,59	40.0	718	2356	2,85	44.0	801	2628
						N540	2,58	39.8	733	2405	2,85	44.0	811	2661
						N150	2,71	41.8	747	2451	2,90A	44.8A	836	2744
						N550	2,88	44.4	763	2503	3,17F	48.9F	836	2743
10,9	168	Barnes	TSX	71,0	2.795	N140	2,59	40.0	739	2425	2,86	44.1	812	2664
						N540	2,68	41.4	746	2448	2,94	45.4	838	2749
						N150	2,63	40.6	740	2428	2,91	44.9	814	2671
10,9	168	Barnes	TTSX BT	69,5	2.736	N133	2,28	35.2	690	2264	2,49	38.4	752	2467
						N135	2,42	37.3	707	2320	2,69C	41.5C	777	2549
						N140	2,59	40.0	718	2356	2,87C	44.3C	790	2592
						N540	2,70	41.7	735	2411	2,96C	45.7C	806	2644
						N150	2,65	40.9	729	2392	2,90C	44.8C	792	2598
						N550	2,85	44.0	740	2428	3,17C	48.9C	819	2687
10,9	168	Berger	Classic Hunter	71,0	2.795	N133	2,35	36.3	727	2385	2,53	39.0	778	2552
						N135	2,47	38.1	727	2385	2,63	40.6	787	2582
						N140	2,63	40.6	744	2441	2,82	43.5	801	2628
						N540	2,65	40.9	753	2470	2,86	44.1	819	2687
						N150	2,61	40.3	746	2448	2,82	43.5	804	2638
						N550	2,78	42.9	754	2474	3,03C	46.8C	821	2694
10,9	168	Berger	Hybrid Target	71,0	2.795	N140	2,50	38.6	715	2346	2,71	41.8	779	2556
						N540	2,58	39.8	736	2415	2,78	42.9	809	2654
						N150	2,56	39.5	731	2398	2,77	42.8	793	2602
						N550	2,73	42.1	739	2425	2,92	45.0	811	2661
10,9	168	Hornady	A-Max	71,0	2.795	N133	2,25	34.7	700	2297	2,48	38.3	763	2503
						N135	2,40	37.0	714	2343	2,58	39.8	772	2533

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Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N140	2,55	39.4	723	2372	2,73	42.1	783	2569
						N540	2,61	40.3	736	2415	2,82	43.5	808	2651
						N150	2,55	39.4	723	2372	2,77C	42.7C	786	2579
						N550	2,75	42.4	737	2418	2,95F	45.5F	808	2651
10,9	168	Hornady	ELD Match	71,0	2.795	N135	2,36	36.4	730	2395	2,55	39.4	785	2575
						N140	2,52	38.9	741	2431	2,75	42.4	807	2648
						N540	2,55	39.4	745	2444	2,77	42.7	814	2671
						N150	2,55	39.4	744	2441	2,78	42.9	806	2644
						N550	2,72	42.0	755	2477	2,96C	45.7C	824	2703
10,9	168	Nosler	Custom Competition	71,1	2.799	N133	2,32	35.8	726	2382	2,52	38.9	783	2569
						N135	2,44	37.7	735	2411	2,63	40.6	790	2592
						N140	2,59	40.0	740	2428	2,82C	43.5C	800	2625
						N540	2,61	40.3	752	2467	2,83	43.7	817	2680
						N150	2,61	40.3	751	2464	2,79	43.1	804	2638
						N550	2,77	42.7	753	2470	3,02C	46.6C	823	2700
10,9	168	Nosler	Expansion Tip	69,8	2.748	N135	2,36	36.4	706	2316	2,65C	40.9C	774	2539
						N140	2,54	39.2	718	2356	2,82C	43.5C	787	2582
						N540	2,68	41.4	734	2408	2,96C	45.7C	808	2651
						N150	2,57	39.7	728	2388	2,87C	44.3C	793	2602
						N550	2,85	44.0	747	2451	3,14C	48.5C	818	2684
10,9	168	Sierra	HPBT	71,0	2.795	N135	2,40	37.0	728	2388	2,60	40.1	783	2569
						N140	2,57	39.7	740	2428	2,78	42.9	802	2631
						N540	2,62	40.4	751	2464	2,83	43.7	814	2671
						N150	2,60	40.1	744	2441	2,82	43.5	803	2635
						N550	2,77	42.7	755	2477	3,01	46.5	824	2703
11,0	170	Lapua	LockBase B476	71,0	2.795	N135	2,42	37.4	710	2328	2,78	42.9	806	2645
						N140	2,56	39.5	715	2345	2,95A	45.5A	822	2696
						N540	2,60	40.1	703	2308	3,00	46.3	842	2762
						N150	2,61	40.2	720	2361	2,95	45.5	833	2734
						N550	2,77	42.8	719	2360	3,14	48.5	845	2772
11,0	170	Lapua	Naturalis LR	71,0	2.795	N140	2,54	39.2	744	2441	2,84	43.8	825	2707
						N150	2,67	41.2	760	2493	2,89	44.6	815	2674
						N550	2,78	42.9	737	2418	3,13F	48.3F	833	2733
11,0	170	Lapua	Naturalis N558	71,0	2.795	N140	2,46	38.0	723	2372	2,72	42.0	797	2615
						N540	2,57	39.7	752	2467	2,86	44.1	824	2703
						N150	2,56	39.5	730	2395	2,77	42.7	803	2635
						N550	2,72	42.0	736	2415	2,97	45.8	799	2621
11,3	175	Barnes	LRX BT	71,0	2.795	N133	2,20	34.0	673	2208	2,44	37.7	736	2415
						N135	2,34	36.1	685	2247	2,60C	40.1C	754	2474
						N140	2,51	38.7	701	2300	2,80C	43.2C	770	2526
						N540	2,60	40.1	712	2336	2,93C	45.2C	794	2605
						N150	2,57	39.7	710	2329	2,83C	43.7C	774	2539
						N550	2,75	42.4	729	2392	3,09C	47.7C	802	2631
11,3	175	Berger	OTM Tactical	71,0	2.795	N130	2,05	31.6	684	2244	2,26	34.9	741	2431
						N133	2,25	34.7	697	2287	2,42	37.3	755	2477
						N530	2,29	35.3	713	2339	2,50	38.6	772	2533
						N135	2,32	35.8	705	2313	2,53	39.0	765	2510
						N140	2,51	38.7	721	2365	2,71	41.8	780	2559
						N540	2,58	39.8	737	2418	2,78	42.9	801	2628
						N150	2,51	38.7	728	2388	2,74	42.3	787	2582
						N550	2,71	41.8	738	2421	2,94	45.4	805	2641
11,3	175	Lapua	OTM Scenar-L GB550	71,0	2.795	N135	2,29	35.3	720	2362	2,50	38.6	786	2579
						N140	2,46	38.0	735	2411	2,68	41.4	803	2635
						N540	2,51	38.7	746	2448	2,75	42.4	822	2697
						N150	2,54	39.2	741	2431	2,73	42.1	804	2638

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Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
11,3	175	Sierra	HPBT	71,0	2.795	N133	2,22	34.3	699	2293	2,43	37.5	756	2480
						N135	2,34	36.1	712	2336	2,52	38.9	765	2510
						N140	2,50	38.6	724	2375	2,70	41.7	783	2569
						N540	2,52	38.9	730	2395	2,73	42.1	795	2608
						N150	2,50	38.6	728	2388	2,74	42.3	790	2592
						N550	2,71	41.8	739	2425	2,93	45.2	807	2648
11,4	176	Hornady	A-Tip Match	71,0	2.795	N135	2,37	36.6	704	2310	2,58	39.8	764	2507
						N140	2,57	39.7	719	2359	2,80C	43.2C	782	2566
						N540	2,60	40.1	739	2425	2,86	44.1	802	2631
						N150	2,60	40.1	735	2411	2,82C	43.5C	792	2598
						N550	2,80	43.2	746	2448	3,06C	47.2C	808	2651
11,5	178	Hornady	ELD Match	71,0	2.795	N130	2,15	33.2	688	2257	2,34	36.1	744	2441
						N133	2,33	36.0	702	2303	2,51	38.7	757	2484
						N135	2,40	37.0	706	2316	2,60	40.1	765	2510
						N140	2,60	40.1	727	2385	2,80	43.2	782	2566
						N540	2,62	40.4	730	2395	2,83	43.7	793	2602
						N150	2,65	40.9	733	2405	2,86	44.1	790	2592
						N550	2,81	43.4	737	2418	3,05C	47.1C	805	2641
11,7	180	Barnes	TTSX BT	71,0	2.795	N135	2,08	32.1	643	2110	2,38	36.7	711	2333
						N140	2,39	36.9	666	2185	2,64	40.7	736	2415
						N540	2,39	36.9	675	2215	2,64	40.7	748	2454
						N150	2,36	36.4	670	2198	2,63	40.6	738	2421
						N550	2,57	39.7	681	2234	2,81	43.4	751	2464
11,7	180	Barnes	XFB	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	Berger	Elite Hunter	71,0	2.795	N135	2,36	36.4	693	2274	2,53	39.0	746	2448
						N140	2,45	37.8	694	2277	2,66	41.1	758	2487
						N540	2,53	39.0	713	2339	2,73	42.1	777	2549
						N150	2,48	38.3	697	2287	2,70	41.7	760	2493
						N550	2,67	41.2	715	2346	2,90	44.8	785	2575
11,7	180	Hornady	CX	71,0	2.795	N135	1,95	30.1	602	1975	2,14	33.0	660	2165
						N140	2,20	34.0	640	2100	2,51	38.7	710	2329
						N540	2,37	36.6	665	2182	2,60	40.1	738	2421
						N150	2,25	34.7	641	2103	2,54	39.2	715	2346
						N550	2,54	39.2	680	2231	2,82	43.5	756	2480
11,7	180	Hornady	SP	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	Norma	Oryx	68,8	2.709	N530	2,24	34.6	693	2274	2,38	36.7	744	2441
						N135	2,22	34.3	680	2231	2,40	37.0	737	2418
						N140	2,42	37.3	697	2287	2,66	41.1	760	2493
						N540	2,45	37.8	708	2323	2,66	41.1	770	2526
						N150	2,43	37.5	702	2303	2,68	41.4	764	2507
						N550	2,59	40.0	712	2336	2,81	43.4	774	2539
11,7	180	RWS	HMK	67,6	2.661	N140	2,47	38.1	693	2274	2,68	41.4	754	2474
						N540	2,49	38.4	701	2300	2,75	42.4	772	2533
						N150	2,48	38.3	697	2287	2,73	42.1	760	2493
						N550	2,74	42.3	712	2336	3,04C	46.9C	788	2585
11,7	180	RWS	UNI Classic	67,2	2.646	N140	2,43	37.5	689	2260	2,69	41.5	753	2470
						N540	2,45	37.8	690	2264	2,70	41.7	761	2497
						N150	2,50	38.6	698	2290	2,73	42.1	758	2487
						N550	2,70	41.7	704	2310	2,98C	46.0C	778	2552
11,7	181	Brenneke	TUG	68,6	2.701	N135	2,32	35.8	679	2228	2,49	38.4	732	2402
						N140	2,51	38.7	697	2287	2,75	42.4	755	2477
						N540	2,57	39.7	714	2343	2,78	42.9	777	2549

.308 Winchester cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N150	2,49	38.4	700	2297	2,74	42.3	762	2500
						N550	2,68	41.4	710	2329	3,00	46.3	787	2582
12,0	185	Berger	Hybrid Target	71,0	2.795	N540	2,42	37.3	684	2244	2,62	40.4	757	2484
						N150	2,41	37.2	672	2205	2,63	40.6	738	2421
12,0	185	Berger	Juggernaut Target	71,0	2.795	N140	2,40	37.0	668	2192	2,61	40.3	730	2395
						N540	2,45	37.8	687	2254	2,66	41.1	758	2487
						N150	2,43	37.5	674	2211	2,63	40.6	734	2408
						N550	2,63	40.6	699	2293	2,81	43.4	764	2507
12,0	185	Lapua	D46	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	Lapua	Mega E415	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	Lapua	Scenar	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
12,3	190	Sierra	HPBT	71,0	2.795	N135	2,23	34.4	673	2208	2,44	37.7	726	2382
						N140	2,40	37.0	691	2267	2,59	40.0	746	2448
						N540	2,46	38.0	702	2303	2,68	41.4	764	2507
						N150	2,42	37.3	689	2260	2,66	41.1	752	2467
						N550	2,62	40.4	710	2329	2,87	44.3	776	2546
13,0	200	Speer	SP	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
13,0	200.2	Berger	200.20X Hybrid Target	71,0	2.795	N140	2,41	37.2	671	2201	2,62	40.4	723	2372
						N540	2,48	38.3	687	2254	2,69	41.5	748	2454
						N150	2,41	37.2	677	2221	2,61	40.3	728	2388
						N550	2,62	40.4	691	2267	2,90	44.8	761	2497
13,3	205	Berger	Elite Hunter	71,0	2.795	N140	2,33	36.0	648	2126	2,55C	39.4C	706	2316
						N540	2,45	37.8	669	2195	2,69	41.5	736	2415
						N150	2,39	36.9	651	2136	2,62C	40.4C	708	2323
						N550	2,62	40.4	678	2224	2,88C	44.4C	749	2457
13,5	208	Hornady	A-MAX	71,0	2.795	N140	2,28	35.2	634	2080	2,49C	38.4C	691	2267
						N540	2,45	37.8	668	2192	2,67C	41.2C	730	2395
						N150	2,40	37.0	647	2123	2,60C	40.1C	699	2293
						N550	2,60	40.1	673	2208	2,84C	43.8C	737	2418
14,3	220	Sako	Hammerhead	70,5	2.776	N140	2,30	35.5	609	1998	2,54	39.2	668	2192
						N540	2,27	35.0	603	1978	2,49	38.4	665	2182
						N150	2,26	34.9	593	1946	2,52	38.9	656	2152
						N550	2,60	40.1	636	2087	2,79	43.1	692	2270

A = Accuracy load C = Compressed load F = Case full [1] A muzzle velocity exceeding 1000 m/s (3300 fps) may lead to severe barrel fouling!

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,8	105	Lapua	HP	64,5	2.539	N120	1,48	22.8	692	2271	1,73	26.8	781	2562

.30-30 Winchester cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						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	Speer	FSP	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
						N135	1,80	27.7	649	2129	2,08	32.0	737	2419
9,7	150	Speer	FSP	64,5	2.539	N120	1,23	19.1	519	1701	1,46	22.5	593	1946
						N130	1,43	22.1	558	1831	1,65	25.4	631	2070
						N133	1,48	22.8	560	1839	1,72	26.5	636	2086
						N135	1,71	26.4	587	1927	1,93	29.7	660	2165
						N140	1,85	28.5	596	1956	2,06	31.8	672	2203
11,0	170	Speer	FSP	64,5	2.539	N130	1,34	20.7	516	1692	1,60	24.7	598	1962
						N133	1,42	21.9	511	1678	1,67	25.8	589	1931
						N135	1,58	24.4	536	1759	1,80	27.7	604	1981
						N140	1,66	25.5	533	1747	1,89	29.2	610	2002

.300 Savage

Test barrel:	600 mm (23½”), 1 in 12” twist
Primers:	Large Rifle
Cases:	Remington, trim-to length 47,30 mm (1.862”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Lapua	HP / OTCE	62,5	2.461	N120	2,19	33.9	878	2881	2,45	37.8	975	3199
						N130	2,41	37.1	912	2993	2,59	40.0	986	3235
						N133	2,59	39.9	894	2932	2,85	44.0	973	3192
8,1	125	Speer	TNT-HP	65,5	2.579	N120	2,06	31.8	764	2507	2,27	35.0	837	2746
						N130	2,21	34.1	794	2606	2,42	37.3	863	2831
						N133	2,53	39.1	822	2698	2,71	41.8	884	2900
9,7	150	Lapua	Mega E469	61,5	2.421	N130	1,89	29.2	684	2243	2,18	33.6	751	2464
						N135	2,24	34.6	706	2315	2,50	38.6	772	2533
						N140	2,44	37.6	719	2360	2,72	42.0	793	2602
10,7	165	Sierra	SBT	66,0	2.598	N133	2,20	33.9	690	2264	2,42	37.3	759	2490
						N135	2,35	36.2	700	2297	2,53	39.0	764	2507
						N140	2,46	37.9	713	2341	2,68	41.4	787	2582
12,0	185	Lapua	Mega E415	66,0	2.598	N135	2,15	33.2	631	2072	2,44	37.6	705	2313
						N140	2,30	35.5	649	2131	2,59	40.0	715	2346
						N540	2,36	36.4	644	2113	2,66	41.0	720	2362

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Lapua	HPCE / OTCE	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
						N133	2,98	46.0	960	3150	3,20F	49.4F	1019	3343
8,0	123	Lapua	FMJ	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	Lapua	LockBase	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
						N140	3,09	47.7	847	2779	3,35	51.7	916	3005

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

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
9,7	150	Lapua	Mega E469	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
10,0	155	Lapua	Scenar / OTM Scenar-L	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
						N150	2,99	46.2	803	2635	3,15A	48.6A	886	2906
10,85	167	Lapua	Scenar	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
						N550	3,21	49.5	797	2616	3,40	52.5	840	2756
10,9	168	Sierra	HPBT	75,6	2.976	N140	2,94	45.4	775	2541	3,18	49.1	830	2723
						N540	3,03	46.7	787	2581	3,12	48.1	812	2664
						N150	3,08	47.5	790	2591	3,27	50.5	834	2736
						N550	3,26	50.3	804	2638	3,40	52.5	840	2756
11,0	170	Lapua	LockBase B476	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
						N550	3,18	49.1	787	2582	3,46	53.4	862	2828
11,0	170	Lapua	Naturalis	72,0	2.835	N140	2,78	42.9	755	2477	3,04	46.9	823	2700
						N540	2,95	45.5	774	2539	3,21	49.5	846	2776
						N150	2,89	44.6	767	2516	3,14	48.5	832	2730
11,0	170	Lapua	Naturalis N558	72,0	2.835	N140	2,80	43.2	744	2441	3,05	47.1	817	2680
						N540	2,87	44.3	765	2510	3,15	48.6	844	2769
						N150	2,83	43.7	750	2461	3,09	47.7	817	2680
12,0	185	Lapua	D46	76,8	3.024	N140	2,87	44.3	737	2418	3,10	47.8	805	2641
						N540	2,98	46.0	748	2454	3,23	49.8	823	2700
						N150	2,93	45.2	740	2428	3,16	48.8	806	2644
						N560	3,14	48.5	754	2474	3,38	52.2	830	2723
12,0	185	Lapua	Mega E415	70,0	2.756	N140	2,80	43.2	708	2324	3,12	48.1	788	2585
						N540	2,87	44.4	720	2363	3,17	48.9	799	2621
						N150	2,92	45.1	718	2355	3,20	49.4	792	2598
						N550	3,13	48.3	746	2446	3,47	53.5	835	2740
12,0	185	Lapua	Scenar	75,0	2.953	N135	2,74	42.2	727	2384	2,98	46.0	795	2609
						N140	2,87	44.3	741	2429	3,03A	46.8A	787	2581
						N540	2,84	43.9	741	2431	3,14	48.5	818	2684
						N150	2,98	45.9	742	2434	3,24	50.0	815	2674
						N550	3,03	46.7	747	2452	3,41	52.6	847	2779
13,0	200	Lapua	D166	76,0	2.992	N140	2,36	36.4	635	2083	2,59A	40.0A	709	2326
						N540	2,47	38.1	656	2152	2,69	41.5	720	2362
						N150	2,36	36.4	641	2103	2,64	40.7	711	2333
13,0	200	Sierra	HPBT	77,1	3.035	N140	2,72	42.0	698	2292	3,07	47.4	779	2556
						N540	2,75	42.4	703	2306	3,06	47.2	779	2556
						N150	2,83	43.6	706	2316	3,14	48.5	781	2562
						N550	3,04	46.8	728	2389	3,34	51.5	807	2648
14,3	220	Sierra	HPBT	77,1	3.035	N540	2,63	40.6	656	2151	2,87	44.3	728	2388
						N150	2,61	40.3	639	2095	2,96	45.7	728	2388
						N550	2,84	43.9	675	2215	3,12	48.1	753	2470

A = Accuracy load F = Case full

7,5 x 55 Swiss GP31

Test barrel:	600 mm (23½"), 1 in 10" twist
Primers:	Large Rifle
Cases:	Norma, trim-to length 55,40 mm (2.181")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
10,0	155	Lapua	Scenar / OTM Scenar-L	75,5	2.972	N140	3,00	46.3	759	2490	3,18	49.1	811	2661
						N540	3,05	47.1	766	2513	3,25	50.1	842	2762
						N150	3,03	46.8	763	2503	3,22	49.7	815	2674
10,85	167	Lapua	Scenar	75,5	2.972	N140	2,78	42.9	700	2297	2,96	45.7	760	2493
						N540	2,65	40.9	700	2297	3,07	47.4	771	2530
						N150	2,78	42.9	703	2306	3,08	47.5	761	2497
12,0	185	Lapua	Scenar	75,5	2.972	N140	2,45	37.8	694	2277	2,71	41.8	710	2329
						N540	2,74	42.3	688	2257	2,87	44.3	722	2369
						N150	2,85	44.0	697	2287	2,93	45.2	723	2372

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
3,7	57	Lapua	ALS[1)]	79,0	3.110	N110	2,02	31.1	1075	3527	2,49	38.4	1217	3994
6,5	100	Lapua	HP / OTCE	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	Hornady	RN	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	Lapua	FMJ	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	Hornady	ECX	81,1	3.193	N135	2,70	41.7	807	2648	2,92	45.1	883	2897
						N140	3,20	49.4	870	2854	3,43	52.9	937	3074
						N540	3,30	50.9	880	2887	3,60	55.6	965	3166
						N150	3,15	48.6	856	2808	3,47	53.6	936	3071
						N550	3,45	53.2	890	2920	3,80	58.6	970	3182
						N555	3,80	58.6	891	2923	3,90C	60.2C	915	3002
						N160	3,85	59.4	886	2907	4,10C	63.3C	942	3091
8,1	125	Nosler	Ballistic Tip	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	Barnes	TSX BT	83,3	3.280	N530	3,03	46.8	860	2822	3,34	51.5	935	3068
						N140	3,20	49.4	864	2835	3,47	53.6	936	3071
						N540	3,33	51.4	883	2897	3,62	55.9	960	3150
						N150	3,25	50.2	868	2848	3,55	54.8	938	3077
						N550	3,54	54.6	882	2894	3,89	60.0	967	3173

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Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
9,5	147	Brenneke	TUG	80,8	3.181	N140	2,94	45.4	773	2536	3,22	49.7	850	2789
						N540	3,09	47.7	804	2638	3,40	52.5	888	2913
						N150	3,07	47.4	790	2592	3,37	52.0	867	2844
						N550	3,25	50.2	806	2644	3,60	55.6	893	2930
						N555	3,72	57.4	845	2772	3,90C	60.2C	882	2894
						N160	3,80	58.6	824	2703	4,13C	63.7C	910	2986
9,7	150	Barnes	TTSX BT	84,8	3.339	N150	2,94	45.4	780	2559	3,21	49.5	851	2792
						N550	3,20	49.4	799	2621	3,52	54.3	880	2887
						N555	3,60	55.6	836	2743	3,96F	61.1F	909	2982
						N160	3,68	56.8	819	2687	4,00F	61.7F	892	2927
9,7	150	Hornady	SST	82,6	3.252	N530	2,82	43.5	808	2651	3,10	47.8	874	2867
						N140	3,05	47.1	824	2703	3,27	50.5	882	2894
						N540	3,15	48.6	839	2753	3,39	52.3	906	2972
						N150	3,08	47.5	828	2717	3,33	51.4	891	2923
						N550	3,36	51.9	838	2749	3,58	55.2	903	2963
						N555	3,70	57.1	846	2776	4,00C	61.7C	903	2963
						N160	3,66	56.5	854	2802	3,92	60.5	918	3012
9,7	150	Lapua	LockBase	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	Lapua	Mega E469	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	LOS	HT	83,0	3.268	N540	3,21	49.5	864	2835	3,50	54.0	940	3084
						N150	3,21	49.5	853	2799	3,49	53.9	922	3025
						N550	3,40	52.5	866	2841	3,80	58.6	952	3123
9,7	150	Norma	FMJ	82,0	3.228	N540	3,10	47.8	826	2710	3,42	52.8	904	2966
						N150	3,10	47.8	822	2697	3,36	51.9	884	2900
						N550	3,35	51.7	834	2736	3,59	55.4	904	2966
						N555	3,70	57.1	863	2831	3,95F	61.0F	918	3012
						N160	3,65	56.3	810	2657	3,90F	60.2F	870	2854
9,7	150	Red Moose	TARVAS	82,9	3.264	N140	3,27	50.5	838	2749	3,48	53.7	897	2943
						N540	3,40	52.5	855	2805	3,62	55.9	925	3035
						N150	3,30	50.9	832	2730	3,54	54.6	896	2940
						N550	3,60	55.6	867	2844	3,83	59.1	930	3051
9,7	150	Sierra	HPBT	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	Brenneke	TAG	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
10,0	155	Lapua	Scenar / OTM Scenar-L	84,0	3.307	N140	2,78	42.9	755	2477	3,23	49.8	850	2789
						N540	3,05	47.1	774	2539	3,45	53.3	886	2907
						N150	2,79	43.0	767	2516	3,30	50.9	863	2831
						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	Nosler	Custom Competition	84,8	3.338	N140	2,88	44.4	791	2595	3,18	49.1	856	2808
						N540	3,08	47.5	822	2697	3,39	52.3	893	2930
						N150	2,92	45.1	803	2635	3,22	49.7	867	2844
						N550	3,28	50.6	831	2726	3,57	55.1	900	2953

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Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N555	3,60	55.6	848	2782	3,90	60.2	912	2992
						N160	3,65	56.3	836	2743	3,93	60.6	899	2949
10,0	155	Sierra	HPBT Palma	84,8	3.339	N140	3,10	47.8	821	2694	3,34	51.5	876	2874
						N540	3,16	48.8	829	2720	3,41	52.6	898	2946
						N150	3,12	48.1	821	2694	3,33	51.4	879	2884
						N550	3,45	53.2	843	2766	3,64	56.2	902	2959
						N160	3,67	56.6	845	2772	3,90F	60.2F	896	2940
10,1	155.5	Berger	Fullbore	83,5	3.287	N140	3,07	47.4	808	2651	3,31	51.1	870	2854
						N540	3,19	49.2	834	2736	3,42	52.8	903	2963
						N150	3,10	47.8	823	2700	3,34	51.5	880	2887
						N550	3,35	51.7	842	2762	3,57	55.1	903	2963
						N555	3,65	56.3	851	2792	3,95F	61.0F	906	2972
						N160	3,75	57.9	846	2776	3,98	61.4	908	2979
10,7	165	Brenneke	TOG	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
						N555	3,40	52.5	767	2516	3,85F	59.4F	860	2822
						N160	2,90	44.8	708	2323	3,53	54.5	810	2657
10,7	165	Hornady	ECX	81,1	3.193	N140	2,75	42.4	711	2333	3,05	47.1	786	2579
						N540	2,90	44.8	738	2421	3,18	49.1	820	2690
						N150	2,70	41.7	706	2316	3,11	48.0	792	2598
						N550	3,05	47.1	758	2487	3,31	51.1	826	2710
						N555	3,28	50.6	770	2526	3,71C	57.3C	845	2772
						N160	3,30	50.9	747	2451	3,75C	57.9C	834	2736
						N560	3,65	56.3	767	2516	4,10C	63.3C	857	2812
10,7	165	Hornady	GMX	83,5	3.287	N550	2,93	45.2	747	2451	3,13	48.3	812	2664
						N555	3,19	49.2	769	2523	3,49	53.9	831	2726
						N160	3,04	46.9	740	2428	3,46	53.4	824	2703
						N560	3,36	51.9	742	2434	3,61	55.7	816	2677
10,7	165	Red Moose	TARVAS	82,8	3.260	N540	3,27	50.5	811	2661	3,48	53.7	877	2877
						N150	3,13	48.3	782	2566	3,36	51.9	841	2759
						N550	3,42	52.8	814	2671	3,65	56.3	876	2874
						N555	3,77	58.2	837	2746	4,05C	62.5C	883	2897
						N160	3,81	58.8	819	2687	4,10C	63.3C	882	2894
10,7	165	Sierra	SBT	84,3	3.319	N540	3,12	48.1	804	2638	3,39	52.3	868	2848
						N150	2,96	45.7	770	2526	3,26	50.3	833	2733
						N550	3,27	50.5	808	2651	3,54	54.6	873	2864
						N555	3,67	56.6	831	2726	3,90C	60.2C	879	2884
						N160	3,60	55.6	808	2651	3,95F	61.0F	874	2867
10,7	165	Swift	Scirocco II	84,0	3.307	N540	2,98	46.0	768	2520	3,23	49.8	835	2740
						N150	2,80	43.2	751	2464	3,12	48.1	813	2667
						N550	3,21	49.5	782	2566	3,46	53.4	848	2782
						N555	3,34	51.5	788	2585	3,73	57.6	862	2828
						N160	3,41	52.6	788	2585	3,67	56.6	849	2785
						N560	3,62	55.9	778	2552	3,95	61.0	852	2795
10,8	166	CopperBear	EXHBT	79,0	3.110	N540	2,90	44.8	743	2438	3,18	49.1	820	2690
						N150	2,70	41.7	708	2323	3,06	47.2	789	2589
						N550	3,05	47.1	747	2451	3,35	51.7	825	2707
						N555	3,40	52.5	776	2546	3,85C	59.4C	856	2808
						N160	3,30	50.9	745	2444	3,72	57.4	832	2730
						N560	3,65	56.3	767	2516	4,05C	62.5C	851	2792
10,85	167	Lapua	Scenar	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
						N550	3,22	49.7	779	2556	3,57	55.1	855	2805

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Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N160	3,60	55.5	749	2457	4,00	61.7	842	2762
10,9	168	Barnes	TSX	81,7	3.217	N540	2,73	42.1	735	2411	3,09	47.7	824	2703
						N550	2,96	45.7	735	2411	3,26	50.3	825	2707
						N160	3,25	50.2	745	2444	3,65	56.3	833	2733
10,9	168	Berger	Classic Hunter	82,8	3.260	N140	2,82	43.5	761	2497	3,08	47.5	826	2710
						N540	3,00	46.3	789	2589	3,25	50.2	854	2802
						N150	2,87	44.3	774	2539	3,14	48.5	837	2746
						N550	3,12	48.1	792	2598	3,37	52.0	855	2805
						N555	3,45	53.2	808	2651	3,79F	58.5F	878	2881
						N160	3,53	54.5	805	2641	3,80	58.6	870	2854
10,9	168	Hornady	A-Max	81,8	3.220	N540	3,02	46.6	778	2552	3,23	49.8	842	2762
						N150	2,95	45.5	762	2500	3,19	49.2	823	2700
						N550	3,27	50.5	794	2605	3,46	53.4	855	2805
						N555	3,50	54.0	802	2631	3,80C	58.6C	866	2841
						N160	3,65	56.3	801	2628	3,94C	60.8C	858	2815
10,9	168	Nosler	RDF	84,8	3.338	N140	2,85	44.0	760	2493	3,12	48.1	822	2697
						N540	3,02	46.6	792	2598	3,20	49.4	846	2776
						N150	2,90	44.8	775	2543	3,14	48.5	830	2723
						N550	3,10	47.8	791	2595	3,35	51.7	857	2812
						N555	3,50	54.0	815	2674	3,78C	58.3C	877	2877
						N160	3,55	54.8	808	2651	3,81	58.8	868	2848
10,9	168	Sierra	TMK	84,0	3.307	N140	2,89	44.6	762	2500	3,16	48.8	832	2730
						N540	2,98	46.0	790	2592	3,24	50.0	864	2835
						N150	2,95	45.5	774	2539	3,22	49.7	845	2772
						N550	3,17	48.9	800	2625	3,46	53.4	876	2874
11,0	170	Lapua	LockBase B476	84,0	3.307	N140	2,91	44.9	717	2352	3,24	50.0	799	2621
						N540	2,96	45.7	729	2392	3,34	51.5	821	2694
						N150	3,06	47.2	735	2411	3,41	52.6	815	2674
						N550	3,17	48.9	746	2448	3,61	55.7	842	2762
						N160	3,65	56.3	765	2510	4,05	62.5	853	2799
11,0	170	Lapua	Naturalis LR	82,0	3.228	N150	2,54	39.2	753	2470	3,12	48.1	822	2697
						N550	3,16	48.8	761	2497	3,42	52.8	845	2772
						N160	3,39	52.3	756	2480	3,74	57.7	846	2776
11,0	170	Lapua	Naturalis N558	82,0	3.228	N540	2,85	44.0	739	2425	3,15	48.6	821	2694
						N150	2,62	40.4	694	2277	2,99	46.1	771	2530
						N550	3,01	46.5	759	2490	3,33	51.4	843	2766
						N555	3,43	52.9	786	2579	3,68	56.8	846	2776
						N160	3,38	52.2	777	2549	3,73	57.6	857	2812
						N560	3,47	53.6	756	2480	3,91	60.3	846	2776
11,0	170	Sako	Blade 657A	84,8	3.339	N140	2,67	41.2	667	2188	3,03	46.8	758	2487
						N540	2,90	44.8	736	2415	3,24	50.0	820	2690
						N150	2,70	41.7	676	2218	3,09	47.7	764	2507
						N550	3,08	47.5	742	2434	3,40	52.5	825	2707
						N555	3,38	52.2	766	2513	3,82C	59.0C	848	2782
						N160	3,25	50.2	721	2365	3,74C	57.7C	817	2680
11,3	175	Lapua	OTM Scenar-L GB550	84,6	3.331	N540	3,03	46.8	760	2493	3,26	50.3	829	2720
						N150	3,00	46.3	751	2464	3,21	49.5	807	2648
						N550	3,30	50.9	777	2549	3,45	53.2	833	2733
						N555	3,45	53.2	787	2582	3,71	57.3	843	2766
						N160	3,60	55.6	777	2549	3,82	59.0	835	2740
						N560	3,67	56.6	767	2516	3,95C	61.0C	836	2743
11,6	178	Hornady	ELD-X	84,8	3.339	N540	3,01	46.5	764	2507	3,28	50.6	837	2746
						N150	3,02	46.6	744	2441	3,26	50.3	814	2671
						N550	3,19	49.2	766	2513	3,44	53.1	839	2753
						N555	3,41	52.6	774	2539	3,69	56.9	833	2733

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Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N160	3,51	54.2	765	2510	3,88	59.9	843	2766
11,7	180	Barnes	TSX	81,7	3.217	N540	2,72	42.0	713	2339	2,99	46.1	783	2569
						N550	2,89	44.6	710	2329	3,20	49.4	788	2585
						N160	3,14	48.5	712	2336	3,54	54.6	792	2598
11,7	180	Berger	Elite Hunter	84,8	3.339	N540	3,05	47.1	783	2569	3,31	51.1	850	2789
						N150	2,99	46.1	761	2497	3,26	50.3	825	2707
						N550	3,28	50.6	785	2575	3,52	54.3	859	2818
						N555	3,48	53.7	783	2569	3,75C	57.9C	845	2772
						N160	3,54	54.6	788	2585	3,91	60.3	862	2828
						N560	3,71	57.3	785	2575	4,08	63.0	866	2841
11,7	180	Fox Bullets	Classic Hunter	80,0	3.150	N140	2,60	40.1	701	2300	2,84	43.8	751	2464
						N540	2,73	42.1	722	2369	3,06	47.2	794	2605
						N150	2,55	39.4	688	2257	2,85	44.0	756	2480
						N160	3,31	51.1	739	2425	3,68C	56.8C	816	2677
11,7	180	Hornady	CX	81,7	3.217	N540	2,70	41.7	697	2287	3,01	46.5	772	2533
						N150	2,60	40.1	666	2185	2,93	45.2	739	2425
						N550	2,75	42.4	691	2267	3,11	48.0	771	2530
						N555	3,20	49.4	728	2388	3,68C	56.8C	810	2657
						N160	3,00	46.3	692	2270	3,53C	54.5C	782	2566
						N560	3,60	55.6	745	2444	3,93C	60.6C	815	2674
11,7	180	Hornady	GMX	82,9	3.264	N140	2,68	41.4	687	2254	2,88	44.4	737	2418
						N540	2,71	41.8	697	2287	2,94	45.4	751	2464
						N150	2,58	39.8	666	2185	2,91	44.9	742	2434
						N550	2,83	43.7	695	2280	3,13	48.3	773	2536
						N555	3,15	48.6	728	2388	3,56	54.9	800	2625
						N160	2,97	45.8	695	2280	3,41	52.6	779	2556
						N560	3,47	53.6	716	2349	3,96	61.1	807	2648
11,7	180	Norma	Oryx	82,0	3.228	N150	2,66	41.1	719	2359	2,98	46.0	779	2556
						N550	2,86	44.1	732	2402	3,14	48.5	796	2612
						N160	3,21	49.5	748	2454	3,61	55.7	819	2687
						N560	3,44	53.1	748	2454	3,74	57.7	816	2677
11,7	180	Sierra	SBT	84,6	3.331	N540	2,94	45.4	747	2451	3,19	49.2	813	2667
						N150	2,86	44.1	733	2405	3,19	49.2	796	2612
						N550	3,12	48.1	763	2503	3,38	52.2	826	2710
						N555	3,50	54.0	788	2585	3,85C	59.4C	856	2808
						N160	3,54	54.6	769	2523	3,82	59.0	832	2730
11,9	184	CopperBear	EXHBT	77,3	3.043	N540	2,70	41.7	672	2205	3,00	46.3	748	2454
						N150	2,60	40.1	654	2146	2,89	44.6	715	2346
						N550	2,82	43.5	682	2238	3,27	50.5	767	2516
						N555	3,25	50.2	719	2359	3,70C	57.1C	797	2615
						N160	2,95	45.5	667	2188	3,52C	54.3C	763	2503
						N560	3,60	55.6	725	2379	3,92C	60.5C	801	2628
12,0	185	Berger	Classic Hunter	84,6	3.331	N540	3,10	47.8	776	2546	3,36	51.9	842	2762
						N150	3,01	46.5	750	2461	3,31	51.1	820	2690
						N550	3,30	50.9	775	2543	3,53	54.5	846	2776
						N555	3,49	53.9	774	2539	3,72C	57.4C	828	2717
						N160	3,57	55.1	772	2533	3,89	60.0	848	2782
						N560	3,77	58.2	778	2552	4,11	63.4	860	2822
12,0	185	Berger	Hybrid Target	84,0	3.307	N150	2,96	45.7	746	2448	3,21	49.5	813	2667
						N550	3,19	49.2	773	2536	3,41	52.6	840	2756
						N160	3,49	53.9	767	2516	3,85	59.4	842	2762
						N560	3,64	56.2	765	2510	3,98	61.4	850	2789
12,0	185	Berger	Juggernaut Target	84,8	3.339	N540	2,95	45.5	752	2467	3,15	48.6	809	2654
						N150	2,70	41.7	719	2359	3,04	46.9	783	2569
						N550	3,00	46.3	748	2454	3,29	50.8	815	2674

.30-06 Springfield cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N555	3,45	53.2	780	2559	3,73	57.6	836	2743
						N160	3,35	51.7	757	2484	3,73	57.6	825	2707
						N560	3,60	55.6	765	2510	3,95C	61.0C	841	2759
12,0	185	Brenneke	Basic	81,0	3.189	N540	2,88	44.4	734	2408	3,21	49.5	806	2644
						N550	3,08	47.5	746	2448	3,30	50.9	804	2638
						N555	3,47	53.6	767	2516	3,78C	58.3C	829	2720
						N160	3,42	52.8	750	2461	3,69	56.9	812	2664
12,0	185	Lapua	Mega E415	79,5	3.130	N540	2,82	43.5	728	2388	3,17	48.9	811	2661
						N150	2,75	42.4	692	2270	3,28	50.6	791	2595
						N550	3,12	46.6	728	2388	3,46	53.4	812	2664
						N160	3,38	52.2	739	2425	3,71	57.2	815	2674
						N560	3,50	54.0	737	2418	3,89	60.0	826	2710
12,0	185	Lapua	Scenar	84,0	3.307	N540	2,86	44.1	688	2257	3,16	48.8	771	2530
						N150	2,88	44.4	696	2283	3,26A	50.3A	778	2552
						N550	3,02	46.6	701	2300	3,36	51.8	792	2598
						N160	3,48	53.7	724	2375	3,85	59.4	809	2654
						N560	3,52	54.3	724	2375	4,01	61.9	816	2677
12,3	190	Sierra	HPBT	84,0	3.307	N150	2,90	44.7	695	2280	3,20	49.4	767	2516
						N550	3,07	47.4	708	2323	3,49	53.9	812	2664
						N555	3,40	52.5	757	2484	3,75	57.9	824	2703
						N160	3,42	52.8	724	2375	3,81	58.8	795	2608
						N560	3,57	55.1	721	2365	4,04	62.3	825	2707
13,0	200	Lapua	Mega E401	79,5	3.130	N150	2,75	42.4	692	2270	3,10	47.8	747	2451
						N550	3,12	48.1	730	2395	3,28	50.6	767	2516
						N555	3,37	52.0	730	2395	3,67	56.6	794	2605
						N160	3,38	52.2	739	2425	3,48	53.7	763	2503
13,0	200	Nosler	Partition	84,0	3.307	N150	2,79	43.0	669	2195	3,08	47.5	724	2375
						N160	3,38	52.2	704	2310	3,73	57.6	765	2510
13,0	200	Rhino	Solid Shank Scandinavia	78,0	3.071	N540	2,70	41.7	670	2198	3,05	47.1	748	2454
						N150	2,59	40.0	650	2133	3,03	46.8	731	2398
						N550	3,00	46.3	703	2306	3,35	51.7	774	2539
						N555	3,45	53.2	736	2415	3,77C	58.2C	797	2615
						N160	3,45	53.2	717	2352	3,67C	56.6C	774	2539
13,0	200	Swift	A-Frame	84,0	3.307	N550	3,19	49.2	720	2362	3,42	52.8	784	2572
						N160	3,40	52.5	708	2323	3,68	56.8	778	2552
						N165	3,85	59.4	740	2428	4,14	63.9	804	2638
13,3	205	Berger	Elite Hunter	84,5	3.327	N140	2,73	42.1	684	2244	2,96	45.7	741	2431
						N540	2,87	44.3	708	2323	3,11	48.0	766	2513
						N150	2,80	43.2	687	2254	3,04	46.9	742	2434
						N550	3,00	46.3	714	2343	3,23	49.8	772	2533
						N555	3,33	51.4	733	2405	3,63	56.0	794	2605
						N160	3,39	52.3	722	2369	3,65	56.3	780	2559
13,5	208	Berger	Long Range Hybrid Target	84,8	3.339	N140	2,72	42.0	678	2224	2,90	44.8	726	2382
						N540	2,82	43.5	698	2290	3,02	46.6	756	2480
						N150	2,75	42.4	677	2221	2,98	46.0	733	2405
						N550	2,95	45.5	705	2313	3,19	49.2	765	2510
						N555	3,38	52.2	734	2408	3,63	56.0	788	2585
						N160	3,40	52.5	718	2356	3,65C	56.3C	779	2556
13,5	208	Hornady	A-MAX	84,2	3.315	N550	3,03	46.8	711	2333	3,28	50.6	769	2523
						N160	3,27	50.5	711	2333	3,56	54.9	774	2539
						N560	3,56	54.9	732	2402	3,83	59.1	798	2618
						N565	3,57	55.1	729	2392	3,89	60.0	782	2566
13,6	210	Nosler	RDF	84,8	3.338	N140	2,70	41.7	685	2247	2,85	44.0	721	2365
						N150	2,60	40.1	670	2198	2,88	44.4	727	2385
						N550	2,85	44.0	692	2270	3,08	47.5	752	2467

.30-06 Springfield cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N555	3,15	48.6	713	2339	3,44C	53.1C	774	2539
						N160	3,20	49.4	708	2323	3,47	53.6	766	2513
						N560	3,35	51.7	712	2336	3,61C	55.7C	774	2539
14,0	215	Berger	Hybrid Target	84,8	3.339	N550	3,04	46.9	704	2310	3,28	50.6	768	2520
						N555	3,25	50.2	705	2313	3,53	54.5	761	2497
						N165	3,76	58.0	727	2385	3,95	61.0	774	2539
						N560	3,55	54.8	719	2359	3,94	60.8	800	2625
14,3	220	Berger	Long Range Hybrid Target	84,8	3.339	N150	2,68	41.4	652	2139	2,89	44.6	702	2303
						N550	2,87	44.3	679	2228	3,13	48.3	740	2428
						N555	3,32	51.2	711	2333	3,58C	55.2C	767	2516
						N160	3,30	50.9	693	2274	3,53	54.5	750	2461
14,3	220	Hornady	RN	84,0	3.307	N160	3,29	50.8	654	2146	3,63	56.0	722	2369
						N560	3,47	53.5	672	2205	3,97	61.3	767	2516
14,3	220	Lapua	Scenar-L	84,8	3.339	N150	2,71	41.8	645	2116	2,96	45.7	701	2300
						N550	3,00	46.3	679	2228	3,18	49.1	735	2411
						N555	3,15	48.6	686	2251	3,42	52.8	741	2431
						N160	3,20	49.4	674	2211	3,54	54.6	734	2408
						N165	3,60	55.6	700	2297	3,89C	60.0C	760	2493
						N560	3,42	52.8	684	2244	3,71C	57.3C	751	2464
14,3	220	Rhino	Solid Shank	81,6	3.213	N150	2,66	41.1	632	2073	2,93	45.2	686	2251
						N550	2,98	46.0	665	2182	3,15	48.6	713	2339
						N160	3,20	49.4	672	2205	3,45	53.2	725	2379
						N560	3,48	53.7	680	2231	3,88C	59.9C	752	2467
						N565	3,75	57.9	697	2287	3,99C	61.6C	750	2461
15,6	240	Woodleigh	Weldcore	84,0	3.307	N165	3,45	53.2	658	2159	3,90	60.2	729	2392
						N560	3,31	51.1	647	2123	3,67	56.6	726	2382
						N565	3,48	53.7	667	2188	3,87	59.7	732	2402

A = Accuracy load C = Compressed load F = Case full [1] A muzzle velocity exceeding 1000 m/s (3300 fps) may lead to severe barrel fouling!

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
10,0	155	Lapua	Scenar / OTM Scenar-L	91,4	3.598	N150	3,76	58.0	888	2913	3,97	61.3	935	3068
						N550	3,98	61.4	914	2999	4,26	65.8	971	3187
						N160	4,28	66.0	909	2982	4,57	70.5	967	3174
12,0	185	Lapua	Scenar	91,4	3.598	N160	3,95	60.9	820	2690	4,21	64.9	872	2862
						N165	4,35	67.1	843	2766	4,62	71.4	895	2937
						N560	4,31	66.5	851	2792	4,59	70.9	908	2978
13,0	200	Sierra	HPBT	91,4	3.598	N160	3,87	59.7	792	2598	4,04	62.4	829	2719
						N165	4,24	65.4	813	2667	4,45	68.6	853	2799
						N560	4,21	65.0	821	2694	4,42	68.1	864	2834

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Lapua	HPCE / OTCE	67,0	2.638	N540	3,91	60.3	1042	3419	4,29	66.2	1146	3760
						N150	3,85	59.4	1026	3366	4,21	65.0	1107	3632

.300 WSM

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N550	4,14	63.9	1027	3369	4,55	70.2	1079	3540
8,0	123	Lapua	FMJ	68,8	2.709	N150	3,82	59.0	963	3159	4,10	63.3	1032	3386
						N550	4,06	62.7	950	3117	4,39	67.7	1057	3468
						N160	4,28	66.1	953	3127	4,70	72.5	1045	3428
9,7	150	Lapua	LockBase	72,0	2.835	N550	3,74	57.7	882	2894	4,15	64.0	979	3212
						N160	3,89	60.0	878	2881	4,50	69.4	978	3209
						N560	4,36	67.3	886	2907	4,81	74.2	989	3245
9,7	150	Lapua	Mega E469	66,5	2.618	N550	3,51	54.2	860	2822	4,00	61.7	956	3136
						N160	3,75	57.9	849	2785	4,34	67.0	951	3120
						N560	4,14	63.9	862	2828	4,60	71.0	969	3179
10,7	165	Swift	Scirocco	73,5	2.894	N550	3,77	58.2	862	2828	4,16	64.2	957	3140
						N160	3,87	59.7	842	2762	4,33	66.8	937	3074
						N165	4,32	66.7	868	2848	4,74	73.1	962	3156
						N560	4,23	65.3	858	2815	4,63	71.5	959	3146
10,85	167	Lapua	Scenar	72,1	2.839	N550	3,56	54.9	832	2730	3,97	61.3	922	3025
						N160	3,49	53.9	792	2598	4,15	64.0	908	2979
						N560	4,03	62.2	833	2733	4,48	69.1	931	3054
11,0	170	Lapua	Naturalis	72,1	2.839	N160	3,38	52.2	790	2592	4,01	61.9	889	2917
						N165	3,90	60.2	821	2694	4,45	68.7	908	2979
						N560	3,95	61.0	814	2671	4,40	67.9	916	3005
11,0	170	Lapua	Naturalis N558	66,5	2.618	N160	3,51	54.2	790	2592	4,12	63.6	891	2923
						N165	3,96	61.1	817	2680	4,50	69.4	901	2956
						N560	3,92	60.5	811	2661	4,40	67.9	913	2995
12,0	185	Lapua	Mega E415	69,9	2.752	N550	3,41	52.6	784	2572	3,83	59.1	867	2844
						N160	3,35	51.7	752	2467	3,92	60.5	851	2792
						N560	3,95	61.0	801	2628	4,33	66.8	881	2890
12,0	185	Lapua	Scenar	77,0	3.031	N160	3,83	59.1	799	2621	4,22	65.1	882	2894
						N165	4,18	64.5	823	2700	4,62	71.3	911	2989
						N560	4,11	63.4	814	2671	4,50	69.4	906	2972
13,0	200	Lapua	Mega E401	70,0	2.756	N160	3,67	56.6	749	2457	4,15	64.0	837	2746
						N165	4,10	63.3	777	2549	4,56	70.4	866	2841
						N560	3,98	61.4	772	2533	4,44	68.5	864	2835

.300 Norma Magnum

Test barrel:	660 mm (26”), 1 in 10” twist
Primers:	Large Rifle Magnum
Cases:	Lapua, trim-to length 63,30 mm (2.480”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
10,0	155	Lapua	Scenar / OTM Scenar-L	83,0	3.268	N555	4,80	74.1	949	3114	5,10	78.7	1001	3284
						N165	5,35	82.6	955	3133	5,67	87.5	1014	3327
						N560	5,17	79.8	957	3140	5,46	84.3	1018	3340
						N565	5,37	82.9	962	3156	5,72C	88.3C	1023	3356
						N170	5,65	87.2	935	3068	5,96C	92.0C	999	3278
						N570	5,70	88.0	941	3087	5,85C	90.3C	979	3212
10,85	167	Lapua	OTM Scenar	82,0	3.228	N555	4,45	68.7	894	2933	4,93	76.1	954	3130
						N165	4,95	76.4	897	2943	5,39	83.2	958	3143
						N560	4,90	75.6	908	2979	5,20	80.2	969	3179
						N565	5,10	78.7	911	2989	5,49	84.7	977	3205
						N170	5,35	82.6	891	2923	5,74	88.6	959	3146
						N568	5,63	86.9	921	3022	5,90C	91.1C	960	3150
						N570	5,60	86.4	939	3081	5,90C	91.1C	990	3248
11,0	170	Lapua	Naturalis N558	83,5	3.287	N560	4,50	69.4	850	2789	5,30	81.8	974	3196
						N565	4,90	75.6	870	2854	5,57	86.0	977	3205

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

.300 Norma Magnum

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N170	4,53	69.9	820	2690	5,69	87.8	957	3140
						N570	5,15	79.5	887	2910	5,81	89.7	995	3264
12,0	185	Lapua	Scenar	86,5	3.406	N560	4,72	72.8	844	2769	5,35	82.6	948	3110
						N565	4,91	75.8	863	2831	5,51	85.0	957	3140
						N170	4,98	76.9	825	2707	5,75	88.7	939	3081
						N570	5,16	79.6	862	2828	5,75	88.7	970	3182
13,9	215	Berger	Hybrid Target	86,5	3.406	N560	4,56	70.4	790	2592	5,10	78.7	889	2917
						N565	4,71	72.7	799	2621	5,25	81.0	893	2930
						N170	4,65	71.8	773	2536	5,50	84.9	881	2890
						N570	5,05	77.9	818	2684	5,66	87.3	917	3009
14,3	220	Lapua	Scenar-L	86,5	3.406	N560	4,30	66.4	762	2500	4,98	76.9	866	2841
						N565	4,41	68.1	769	2523	5,17	79.8	874	2867
						N170	4,30	66.4	780	2559	5,30	81.8	856	2808
						N570	4,62	71.3	780	2559	5,37	82.9	887	2910
14,9	230	Berger	Hybrid Target	86,5	3.406	N560	4,35	67.1	754	2474	4,92	75.9	853	2799
						N565	4,53	69.9	763	2503	5,11	78.9	856	2808
						N570	4,60	71.0	764	2507	5,41	83.5	872	2861
14,9	230	Hornady	A-Tip Match	92,9	3.657	N165	4,45	68.7	756	2480	4,86	75.0	814	2671
						N560	4,45	68.7	783	2569	4,82	74.4	835	2740
						N565	4,55	70.2	780	2559	4,98	76.9	840	2756
						N170	4,80	74.1	774	2539	5,17	79.8	832	2730
						N568	5,00	77.2	791	2595	5,41	83.5	848	2782
						N570	5,15	79.5	821	2694	5,47	84.4	871	2858
						24N41	5,14	79.3	777	2549	5,55C	85.6C	834	2736
16,2	250	Hornady	A-Tip Match	92,3	3.634	N165	4,00	61.7	698	2290	4,40	67.9	751	2464
						N560	4,10	63.3	728	2388	4,45	68.7	779	2556
						N565	4,30	66.4	737	2418	4,69	72.4	788	2585
						N170	4,35	67.1	717	2352	4,73	73.0	776	2546
						N568	4,50	69.4	732	2402	5,05	77.9	797	2615
						N570	4,50	69.4	753	2470	4,93	76.1	808	2651
						24N41	4,68	72.2	724	2375	5,17C	79.8C	782	2566

C = Compressed load

.300 PRC

Test barrel:	660 mm (26”), 1 in 8” twist
Primers:	Large Rifle Magnum, Federal 215
Cases:	Lapua, trim-to length 65,15 mm (2.565”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
10,0	155	Lapua	Scenar / OTM Scenar-L	88,0	3.465	N555	4,54	70.1	917	3009	4,94	76.2	988	3241
						N160	4,58	70.7	909	2982	5,00	77.2	982	3222
						N165	4,96	76.5	919	3015	5,35	82.6	992	3255
						N560	4,85	74.8	925	3035	5,23	80.7	999	3278
						N565	5,00	77.2	923	3028	5,38	83.0	995	3264
						N570	5,25	81.0	893	2930	5,55C	85.6C	950	3117
10,0	155	Sierra	HPBT	87,0	3.425	N160	4,67	72.1	912	2992	5,02	77.5	984	3228
						N165	5,00	77.2	925	3035	5,40	83.3	1004	3294
						N560	4,95	76.4	930	3051	5,31C	81.9C	1005	3297
						N565	5,04	77.8	928	3045	5,42C	83.6C	1006	3301
10,7	165	Hornady	SST	88,0	3.465	N555	4,30	66.4	871	2858	4,73	73.0	945	3100
						N160	4,25	65.6	856	2808	4,78	73.8	938	3077
						N165	4,75	73.3	881	2890	5,25	81.0	963	3159
						N560	4,70	72.5	886	2907	5,06	78.1	965	3166
						N565	4,90	75.6	893	2930	5,29	81.6	965	3166

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

.300 PRC cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N570	5,30	81.8	903	2963	5,55C	85.6C	948	3110
10,85	167	Lapua	OTM Scenar	87,0	3.425	N555	4,40	67.9	880	2887	4,78	73.8	949	3114
						N160	4,43	68.4	868	2848	4,85	74.8	940	3084
						N165	4,80	74.1	888	2913	5,22	80.6	960	3150
						N560	4,74	73.1	890	2920	5,07	78.2	962	3156
						N565	4,90	75.6	899	2949	5,30	81.8	970	3182
						N568	5,40	83.3	901	2956	5,55C	85.6C	928	3045
						N570	5,35	82.6	917	3009	5,55C	85.6C	961	3153
10,9	168	Hornady	ELD Match	88,5	3.484	N555	4,33	66.8	880	2887	4,75	73.3	951	3120
						N160	4,35	67.1	866	2841	4,77	73.6	941	3087
						N165	4,75	73.3	887	2910	5,25	81.0	966	3169
						N560	4,60	71.0	879	2884	5,07	78.2	963	3159
						N565	4,88	75.3	893	2930	5,29	81.6	969	3179
11,0	170	Lapua	LockBase B476	87,5	3.445	N555	4,45	68.7	883	2897	4,87	75.2	954	3130
						N160	4,45	68.7	872	2861	4,82	74.4	943	3094
						N165	4,49	69.3	860	2822	5,21	80.4	952	3123
						N560	4,72	72.8	890	2920	5,14	79.3	968	3176
						N565	4,88	75.3	892	2927	5,28	81.5	965	3166
						N570	5,35	82.6	910	2986	5,50C	84.9C	942	3091
11,0	170	Lapua	Naturalis N558	88,5	3.484	N165	4,45	68.7	861	2825	5,05	77.9	935	3068
						N560	4,45	68.7	867	2844	4,87	75.2	939	3081
						N565	4,65	71.8	870	2854	5,13	79.2	948	3110
						N568	5,00	77.2	850	2789	5,55C	85.6C	939	3081
						N570	5,05	77.9	888	2913	5,49	84.7	970	3182
11,3	175	Barnes	LRX BT	91,0	3.583	N165	4,12	63.6	822	2697	4,83	74.5	915	3002
						N560	4,20	64.8	839	2753	4,67	72.1	923	3028
						N565	4,52	69.8	850	2789	5,01	77.3	929	3048
						N170	4,50	69.4	822	2697	5,19	80.1	917	3009
						N568	5,07	78.2	862	2828	5,54	85.5	938	3077
						N570	4,81	74.2	867	2844	5,31	81.9	954	3130
11,3	175	Lapua	OTM Scenar-L GB550	90,0	3.543	N165	4,67	72.1	873	2864	5,07F	78.2F	944	3097
						N565	4,73	73.0	869	2851	5,18	79.9	946	3104
						N170	5,05	77.9	865	2838	5,45F	84.1F	941	3087
						N568	5,25	81.0	882	2894	5,60C	86.4C	943	3094
11,4	176	Hornady	A-Tip Match	91,0	3.583	N165	4,56	70.4	848	2782	5,04	77.8	926	3038
						N560	4,60	71.0	859	2818	4,95	76.4	937	3074
						N565	4,65	71.8	859	2818	5,11	78.9	937	3074
						N170	4,85	74.8	839	2753	5,36	82.7	918	3012
						N570	5,12	79.0	886	2907	5,55C	85.6C	962	3156
11,5	178	Hornady	ELD Match	86,5	3.406	N160	4,15	64.0	822	2697	4,73	73.0	902	2959
						N165	4,60	71.0	849	2785	5,11	78.9	925	3035
						N560	4,55	70.2	858	2815	4,91	75.8	934	3064
						N565	4,80	74.1	869	2851	5,18	79.9	941	3087
						N170	5,00	77.2	850	2789	5,43C	83.8C	925	3035
						N570	5,13	79.2	881	2890	5,48	84.6	955	3133
11,7	180	Hornady	GMX	86,5	3.406	N550	3,95	61.0	835	2740	4,30	66.4	906	2972
						N555	4,20	64.8	839	2753	4,62	71.3	909	2982
						N165	4,64	71.6	847	2779	5,12C	79.0C	932	3058
						N560	4,09	63.1	815	2674	4,71	72.7	908	2979
						N565	4,75	73.3	854	2802	5,16	79.6	928	3045
						N170	5,00	77.2	839	2753	5,45C	84.1C	921	3022
						N568	5,05	77.9	850	2789	5,45C	84.1C	902	2959
11,7	180	Nosler	BT Hunting	90,5	3.563	N165	4,10	63.3	813	2667	4,68	72.2	890	2920
						N560	4,31	66.5	833	2733	4,77	73.6	910	2986
						N565	4,45	68.7	839	2753	4,98	76.9	915	3002

.300 PRC cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N568	5,01	77.3	851	2792	5,54C	85.5C	927	3041
						N570	4,95	76.4	872	2861	5,42C	83.6C	945	3100
12,0	185	Lapua	OTM Scenar	86,5	3.406	N550	3,91	60.3	823	2700	4,31	66.5	893	2930
						N555	4,20	64.8	829	2720	4,58	70.7	897	2943
						N160	4,21	65.0	814	2671	4,64	71.6	882	2894
						N165	4,68	72.2	845	2772	5,04	77.8	911	2989
						N560	4,59	70.8	851	2792	4,88	75.3	917	3009
						N565	4,81	74.2	855	2805	5,14	79.3	921	3022
						N170	4,95	76.4	835	2740	5,40	83.3	906	2972
12,3	190	Sierra	HPBT	88,0	3.465	N550	3,82	59.0	812	2664	4,21	65.0	878	2881
						N555	4,07	62.8	813	2667	4,54	70.1	886	2907
						N160	3,98	61.4	792	2598	4,46	68.8	863	2831
						N165	4,51	69.6	828	2717	4,96	76.5	890	2920
						N560	4,47	69.0	830	2723	4,83	74.5	904	2966
						N565	4,75	73.3	848	2782	5,15	79.5	915	3002
						N170	4,91	75.8	825	2707	5,34	82.4	898	2946
						N568	5,10	78.7	832	2730	5,45C	84.1C	896	2940
13,0	200	Nosler	Partition	89,5	3.524	N165	3,95	61.0	755	2477	4,50	69.4	830	2723
						N565	4,35	67.1	799	2621	4,90	75.6	872	2861
						N570	4,75	73.3	826	2710	5,30C	81.8C	903	2963
13,5	208	Berger	Long Range Hybrid Target	93,5	3.681	N555	3,84	59.3	764	2507	4,34	67.0	837	2746
						N165	4,10	63.3	772	2533	4,70	72.5	849	2785
						N560	4,24	65.4	787	2582	4,65	71.8	862	2828
						N565	4,55	70.2	808	2651	4,93	76.1	874	2867
						N170	4,60	71.0	785	2575	5,09	78.6	861	2825
						N568	4,97	76.7	810	2657	5,42F	83.6F	885	2904
						N570	4,95	76.4	836	2743	5,33	82.3	903	2963
13,7	212	Hornady	ELD-X	93,0	3.661	N165	4,00	61.7	751	2464	4,52	69.8	821	2694
						N560	4,15	64.0	774	2539	4,55	70.2	844	2769
						N565	4,30	66.4	782	2566	4,73	73.0	849	2785
						N170	4,30	66.4	752	2467	4,86	75.0	832	2730
						N568	4,72	72.8	790	2592	5,26	81.2	866	2841
						N570	4,70	72.5	811	2661	5,13	79.2	880	2887
13,9	215	Berger	Hybrid Target	93,5	3.681	N165	4,10	63.3	761	2497	4,60	71.0	833	2733
						N560	4,15	64.0	774	2539	4,52	69.8	846	2776
						N565	4,35	67.1	785	2575	4,80	74.1	855	2805
						N170	4,44	68.5	765	2510	4,98	76.9	842	2762
						N568	4,75	73.3	789	2589	5,25	81.0	868	2848
						N570	4,60	71.0	807	2648	5,05	77.9	875	2871
14,3	220	Berger	Long Range Hybrid Target	93,5	3.681	N555	3,76	58.0	739	2425	4,31	66.5	816	2677
						N160	3,74	57.7	736	2415	4,10	63.3	792	2598
						N165	4,09	63.1	755	2477	4,65	71.8	826	2710
						N560	4,16	64.2	771	2530	4,59	70.8	838	2749
						N565	4,45	68.7	784	2572	4,87	75.2	849	2785
						N170	4,52	69.8	770	2526	5,02	77.5	838	2749
						N568	4,89	75.5	795	2608	5,32	82.1	862	2828
						N570	4,82	74.4	809	2654	5,22	80.6	877	2877
14,3	220	Lapua	OTM Scenar-L	91,5	3.602	N550	3,50	54.0	749	2457	3,87	59.7	803	2635
						N555	3,84	59.3	746	2448	4,19	64.7	808	2651
						N160	3,75	57.9	739	2425	4,17	64.4	801	2628
						N165	4,28	66.1	766	2513	4,66	71.9	829	2720
						N560	4,22	65.1	781	2562	4,54	70.1	840	2756
						N565	4,41	68.1	786	2579	4,80	74.1	848	2782
						N170	4,45	68.7	764	2507	4,89	75.5	832	2730
						N568	4,70	72.5	781	2562	5,20	80.2	855	2805

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

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

.300 PRC cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N570	4,70	72.5	807	2648	5,17	79.8	879	2884
14,6	225	Hornady	ELD-M	93,4	3.677	N555	3,73	57.6	731	2398	4,16	64.2	795	2608
						N160	3,65	56.3	722	2369	4,10	63.3	786	2579
						N165	3,98	61.4	738	2421	4,48	69.1	804	2638
						N560	4,06	62.7	756	2480	4,50	69.4	825	2707
						N565	4,37	67.4	774	2539	4,82	74.4	841	2759
						N170	4,44	68.5	758	2487	4,92	75.9	825	2707
						N568	4,68	72.2	773	2536	5,19	80.1	845	2772
						N570	4,59	70.8	790	2592	5,08	78.4	861	2825
14,9	230	Hornady	A-Tip Match	93,9	3.697	N160	4,06	62.7	747	2451	4,43	68.4	807	2648
						N165	4,43	68.4	766	2513	4,79	73.9	823	2700
						N560	4,39	67.7	780	2559	4,73	73.0	842	2762
						N565	4,50	69.4	780	2559	4,85	74.8	836	2743
						N170	4,65	71.8	765	2510	5,05	77.9	828	2717
						N568	4,90	75.6	786	2579	5,30C	81.8C	848	2782
						N570	4,80	74.1	801	2628	5,15C	79.5C	862	2828
16,2	250	Hornady	A-Tip Match	93,9	3.697	N165	4,06	62.7	709	2326	4,51	69.6	775	2543
						N560	4,09	63.1	723	2372	4,44	68.5	788	2585
						N565	4,28	66.1	732	2402	4,69	72.4	796	2612
						N170	4,47	69.0	722	2369	4,90	75.6	787	2582
						N568	4,70	72.5	744	2441	5,13C	79.2C	804	2638
						N570	4,50	69.4	751	2464	4,95	76.4	819	2687

C = Compressed load F = Case full

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
8,0	123	Lapua	FMJ	81,9	3.224	N540	4,10	63.3	980	3215	4,51	69.6	1060	3478
						N150	3,84	59.3	944	3097	4,37	67.4	1029	3376
						N550	4,30	66.4	975	3199	4,67	72.1	1063	3488
						N555	4,60	71.0	972	3189	5,10C	78.7C	1071	3514
						N160	4,50	69.4	955	3133	5,07	78.2	1055	3461
8,4	130	Barnes	TTSX BT	84,8	3.340	N150	3,75	57.9	940	3084	4,26	65.7	1015	3330
						N555	4,80	74.1	985	3232	5,20C	80.2C	1058	3471
						N160	4,77	73.6	959	3146	5,22C	80.6C	1046	3432
						N165	5,20	80.2	970	3182	5,60C	86.4C	1057	3468
						N560	5,10	78.7	977	3205	5,46C	84.3C	1055	3461
						N565	5,15	79.5	947	3107	5,50C	84.9C	1017	3337
9,7	150	Lapua	Mega E469	79,5	3.130	N550	3,90	60.2	877	2877	4,29	66.2	959	3146
						N555	3,91	60.3	859	2818	4,60	71.0	964	3163
						N160	3,50	54.0	829	2720	4,26	65.7	929	3048
						N165	4,30	66.4	870	2854	5,12	79.0	973	3192
						N560	4,35	67.1	870	2854	4,84	74.7	968	3176
						N565	4,55	70.2	883	2897	5,15	79.5	976	3202
						N170	4,90	75.6	877	2877	5,25	81.0	928	3045
10,0	155	Brenneke	TAG	83,5	3.287	N550	4,07	62.8	897	2943	4,44	68.5	974	3196
						N555	4,50	69.4	915	3002	4,89	75.5	988	3241
						N160	4,50	69.4	897	2943	4,98	76.9	978	3209
						N165	4,99	77.0	921	3022	5,40C	83.3C	1000	3281

.300 Winchester Magnum cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N560	4,76	73.5	907	2976	5,16	79.6	989	3245
10,0	155	Lapua	Scenar / OTM Scenar-L	84,0	3.307	N150	3,50	54.0	857	2812	4,02	62.0	927	3041
						N550	3,90	60.2	873	2864	4,33	66.8	963	3159
						N555	4,30	66.4	898	2946	4,73	73.0	977	3205
						N160	4,25	65.6	873	2864	4,78	73.8	955	3133
						N165	4,80	74.1	894	2933	5,29C	81.6C	982	3222
						N560	4,60	71.0	904	2966	4,97	76.7	976	3202
						N565	4,75	73.3	893	2930	5,18	79.9	974	3196
10,0	155	Sierra	HPBT	84,8	3.339	N150	3,50	54.0	861	2825	3,88	59.9	923	3028
						N550	4,10	63.3	902	2959	4,36	67.3	966	3169
						N555	4,35	67.1	899	2949	4,78	73.8	979	3212
						N160	4,36	67.3	884	2900	4,80C	74.1C	962	3156
						N165	4,90	75.6	911	2989	5,23C	80.7C	984	3228
						N560	4,70	72.5	908	2979	5,04C	77.8C	983	3225
						N565	4,85	74.8	900	2953	5,25C	81.0C	981	3219
10,7	165	Barnes	TTSX BT	84,8	3.339	N165	3,50	54.0	783	2569	3,93	60.6	859	2818
						N560	4,25	65.6	840	2756	4,77C	73.6C	929	3048
						N565	4,30	66.4	838	2749	4,87C	75.2C	923	3028
						N570	4,40	67.9	879	2884	5,20C	80.2C	950	3117
10,7	165	Hornady	SST	84,8	3.338	N550	3,95	61.0	872	2861	4,26	65.7	939	3081
						N555	4,24	65.4	879	2884	4,62	71.3	948	3110
						N160	4,25	65.6	861	2825	4,71	72.7	936	3071
						N165	4,68	72.2	880	2887	5,01	77.3	951	3120
						N560	4,51	69.6	875	2871	4,88	75.3	953	3127
						N565	4,74	73.1	875	2871	5,12	79.0	947	3107
10,7	165	LOS	Solid Brass Tactic	84,8	3.339	N550	3,90	60.2	868	2848	4,25	65.6	939	3081
						N555	4,20	64.8	867	2844	4,69C	72.4C	952	3123
						N165	4,75	73.3	893	2930	5,27C	81.3C	971	3186
						N560	4,65	71.8	885	2904	5,05	77.9	964	3163
						N565	4,76	73.5	879	2884	5,30C	81.8C	957	3140
10,7	165	Sierra	SBT	84,8	3.338	N550	3,93	60.6	859	2818	4,30	66.4	931	3054
						N555	4,04	62.3	856	2808	4,64	71.6	940	3084
						N160	3,56	54.9	806	2644	4,27	65.9	900	2953
						N165	4,35	67.1	850	2789	5,14	79.3	947	3107
						N560	4,44	68.5	870	2854	4,85	74.8	947	3107
						N565	4,60	71.0	868	2848	5,14	79.3	952	3123
						N170	5,00	77.2	862	2828	5,38	83.0	934	3064
10,8	166	CopperBear	EXHBT	84,0	3.307	N540	3,20	49.4	783	2569	3,72	57.4	877	2877
						N150	3,08	47.5	761	2497	3,53	54.5	844	2769
						N550	3,40	52.5	792	2598	3,89	60.0	883	2897
						N555	3,78	58.3	816	2677	4,26	65.7	898	2946
						N160	3,57	55.1	781	2562	4,02	62.0	866	2841
						N165	3,86	59.6	803	2635	4,45	68.7	899	2949
						N170	4,10	63.3	795	2608	4,60	71.0	883	2897
10,85	167	Lapua	OTM Scenar	84,8	3.338	N160	4,13	63.7	843	2766	4,58	70.7	918	3012
						N165	4,58	70.7	871	2858	4,99	77.0	943	3094
						N560	4,54	70.1	872	2861	4,89	75.5	949	3114
						N565	4,67	72.1	869	2851	5,03	77.6	941	3087
						N170	4,91	75.8	856	2808	5,29C	81.6C	927	3041
10,9	168	Hornady	A-Max	84,8	3.338	N550	3,86	59.6	857	2812	4,23	65.3	929	3048
						N555	4,20	64.8	868	2848	4,60	71.0	937	3074
						N160	4,10	63.3	837	2746	4,56	70.4	914	2999
						N165	4,60	71.0	872	2861	5,00	77.2	944	3097
						N560	4,47	69.0	866	2841	4,83	74.5	942	3091
						N565	4,65	71.8	869	2851	5,09	78.6	942	3091

.300 Winchester Magnum

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
10,9	168	Sierra	HPBT	84,8	3.339	N550	3,80	58.6	836	2743	4,22	65.1	919	3015
						N555	4,14	63.9	858	2815	4,57	70.5	931	3054
						N160	4,03	62.2	834	2736	4,52	69.8	914	2999
						N165	4,53	69.9	860	2822	5,06C	78.1C	944	3097
						N560	4,40	67.9	855	2805	4,80	74.1	938	3077
						N565	4,65	71.8	858	2815	5,10C	78.7C	938	3077
						N570	4,85	74.8	859	2818	5,20C	80.2C	907	2976
11,0	170	Lapua	LockBase B476	84,8	3.338	N550	3,84	59.3	847	2779	4,25	65.6	920	3018
						N555	4,00	61.7	846	2776	4,54	70.1	928	3045
						N160	3,99	61.6	822	2697	4,53	69.9	903	2963
						N165	4,50	69.4	841	2759	5,04	77.8	933	3061
						N560	4,40	67.9	859	2818	4,75	73.3	931	3054
						N565	4,55	70.2	861	2825	5,05	77.9	938	3077
						N170	4,80	74.1	837	2746	5,32F	82.1F	921	3022
						N568	5,00	77.2	846	2776	5,15F	79.5F	872	2861
11,0	170	Lapua	Naturalis N558	84,0	3.307	N550	3,70	57.1	814	2671	4,08	63.0	892	2927
						N555	3,90	60.2	824	2703	4,34	67.0	898	2946
						N160	3,40	52.5	759	2490	4,09	63.1	864	2835
						N165	3,80	58.6	786	2579	4,90	75.6	911	2989
						N560	4,25	65.6	835	2740	4,58	70.7	910	2986
						N565	4,40	67.9	843	2766	4,80C	74.1C	915	3002
11,3	175	Berger	OTM Tactical	84,8	3.338	N550	3,87	59.7	834	2736	4,19	64.7	901	2956
						N555	4,15	64.0	842	2762	4,55	70.2	907	2976
						N160	3,90	60.2	812	2664	4,59	70.8	898	2946
						N165	4,64	71.6	852	2795	5,02	77.5	925	3035
						N560	4,51	69.6	854	2802	4,81	74.2	923	3028
						N565	4,66	71.9	858	2815	5,00	77.2	923	3028
11,3	175	Lapua	OTM Scenar-L GB550	84,8	3.338	N160	4,00	61.7	833	2733	4,52	69.8	897	2943
						N165	4,52	69.8	848	2782	4,93	76.1	921	3022
						N560	4,51	69.6	856	2808	4,85	74.8	926	3038
						N565	4,60	71.0	855	2805	4,97	76.7	923	3028
						N170	4,87	75.2	838	2749	5,33C	82.3C	917	3009
11,3	175	Sako	Blade 659A	84,8	3.340	N550	3,65	56.3	798	2618	4,05	62.5	875	2871
						N555	3,45	53.2	778	2552	3,92	60.5	851	2792
						N160	3,48	53.7	755	2477	3,87	59.7	835	2740
						N560	4,35	67.1	829	2720	4,77C	73.6C	908	2979
						N565	4,35	67.1	826	2710	4,87C	75.2C	896	2940
11,3	175	Sierra	HPBT	84,8	3.339	N550	3,77	58.2	833	2733	4,14	63.9	899	2949
						N555	4,07	62.8	838	2749	4,49	69.3	909	2982
						N160	4,05	62.5	820	2690	4,50	69.4	896	2940
						N165	4,52	69.8	849	2785	4,98	76.9	925	3035
						N560	4,45	68.7	853	2799	4,80	74.1	922	3025
						N565	4,60	71.0	841	2759	5,02C	77.5C	918	3012
						N170	4,85	74.8	833	2733	5,32C	82.1C	914	2999
						N570	5,00	77.2	869	2851	5,20C	80.2C	911	2989
11,6	178	Hornady	ELD-X	84,8	3.338	N160	3,50	54.0	794	2605	3,77	58.2	832	2730
						N165	3,70	57.1	777	2549	4,91F	75.8F	901	2956
						N560	4,25	65.6	830	2723	4,67	72.1	907	2976
11,7	180	Fox Bullets	Classic Hunter	84,8	3.338	N165	3,81	58.8	781	2562	4,31	66.5	863	2831
						N560	4,15	64.0	814	2671	4,57	70.5	889	2917
						N565	4,30	66.4	817	2680	4,88C	75.3C	895	2936
11,7	180	Hornady	GMX	84,8	3.338	N555	3,53	54.5	766	2513	3,95	61.0	837	2746
						N160	3,50	54.0	764	2507	3,79	58.5	813	2667
						N165	3,68	56.8	750	2461	4,13	63.7	832	2730
						N560	3,85	59.4	781	2562	4,31	66.5	865	2838

.300 Winchester Magnum

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N565	3,93	60.6	787	2582	4,52	69.8	868	2848
11,7	180	Nosler	BT Hunting	84,8	3.338	N165	4,56	70.4	826	2710	4,95C	76.4C	896	2940
						N560	4,43	68.4	829	2720	4,76	73.5	900	2953
						N565	4,59	70.8	837	2746	5,02C	77.5C	905	2969
						N170	4,86	75.0	820	2690	5,29C	81.6C	895	2936
11,9	184	CopperBear	EXHBT	82,5	3.248	N555	3,40	52.5	739	2425	3,88	59.9	817	2680
						N160	3,40	52.5	747	2451	3,74	57.7	798	2618
						N165	3,52	54.3	725	2379	4,00	61.7	809	2654
						N560	3,78	58.3	769	2523	4,22	65.1	847	2779
						N565	3,90	60.2	768	2520	4,30	66.4	838	2749
						N170	4,20	64.8	758	2487	4,56	70.4	829	2720
12,0	185	Lapua	D46	84,8	3.340	N150	3,30	50.9	779	2556	3,65	56.3	837	2746
						N550	3,80	58.6	812	2664	4,25	65.6	889	2917
						N555	4,05	62.5	817	2680	4,50C	69.4C	890	2920
						N160	4,10	63.3	805	2641	4,52	69.8	879	2884
						N165	4,50	69.4	826	2710	4,96C	76.5C	904	2966
						N560	4,45	68.7	836	2743	4,75	73.3	906	2972
						N565	4,55	70.2	830	2723	4,97C	76.7C	907	2976
12,0	185	Lapua	Mega E415	82,5	3.248	N550	3,85	59.4	813	2667	4,17	64.4	876	2874
						N555	4,03	62.2	811	2661	4,47	69.0	881	2890
						N160	3,87	59.7	766	2513	4,41	68.1	859	2818
						N165	4,16	64.2	782	2566	4,82	74.4	881	2890
						N560	4,33	66.8	817	2680	4,72	72.8	890	2920
						N565	4,46	68.8	819	2687	4,96	76.5	897	2943
						N170	4,75	73.3	804	2638	5,23C	80.7C	882	2894
						N568	5,00	77.2	831	2726	5,15F	79.5F	853	2799
12,0	185	Lapua	OTM Scenar	84,8	3.338	N160	3,90	60.2	791	2595	4,34	67.0	857	2812
						N165	4,32	66.7	813	2667	4,84	74.7	889	2917
						N560	4,39	67.7	828	2717	4,73	73.0	899	2949
						N565	4,49	69.3	830	2723	4,87	75.2	899	2949
						N170	4,76	73.5	816	2677	5,15	79.5	888	2913
12,3	190	Hornady	CX	84,8	3.340	N550	3,65	56.3	791	2595	4,09	63.1	855	2805
						N555	3,80	58.6	783	2569	4,35C	67.1C	851	2792
						N160	3,40	52.5	725	2379	3,89	60.0	807	2648
						N165	4,20	64.8	806	2644	4,80C	74.1C	871	2858
						N560	4,50	69.4	821	2694	4,85C	74.8C	893	2930
						N565	4,50	69.4	800	2625	5,07C	78.2C	885	2904
12,3	190	Sierra	HPBT	84,8	3.339	N160	3,82	59.0	777	2549	4,32	66.7	853	2799
						N165	4,24	65.4	799	2621	4,83C	74.5C	882	2894
						N560	4,25	65.6	811	2661	4,65	71.8	884	2900
						N565	4,40	67.9	815	2674	4,85C	74.8C	886	2907
						N170	4,70	72.5	801	2628	5,18C	79.9C	880	2887
						N570	4,75	73.3	840	2756	5,20C	80.2C	900	2953
13,0	200	Lapua	Mega E401	84,8	3.338	N165	3,85	59.4	754	2474	4,38	67.6	826	2710
						N565	4,22	65.1	782	2566	4,65	71.8	852	2795
						N170	4,43	68.4	766	2513	4,92	75.9	841	2759
						N568	4,51	69.6	785	2575	5,02	77.5	857	2812
						N570	4,38	67.6	792	2598	4,80	74.1	866	2841
13,0	200	Nosler	Partition	84,8	3.338	N165	3,90	60.2	761	2497	4,63	71.5	835	2740
						N565	4,45	68.7	795	2608	4,85	74.8	861	2825
						N170	4,60	71.0	775	2543	5,10C	78.7C	852	2795
						N570	4,42	68.2	796	2612	4,75	73.3	862	2828
13,3	205	Berger	Elite Hunter	84,8	3.338	N550	3,70	57.1	779	2556	4,03	62.2	841	2759
						N555	4,00	61.7	781	2562	4,42	68.2	850	2789
						N160	4,05	62.5	770	2526	4,53	69.9	850	2789

.300 Winchester Magnum cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N165	4,60	71.0	803	2635	4,92	75.9	873	2864
						N560	4,32	66.7	800	2625	4,67	72.1	866	2841
						N565	4,48	69.1	802	2631	4,84	74.7	868	2848
						N170	4,70	72.5	784	2572	5,10C	78.7C	853	2799
						N568	5,02	77.5	811	2661	5,15C	79.5C	831	2726
13,5	208	Berger	Long Range Hybrid Target	84,8	3.338	N550	3,70	57.1	778	2552	4,05	62.5	837	2746
						N555	3,98	61.4	775	2543	4,38	67.6	842	2762
						N160	4,00	61.7	764	2507	4,45	68.7	835	2740
						N165	4,52	69.8	795	2608	4,87	75.2	859	2818
						N560	4,30	66.4	792	2598	4,64	71.6	861	2825
						N565	4,50	69.4	801	2628	4,85	74.8	863	2831
						N170	4,70	72.5	785	2575	5,10C	78.7C	852	2795
14,3	220	Berger	Long Range Hybrid Target	88,0[1]	3.465	N550	3,60	55.6	750	2461	3,88	59.9	801	2628
						N555	3,80	58.6	743	2438	4,22	65.1	807	2648
						N160	3,66	56.5	722	2369	4,22	65.1	798	2618
						N165	4,08	63.0	746	2448	4,64	71.6	822	2697
						N560	4,10	63.3	766	2513	4,50	69.4	832	2730
						N565	4,25	65.6	766	2513	4,68	72.2	835	2740
						N170	4,52	69.8	758	2487	4,95F	76.4F	826	2710
						N568	4,89	75.5	786	2579	5,15C	79.5C	830	2723
14,3	220	Lapua	OTM Scenar-L	84,8	3.338	N165	3,96	61.1	721	2365	4,47	69.0	791	2595
						N560	4,03	62.2	740	2428	4,44	68.5	816	2677
						N565	4,41	68.1	771	2530	4,73C	73.0C	833	2733
						N170	4,66	71.9	764	2507	5,01C	77.3C	830	2723
						N568	4,96	76.5	786	2579	5,20C	80.2C	831	2726
						N570	5,00	77.2	810	2657	5,20C	80.2C	856	2808
14,6	225	Hornady	ELD-M	86,0[2]	3.386	N555	3,80	58.6	735	2411	4,19	64.7	797	2615
						N160	3,70	57.1	718	2356	4,15	64.0	783	2569
						N165	4,00	61.7	717	2352	4,61C	71.1C	796	2612
						N560	4,00	61.7	733	2405	4,45	68.7	811	2661
						N565	4,15	64.0	739	2425	4,67C	72.1C	818	2684
						N568	4,80	74.1	773	2536	5,10C	78.7C	821	2694
14,9	230	Berger	Hybrid Target	86,5[3]	3.406	N165	4,02	62.0	721	2365	4,45	68.7	786	2579
						N565	4,23	65.3	745	2444	4,66	71.9	813	2667
						N170	4,39	67.7	725	2379	4,81	74.2	796	2612
						N568	4,70	72.5	756	2480	5,15C	79.5C	827	2713
						N570	4,47	69.0	758	2487	4,88	75.3	825	2707

C = Compressed load F = Case full [1] The cartridge overall length exceeds the CIP maximum. [2] The cartridge overall length exceeds the CIP maximum. [3] 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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
8,1	125	Nosler	Ballistic Tip	90,0	3.543	N160	5,19	80.2	1046	3430	5,52	85.2	1104	3623
9,7	150	Nosler	Ballistic Tip	90,1	3.547	N160	4,88	75.2	945	3102	5,22	80.6	1003	3291
						N165	5,27	81.3	949	3113	5,59	86.3	1019	3343
10,7	165	Speer	SPBT	90,3	3.555	N160	4,85	74.8	923	3028	5,16	79.6	975	3200
						N165	5,24	80.9	932	3057	5,57	85.9	984	3228
11,7	180	Hornady	SP	90,3	3.555	N160	4,66	71.9	875	2872	5,01	77.3	930	3050
						N165	5,04	77.7	888	2912	5,43	83.8	944	3098
13,0	200	Sierra	HPBT	90,3	3.555	N165	4,39	67.7	795	2609	4,87	75.1	858	2814

.300 Weatherby Magnum cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N560	4,47	69.0	821	2694	4,81	74.2	872	2862
						N170	4,44	68.5	781	2562	5,11	78.9	859	2817

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
10,0	155	Lapua	Scenar / OTM Scenar-L	93,0	3.661	N160	4,89	75.5	973	3192	5,23	80.7	1023	3355
						N560	5,24	80.9	973	3192	5,73	88.4	1057	3468
						N170	6,01	92.7	993	3258	6,41	99.0	1064	3491
11,0	170	Lapua	LockBase B476	93,0	3.661	N560	5,12	79.0	942	3091	5,49	84.7	1004	3293
						N170	5,66	87.3	939	3081	6,10	94.1	1003	3292
						24N41	6,15	94.9	945	3100	6,56	101.2	1015	3331
12,0	185	Lapua	Scenar	93,0	3.661	N560	4,82	74.4	879	2884	5,31	81.9	954	3131
						N170	5,40	83.3	893	2930	5,89	90.9	962	3158
						24N41	5,93	91.5	916	3005	6,30	97.2	965	3166
13,0	200	Sierra	HPBT	93,0	3.661	N170	5,09	78.5	851	2792	5,56	85.8	915	3003
						24N41	5,56	85.8	866	2841	6,01	92.8	928	3044
14,3	220	Sierra	HPBT	93,0	3.661	24N41	5,10	78.7	804	2638	5,67	87.4	875	2871
						20N29	6,06	93.5	856	2808	6,45	99.6	908	2980

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
10,0	155	Lapua	Scenar / OTM Scenar-L	89,5	3.524	N160	5,29	81.6	957	3140	5,80	89.5	1044	3425
						N165	5,60	86.4	952	3123	6,19	95.5	1052	3451
						N560	5,60	86.4	865	2838	6,09	94.0	1067	3501
10,7	165	Nosler	Partition	89,5	3.524	N160	4,97	76.7	896	2940	5,64	87.0	980	3214
						N165	5,57	85.9	919	3015	6,12	94.4	1009	3311
						N560	5,39	83.2	902	2959	6,13	94.5	1027	3371
10,85	167	Lapua	OTM Scenar	90,0	3.543	N165	5,05	77.9	882	2894	6,10	94.1	1007	3304
						N560	5,29	81.6	925	3035	5,95	91.8	1029	3376
						N170	5,37	82.9	895	2936	6,48	100.0	1011	3317
11,0	170	Lapua	LockBase B476	90,0	3.543	N165	4,56	70.4	851	2792	5,73	88.4	976	3202
						N560	4,73	73.0	899	2949	5,74	88.6	1006	3301
						N170	5,02	77.5	865	2838	6,36	98.1	992	3255
11,7	180	Barnes	XFB	89,5	3.524	N165	4,70	72.5	855	2805	5,40	83.3	939	3079
						N560	4,85	74.8	885	2904	5,60	86.3	956	3137
						N170	5,02	77.5	851	2792	6,12	94.4	952	3124
12,0	185	Lapua	Mega E415	88,5	3.484	N165	4,75	73.3	826	2710	5,82	89.8	937	3074
						N560	5,18	79.9	874	2867	5,83	90.0	969	3179
						N170	5,22	80.6	837	2746	6,31	97.4	953	3127
12,0	185	Lapua	Scenar	91,4	3.598	N165	5,18	79.9	865	2838	6,09	94.0	960	3148
						N560	5,46	84.2	888	2913	5,93	91.5	979	3213

.300 Remington Ultra Magnum cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						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	Lapua	Mega E401	89,3	3.516	N165	4,95	76.4	831	2726	5,70	88.0	922	3025
						N560	5,24	80.9	892	2927	5,85	90.3	959	3146
						N570	5,70	88.0	877	2877	6,37	98.3	958	3143

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
10,0	155	Lapua	Scenar / OTM Scenar-L	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	Lapua	LockBase B476	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	Lapua	Scenar	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	Sierra	HPBT	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	Sierra	HPBT	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
3,7	57	Lapua	ALS	55,7	2.193	N110	1,56	24.1	925	3035	1,78	27.5	997	3233
6,5	100	Lapua	HP / OTCE	55,4	2.181	N110	1,22	18.8	685	2247	1,41	21.8	772	2503
						N120	1,65	25.5	688	2257	1,80	27.8	769	2494
7,1	110	H&N	RN HS	50,5	1.988	N110	0,90	13.9	498	1634	1,00	15.4	527	1729
						N120	1,20	18.5	509	1670	1,25	19.3	548	1798
7,1	110	Hornady	CX	59,5[1)]	2.343	N120	1,50	23.1	687	2254	1,75C	27.0C	777	2549
						N130	1,70	26.2	696	2283	1,80C	27.8C	729	2392
8,0	123	Berry's	TMJ Spire Point	55,1	2.169	N120	1,25	19.3	549	1801	1,32	20.4	587	1926
8,0	123	Lapua	FMJ	55,7	2.193	N120	1,60	24.7	663	2175	1,77	27.3	728	2388
8,0	123	Nosler	Varmageddon	56,0	2.205	N110	1,05	16.2	601	1972	1,17	18.1	651	2136
						N120	1,46	22.5	644	2113	1,65	25.5	712	2336
						N130	1,65	25.5	670	2198	1,80C	27.8C	725	2379
8,1	125	Hornady	ECX	56,0	2.205	N110	1,00	15.4	567	1860	1,11	17.1	607	1991
						N120	1,45	22.4	627	2057	1,66C	25.6C	710	2329
						N130	1,60	24.7	634	2080	1,80C	27.8C	700	2297
8,1	125	Sierra	TMK	58,0	2.283	N110	1,05	16.2	607	1991	1,19	18.4	656	2152
						N120	1,50	23.1	657	2156	1,64	25.3	719	2359

7,62 x 39 cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N130	1,64	25.3	660	2165	1,80	27.8	712	2336
9,7	150	Lapua	LockBase	56,0	2.205	N120	1,43	22.1	605	1985	1,58	24.4	666	2185
9,7	150	X-Treme Bullets	Flat Point	55,0	2.165	N110	0,90	13.9	465	1526	1,00	15.4	535	1755
						N120	1,10	17.0	424	1391	1,30	20.1	535	1755
13,0	200	Lapua	B416 FMJBT	56,0	2.205	N110	0,87	13.4	435	1427	0,97	15.0	481	1578
						N120	1,21	18.7	493	1617	1,33	20.5	542	1778
						N130	1,30	20.1	499	1637	1,45	22.4	553	1814

C = Compressed load [1)] The cartridge overall length exceeds the CIP maximum.

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
3,7	57	Lapua	ALS[1)]	73,3	2.886	N110	1,68	25.9	981	3219	2,21	34.1	1178	3865
8,0	123	Lapua	FMJ	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
						N133	2,58	39.8	858	2815	2,76	42.6	914	2999
9,7	150	Lapua	Mega E469	70,5	2.776	N130	2,38	36.7	831	2726	2,55	39.3	884	2900
						N133	2,49	38.4	839	2753	2,70	41.7	899	2949
11,3	175	Sierra	HPBT	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
						N540	2,57	39.7	728	2388	2,78	42.9	791	2595
11,7	180	Sierra	Spitzer	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
						N540	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,8	120	Lapua	OT, G573	73,5	2.894	N110	1,78	27.5	773	2536	2,04	31.5	833	2733
						N120	2,22	34.3	821	2694	2,57	39.7	907	2976
						N130	2,62	40.4	868	2848	2,90	44.8	945	3100
						N133	2,88	44.4	886	2907	3,20	49.4	969	3179
8,1	125	Hornady	SP	74,0	2.913	N130	2,80	43.2	874	2867	3,12	48.1	950	3117
						N133	3,14	48.5	883	2897	3,50	54.0	979	3212
						N135	3,22	49.7	882	2894	3,57	55.1	974	3196
9,7	150	Speer	Spitzer	76,0	2.992	N135	2,97	45.8	801	2628	3,31	51.1	880	2887
						N140	3,13	48.3	799	2621	3,49	53.9	892	2927
10,4	160	Barnes	TTSX	77,0	3.031	N135	2,67	41.2	752	2467	3,02	46.6	834	2736
						N140	2,87	44.3	767	2516	3,14	48.5	841	2759
						N540	3,01	46.5	782	2566	3,33	51.4	870	2854
11,0	170	Speer	SP	77,0	3.031	N135	2,86	44.1	748	2454	3,18	49.1	829	2720
						N140	2,99	46.1	747	2451	3,33	51.4	838	2749
						N150	3,13	48.3	761	2497	3,48	53.7	853	2799
11,7	180	Lapua	Naturalis N559	81,0	3.189	N135	2,70	41.7	730	2395	2,95	45.5	803	2635
						N140	2,87	44.3	743	2438	3,11	48.0	804	2638
						N540	2,89	44.6	747	2451	3,14	48.5	814	2671

8 x 57 IS (8mm Mauser)

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
						N150	2,89	44.6	744	2441	3,14	48.5	809	2654
11,7	180	Nosler	Expansion Tip	77,0	3.031	N135	2,58	39.8	712	2336	2,96	45.7	791	2595
						N140	2,77	42.7	719	2359	3,11	48.0	795	2608
						N540	2,78	42.9	718	2356	3,18	49.1	808	2651
						N150	2,90	44.8	735	2411	3,15	48.6	801	2628
11,7	181	Brenneke	TOG	77,0	3.031	N140	2,84	43.8	705	2313	3,16	48.8	782	2566
						N540	2,93	45.2	746	2448	3,22	49.7	822	2697
						N150	2,93	45.2	723	2372	3,18	49.1	788	2585
12,8	198	Brenneke	TIG	77,0	3.031	N140	2,82	43.5	697	2287	3,12	48.1	759	2490
						N540	2,91	44.9	715	2346	3,19	49.2	783	2569
						N150	2,93	45.2	708	2323	3,20	49.4	768	2520
13,0	200	Barnes	TSX	77,2	3.039	N540	2,77	42.7	677	2221	3,11	48.0	760	2493
						N150	2,79	43.1	679	2228	3,08	47.5	745	2444
						N550	3,10	47.8	701	2300	3,40	52.5	767	2516
13,0	200	Nosler	Accubond	79,1	3.114	N540	2,75	42.4	701	2300	3,00	46.3	765	2510
						N150	2,79	43.1	693	2274	3,07	47.4	766	2513
						N550	2,97	45.8	713	2339	3,33	51.4	784	2572
						N160	3,32	51.2	706	2316	3,50	54.0	746	2448
13,0	200	Nosler	Partition	81,0	3.189	N160	3,27	50.5	681	2234	3,64	56.2	785	2575
13,0	200	Sierra	MatchKing	79,1	3.114	N540	2,82	43.5	715	2346	3,05	47.1	781	2562
						N150	2,74	42.3	699	2293	3,03	46.8	764	2507
						N550	3,00	46.3	716	2349	3,25	50.2	783	2569
13,0	200	Speer	Spitzer	79,5	3.130	N140	2,77	42.7	661	2169	3,08	47.5	759	2490
						N150	2,86	44.1	680	2231	3,19	49.2	763	2503
13,0	200	Swift	A-Frame	75,0	2.953	N540	2,85	44.0	714	2343	3,13	48.3	788	2585
						N150	2,91	44.9	709	2326	3,22F	49.7F	786	2579
						N550	2,99	46.1	713	2339	3,19	49.2	773	2536
14,3	220	Sierra	Game King	81,0	3.189	N140	2,74	42.3	675	2215	3,03	46.8	742	2434
						N540	2,79	43.1	688	2257	3,09	47.7	759	2490
						N150	2,75	42.4	679	2228	3,07	47.4	746	2448
						N550	2,92	45.1	689	2260	3,25	50.2	764	2507
						N160	3,38	52.2	715	2346	3,40F	52.5F	722	2369

F = Case full

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
9,7	150	Speer	Spitzer	75,0	2.953	N140	3,14	48.5	797	2615	3,35	51.7	858	2815
						N540	3,12	48.1	793	2602	3,52	54.3	890	2920
						N150	2,83	43.7	712	2336	3,08	47.5	890	2920
11,7	180	Lapua	Naturalis N559	79,5	3.130	N135	2,47	38.1	702	2303	2,65	40.9	742	2434
						N140	2,63	40.6	711	2333	2,83	43.7	758	2487
						N540	2,77	42.7	733	2405	2,94	45.4	778	2552
						N150	2,63	40.6	717	2352	2,83	43.7	758	2487
12,8	198	Brenneke	TIG	77,0	3.031	N140	2,80	43.2	708	2323	2,95	45.5	739	2425
						N540	2,93	45.2	721	2365	3,07	47.4	758	2487

8 x 68 S

Test barrel:	670 mm (26"), 1 in 11" twist
Primers:	Large Rifle
Cases:	RWS, trim-to length 67,50 mm (2.646")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
7,8	120	Lapua	OT, G573	86,4	3.402	N135	3,40	52.5	956	3136	3,87	59.7	1053	3455
						N140	3,91	60.3	990	3248	4,28	66.1	1080	3543
						N150	3,63	56.0	988	3241	4,22	65.1	1091	3579
9,7	150	Sierra	Pro Hunter Spitzer	86,4	3.402	N150	4,00	61.7	924	3031	4,48	69.1	1021	3350
						N550	4,32	66.7	946	3104	4,75	73.3	1044	3425
						N160	4,69	72.4	945	3100	5,12	79.0	1031	3383
10,4	160	Barnes	TTSX	86,4	3.402	N150	3,55	54.8	850	2789	4,07	62.8	952	3123
						N550	3,79	58.5	876	2874	4,28	66.1	989	3245
						N160	4,16	64.2	877	2877	4,67	72.1	987	3238
11,3	174	Brenneke	TAG	87,0	3.425	N550	3,85	59.4	851	2792	4,27	65.9	942	3091
						N160	4,02	62.0	837	2746	4,65	71.8	947	3107
						N560	4,40	67.9	853	2799	4,97	76.7	957	3140
11,7	180	Lapua	Naturalis N559	86,4	3.402	N150	3,52	54.3	819	2687	4,00	61.7	907	2976
						N550	3,83	59.1	847	2779	4,22	65.1	935	3068
						N160	4,14	63.9	840	2756	4,62	71.3	937	3074
11,7	180	Nosler	Expansion Tip	87,0	3.425	N150	3,35	51.7	790	2592	3,92	60.5	885	2904
						N550	3,79	58.5	825	2707	4,21	65.0	921	3022
						N160	3,82	59.0	803	2635	4,62	71.3	923	3028
13,0	200	Barnes	TSX	87,0	3.425	N160	3,60	55.6	735	2411	4,21	65.0	854	2802
						N560	4,15	64.0	783	2569	4,65	71.8	888	2913
						N565	4,43	68.4	796	2612	5,00	77.2	879	2884
13,0	200	Nosler	Accubond	87,0	3.425	N550	3,79	58.5	809	2654	4,16	64.2	888	2913
						N160	4,13	63.7	810	2657	4,56	70.4	890	2920
						N560	4,45	68.7	815	2674	4,97	76.7	912	2992
14,2	219	Brenneke	TOG	87,1	3.425	N160	3,58	55.2	708	2323	4,11	63.4	805	2641
						N560	3,95	61.0	736	2415	4,42	68.2	831	2726
						N565	4,18	64.5	749	2457	4,85	74.8	848	2782

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
13,0	200	Hornady	SP	85,0[1)]	3.346	N540	3,90	60.2	814	2671	4,34	67.0	888	2913
						N150	3,85	59.4	801	2628	4,34	67.0	873	2864
						N550	4,15	64.0	822	2697	4,61	71.1	899	2949
						N160	4,71	72.7	720	2362	5,23F	80.7F	905	2969
14,6	225	Hornady	SP	84,0	3.307	N160	4,56	70.4	798	2617	4,80	74.1	856	2809
						N560	4,78	73.8	820	2689	5,15	79.4	849	2785
15,0	231	Lapua	Naturalis LR	84,3	3.319	N550	3,80	58.6	752	2467	4,31	66.5	838	2749
						N160	4,25	65.6	751	2464	4,74	73.1	843	2766
						N560	4,50	69.4	769	2523	4,85F	74.8F	832	2730
16,2	250	Lapua	Scenar	84,0	3.307	N550	4,06	62.7	765	2509	4,27	65.8	810	2657
						N160	4,23	65.3	760	2494	4,55	70.1	813	2669
						N560	4,72	72.9	787	2581	5,03	77.5	843	2765
16,2	250	Sierra	SBT	84,8	3.339	N160	4,25	65.6	758	2488	4,58	70.7	810	2659
						N165	4,63	71.4	779	2555	5,02	77.4	835	2738
						N560	4,39	67.7	774	2540	4,78	73.7	831	2728

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

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

.338 Winchester Magnum cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
16,2	250	Speer	Grand Slam	83,8	3.299	N160	4,49	69.3	753	2470	4,83	74.5	809	2655
						N165	4,81	74.3	766	2511	5,19	80.0	823	2698
17,8	275	Speer	SP	85,0[1)]	3.346	N165	4,63	71.5	731	2398	5,01	77.3	785	2576
17,8	275	Swift	A-Frame	86,5[1)]	3.406	N160	3,55	54.8	634	2080	4,15	64.0	717	2352
						N165	3,79	58.5	651	2136	4,35	67.1	725	2379
						N560	3,76	58.0	651	2136	4,30	66.3	731	2398
19,4	300	Sierra	HPBT	84,8	3.339	N160	4,06	62.7	692	2270	4,43	68.3	745	2445
						N560	4,20	64.7	700	2295	4,66	71.9	756	2479
19,4	300	Woodleigh	RNSP	83,5	3.287	N160	3,58	55.2	626	2054	4,10	63.3	692	2270
						N165	3,92	60.5	637	2090	4,46	68.8	711	2333
						N560	3,92	60.5	658	2159	4,55	70.2	731	2398

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						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
13,0	200	Hornady	SP	91,0	3.583	N160	5,81	89.6	926	3038	6,22	96.0	993	3259
						N165	6,24	96.3	935	3068	6,66	102.8	1005	3297
14,6	225	Hornady	SP	91,0	3.583	N160	5,07	78.3	830	2723	5,64	87.0	900	2953
						N165	5,40	83.2	839	2753	6,01	92.8	915	3000
						N560	5,35	82.6	865	2838	5,86	90.5	934	3065
						N170	5,75	88.8	847	2779	6,33	97.6	917	3009
15,0	231	Lapua	Naturalis LR	90,5	3.563	N160	4,73	73.0	793	2602	5,35	82.6	876	2874
						N165	5,00	77.2	797	2615	5,80	89.5	897	2943
						N560	5,19	80.1	817	2680	5,75	88.7	913	2995
16,2	250	Berger	Hybrid OTM Tactical	93,5	3.681	N165	5,10	78.7	787	2582	5,80	89.5	869	2851
						N560	5,16	79.6	803	2635	5,77	89.0	886	2907
						N565	5,53	85.3	822	2697	5,97	92.1	890	2920
						N170	5,59	86.3	798	2618	6,11	94.3	871	2858
						N570	5,81	89.7	827	2713	6,28	96.9	902	2959
16,2	250	Lapua	LockBase B408	91,5	3.602	N165	4,89	75.5	781	2562	5,67	87.5	871	2858
						N560	5,04	77.8	781	2562	5,71	88.1	895	2936
						N565	5,22	80.6	807	2648	5,89	90.9	883	2897
						N170	5,36	82.7	789	2589	6,23	96.1	892	2927
						N570	5,60	86.4	830	2723	6,22	96.0	920	3018
16,2	250	Lapua	Scenar	93,5	3.681	N165	4,95	76.4	782	2566	5,61	86.6	864	2835
						N560	4,94	76.2	778	2552	5,50	84.9	884	2900
						N565	5,21	80.4	803	2635	5,85	90.3	878	2881
						N170	5,50	84.9	797	2615	6,17	95.2	883	2897
						N570	5,57	86.0	829	2720	6,22	96.0	920	3018
16,2	250	Swift	A-Frame	88,8	3.496	N165	4,48	69.1	737	2418	5,40	83.3	834	2736
						N560	4,41	68.1	753	2470	5,38	83.0	861	2825
						N570	5,26	81.2	795	2608	6,05	93.4	889	2917
17,2	265	Barnes	LRX BT	93,2	3.670	N560	4,78	73.8	744	2441	5,24	80.9	803	2635
						N565	4,79	73,9	759	2490	5,39	83.2	830	2723
						N570	5,10	78.7	768	2520	5,55	85.6	824	2703
18,1	280	Barnes	LRX BT	93,5	3.681	N165	4,35	67.1	668	2192	4,83	74.5	727	2385
						N565	4,53	69.9	717	2352	5,16	79.6	792	2598
						N170	5,05	77.9	699	2293	5,52	85.2	762	2500
18,5	285	Barnes	TSX	93,0	3.661	N560	4,12	63.6	684	2244	4,78	73.8	772	2533
						N170	4,30	66.4	654	2146	5,20	80.2	768	2520

.338 Lapua Magnum cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
						N570	4,70	72.5	728	2388	5,31	81.9	806	2644
18,5	285	Hornady	HPBT	93,5	3.681	N165	4,81	74.2	733	2405	5,49	84.7	812	2664
						N560	4,93	76.1	759	2490	5,48	84.6	837	2746
						N170	5,25	81.0	741	2431	5,96	92.0	831	2726
						N570	5,44	84.0	781	2562	6,07	93.7	863	2831
19,4	300	Berger	Elite Hunter	93,5	3.681	N560	4,72	72.8	720	2362	5,27	81.3	790	2592
						N565	4,89	75.5	724	2375	5,55	85.6	804	2638
						N570	5,23	80.7	744	2441	5,80	89.5	815	2674
19,4	300	Berger	HPBT	93,5	3.681	N560	4,64	71.6	744	2441	5,34	82.4	831	2726
						N170	4,62	71.3	720	2362	5,68	87.7	823	2700
						N570	4,24	65.4	711	2333	5,55	85.6	833	2733
19,4	300	Lapua	Scenar	93,5	3.681	N165	4,47	69.0	685	2247	5,30	81.8	785	2575
						N560	4,64	71.6	709	2326	5,33	82.3	814	2671
						N565	5,00	77.2	732	2402	5,50	84.9	799	2621
						N170	4,90	75.6	712	2336	5,74	88.6	811	2661
						N568	5,43	83.8	742	2434	6,00	92.6	811	2661
						N570	5,19	80.1	732	2402	5,99	92.4	837	2746
						24N41	5,43	83.8	729	2392	6,23	96.1	821	2694
19,4	300	Sierra	HPBT	91,5	3.602	N165	4,57	70.5	695	2281	5,20	80.2	766	2513
						N560	4,70	72.5	722	2370	5,37	82.8	800	2624
						N170	5,15	79.4	719	2360	5,86	90.4	792	2599
						N570	5,39	83.2	776	2546	5,92	91.3	826	2710
						24N41	5,52	85.2	735	2410	6,28	96.8	809	2653

9,3 x 62

Test barrel:	580 mm (22¾"), 1 in 14" twist
Primers:	Large Rifle
Cases:	Lapua, trim-to length 61,80 mm (2.433")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
12,0	185	Lapua	OT, G574	78,5	3.091	N110	2,09	32.3	694	2277	2,38	36.7	758	2487
						N120	2,74	42.3	760	2493	2,99	46.1	819	2687
						N130	3,12	48.1	799	2621	3,34	51.5	838	2749
12,5	193	S&B	Soft Point	76,0	2.992	N130	3,10	47.8	769	2523	3,45	53.2	839	2753
						N133	3,53	54.5	800	2625	3,84	59.3	861	2825
						N135	3,65	56.3	809	2654	3,92	60.5	863	2831
						N140	3,80	58.6	800	2625	4,10	63.3	866	2841
						N540	3,97	61.3	802	2631	4,28C	66.1C	877	2877
14,3	220	Brenneke	TUG	79,5	3.130	N130	2,80	43.2	674	2211	3,14	48.5	745	2444
						N133	3,20	49.4	708	2323	3,51C	54.2C	778	2552
						N135	3,40	52.5	718	2356	3,66C	56.5C	786	2579
						N540	3,71	57.3	734	2408	3,98C	61.4C	805	2641
14,3	220	Fox Bullets	Classic Hunter	82,5	3.248	N130	2,70	41.7	671	2201	3,00	46.3	732	2402
						N133	2,92	45.1	682	2238	3,24	50.0	749	2457
						N135	3,16	48.8	704	2310	3,57	55.1	778	2552
						N140	3,60	55.6	724	2375	3,87C	59.7C	793	2602
						N540	3,55	54.8	719	2359	3,99C	61.6C	805	2641
14,3	220	Lapua	Naturalis LR	82,0	3.228	N530	3,01	46.4	687	2254	3,48	53.7	792	2598
						N135	2,95	45.5	662	2172	3,67	56.6	782	2566
						N140	3,49	53.9	733	2405	3,88	59.9	807	2648
14,6	225	Brenneke	TAG	82,0	3.228	N133	3,35	51.7	720	2362	3,60C	55.6C	784	2572
						N530	3,16	48.8	718	2356	3,52	54.3	787	2582
						N135	3,52	54.3	732	2402	3,75C	57.9C	789	2589
						N140	3,60	55.6	730	2395	3,89C	60.0C	794	2605

9,3 x 62 cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N540	3,62	55.9	745	2444	4,04	62.3	817	2680
						N150	3,61	55.7	737	2418	3,97C	61.3C	800	2625
14,9	230	Sako	Blade 613D	81,3	3.201	N130	2,85	44.0	661	2169	3,20	49.4	730	2395
						N133	3,10	47.8	668	2192	3,53C	54.5C	753	2470
						N135	3,35	51.7	696	2283	3,63C	56.0C	761	2497
						N140	3,63	56.0	709	2326	4,00C	61.7C	780	2559
						N540	3,73	57.6	715	2346	4,11C	63.4C	796	2612
15,2	235	Rhino	Solid Shank	79,8	3.142	N130	2,81	43.4	658	2159	3,12	48.1	722	2369
						N133	2,98	46.0	666	2185	3,37	52.0	735	2411
						N135	3,20	49.4	684	2244	3,51	54.2	748	2454
						N140	3,50	54.0	701	2300	3,77	58.2	760	2493
						N540	3,55	54.8	694	2277	3,93	60.6	774	2539
16,0	247	Brenneke	TOG	80,5	3.169	N133	2,95	45.5	642	2106	3,29	50.8	706	2316
						N135	3,16	48.8	654	2146	3,48	53.7	719	2359
						N140	3,32	51.2	667	2188	3,69	56.9	738	2421
						N540	3,50	54.0	684	2244	3,88C	59.9C	768	2520
						N150	3,40	52.5	675	2215	3,76C	58.0C	741	2431
16,0	247	CopperBear	EXHBT	82,0	3.228	N140	3,15	48.6	640	2100	3,59C	55.4C	715	2346
						N540	3,32	51.2	658	2159	3,83C	59.1C	749	2457
						N150	3,05	47.1	626	2054	3,59C	55.4C	712	2336
						N550	3,50	54.0	662	2172	4,06C	62.7C	748	2454
16,2	250	Barnes	TTSX BT	83,6	3.291	N130	2,35	36.3	571	1873	2,79	43.1	653	2142
						N530	2,75	42.4	616	2021	3,14	48.5	702	2303
						N135	2,69	41.5	606	1988	3,13	48.3	693	2274
						N140	3,05	47.1	635	2083	3,58	55.2	725	2379
						N540	3,11	48.0	629	2064	3,54	54.6	728	2388
16,2	250	Lapua	Naturalis	83,4	3.283	N140	3,44	53.1	692	2270	3,77	58.2	762	2500
						N540	3,40	52.5	702	2303	3,84	59.3	775	2543
						N150	3,53	54.5	701	2300	3,81	58.8	758	2487
16,2	250	Nosler	Accubond	82,0	3.228	N530	2,99	46.1	678	2224	3,32	51.2	745	2444
						N140	3,37	52.0	693	2274	3,73	57.6	760	2493
						N540	3,46	53.4	701	2300	3,98	61.4	794	2605
16,2	250	Rhino	Solid Shank	79,8	3.142	N130	2,60	40.1	604	1982	2,93	45.2	677	2221
						N133	2,80	43.2	620	2034	3,25	50.2	703	2306
						N135	3,00	46.3	635	2083	3,41	52.6	715	2346
						N140	3,30	50.9	656	2152	3,72	57.4	734	2408
						N540	3,50	54.0	687	2254	3,87	59.7	758	2487
16,2	250	Woodleigh	Weldcore	80,6	3.173	N130	2,57	39.7	622	2041	3,08	47.5	707	2320
						N135	3,25	50.2	676	2218	3,61	55.7	747	2451
17,5	270	Lapua	Naturalis	82,5	3.248	N135	2,80	43.2	642	2106	3,30	50.9	699	2293
						N140	3,39	52.3	673	2208	3,70	57.1	733	2405
						N540	3,52	54.3	679	2228	3,77	58.2	731	2398
						N150	3,50	54.0	684	2244	3,82	58.9	745	2444
18,5	285	Lapua	Mega	82,2	3.236	N135	2,85	44.0	605	1985	3,14	48.5	676	2218
						N140	3,00	46.3	614	2014	3,39	52.3	673	2208
						N540	3,05	47.1	607	1991	3,50	54.0	694	2277
						N150	3,17	48.9	627	2057	3,60	55.6	700	2297
18,5	286	Barnes	TSX	82,5	3.248	N540	3,12	48.1	607	1991	3,47	53.6	679	2228
						N150	2,83	43.7	559	1834	3,32	51.2	654	2146
						N550	2,88	44.4	534	1752	3,94	60.8	697	2287
18,5	286	Rhino	Solid Shank Scandinavia	79,3	3.122	N130	2,38	36.7	539	1768	2,71	41.8	604	1982
						N133	2,70	41.7	573	1880	3,10	47.8	637	2090
						N135	2,85	44.0	576	1890	3,28	50.6	649	2129
						N140	2,99	46.1	584	1916	3,46	53.4	665	2182
18,5	286	Woodleigh	Weldcore	82,9	3.264	N130	2,40	37.0	556	1824	2,84	43.8	626	2054

9,3 x 62 cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N133	2,70	41.7	593	1946	3,14	48.5	660	2165
						N135	2,98	46.0	617	2024	3,38	52.2	681	2234
19,0	293	Brenneke	TUG	82,0	3.228	N133	2,85	44.0	585	1919	3,19	49.2	647	2123
						N135	3,05	47.1	601	1972	3,40	52.5	666	2185
						N140	3,20	49.4	613	2011	3,60C	55.6C	683	2241
						N540	3,31	51.1	635	2083	3,57	55.1	697	2287
						N150	3,20	49.4	619	2031	3,58	55.2	681	2234
						N550	3,50	54.0	638	2093	3,89	60.0	703	2306
19,4	300	Swift	A-Frame	77,0	3.031	N130	2,43	37.5	536	1759	2,75	42.4	594	1949
						N133	2,65	40.9	550	1804	3,06	47.2	620	2034
						N135	2,90	44.8	581	1906	3,19C	49.2C	633	2077
						N140	3,10	47.8	597	1959	3,40C	52.5C	653	2142
						N540	3,20	49.4	595	1952	3,51C	54.2C	663	2175
20,7	320	Woodleigh	RNSP	82,0	3.228	N540	3,45	53.2	630	2067	3,72	57.4	684	2244
						N150	3,50	54.0	627	2057	3,73	57.6	675	2215
						N550	3,70	57.1	636	2087	4,04	62.3	700	2297

C = Compressed load

9,3 x 66 Sako

Test barrel:	630 mm (24¾"), 1 in 14" twist
Primers:	Large Rifle
Cases:	Sako, trim-to length 65,80 mm (2.591")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
17,5	270	Lapua	Naturalis	85,0	3.346	N140	3,40	52.5	684	2244	4,00	61.7	773	2536
						N540	3,84	59.3	736	2415	4,15	64.0	789	2589
						N550	4,13	63.7	745	2444	4,37F	67.4F	791	2595
19,4	300	Swift	A-Frame	84,0	3.307	N540	3,06	47.2	622	2041	3,53	54.5	689	2260
						N150	3,09	47.7	599	1965	3,42	52.8	670	2198
						N550	3,50	54.0	658	2159	3,75	57.9	702	2303
20,7	320	Woodleigh	RNSP	85,0	3.346	N540	3,47	53.5	678	2224	3,91	60.3	713	2339
						N150	3,44	53.1	602	1975	3,80	58.6	698	2290
						N550	3,70	57.1	650	2133	4,25	65.6	733	2405

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
12,5	193	S&B	JFP	88,9	3.500	N120	2,98	46.0	744	2441	3,33	51.4	810	2656
						N130	3,42	52.8	791	2595	3,66	56.5	837	2746
14,3	220	Lapua	Naturalis LR	94,4	3.717	N530	3,04	46.9	708	2323	3,40	52.5	782	2566
						N135	3,02	46.6	702	2303	3,50	54.0	780	2559
						N140	3,39	52.3	721	2365	3,88	59.9	806	2644
15,0	231	Norma	SP	92,1	3.626	N140	3,72	57.4	718	2356	4,29	66.2	810	2656
16,2	250	Lapua	Naturalis N560	94,0	3.701	N135	2,98	46.0	676	2218	3,30	50.9	731	2398
						N140	3,11	48.0	686	2251	3,46	53.4	740	2428
						N540	3,15	48.6	690	2264	3,61	55.7	759	2490
16,6	256	Sako	SP	92,2	3.630	N140	3,50	54.0	654	2146	4,00	61.8	751	2463
17,5	270	Lapua	Naturalis	94,0	3.701	N135	3,10	47.8	649	2129	3,30	50.9	706	2316
						N140	3,30	50.9	656	2152	3,75	57.9	716	2349

9,3 x 74R

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N540	3,48	53.7	655	2149	3,83	59.1	723	2372
18,5	285	Lapua	Mega	92,2	3.630	N135	2,80	43.2	576	1890	3,43	52.9	665	2182
						N140	3,45	53.2	636	2087	3,78	58.3	694	2277
						N540	3,24	50.0	618	2028	3,78	58.3	701	2300
19,0	293	RWS	TUG	95,5[1)]	3.760	N140	3,42	52.7	637	2088	3,72	57.4	695	2281
19,4	300	Swift	A-Frame	92,2	3.630	N135	2,70	41.7	547	1795	2,94	45.4	593	1946
						N140	2,90	44.7	562	1844	3,21	49.5	613	2011
						N540	3,04	46.9	575	1886	3,40	52.5	636	2087
20,7	320	Woodleigh	RNSP	94,0	3.701	N135	2,90	44.7	544	1785	3,18	49.1	601	1972
						N140	3,08	47.5	558	1831	3,37	52.0	610	2001
						N540	3,15	48.6	571	1873	3,48	53.7	630	2067

[1)] The cartridge overall length exceeds the CIP maximum.

.375 H&H Magnum

Test barrel:	620 mm (24½"), 1 in 12" twist
Primers:	Large Rifle Magnum
Cases:	Remington, trim-to length 72,20 mm (2.842")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
15,2	235	Speer	Spitzer	91,0	3.583	N140	4,55	70.2	816	2677	4,91	75.8	879	2884
						N540	4,11	63.4	729	2392	5,18	79.9	890	2920
						N150	4,75	73.3	834	2736	5,10	78.7	886	2907
16,2	250	Sierra	SBT	91,0	3.583	N540	4,44	68.5	797	2615	4,82	74.4	856	2808
						N150	4,52	69.7	799	2621	4,87	75.1	852	2795
17,5	270	Barnes	XFB	91,0	3.583	N140	3,90	60.2	635	2083	4,55	70.2	787	2582
						N540	4,20	64.8	727	2385	4,76	73.4	813	2667
						N150	4,25	65.6	723	2372	4,71	72.7	796	2612
17,5	270	Speer	SP	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	Woodleigh	RNSP	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	Speer	Grand Slam	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	Swift	A-Frame	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
22,7	350	Swift	A-Frame	92,0	3.622	N160	5,45	84.1	679	2228	5,95	91.8	736	2415
						N165	5,55	85.6	682	2238	6,25	96.4	747	2451
						N560	5,73	88.4	685	2247	6,02	92.9	728	2388
25,9	400	Barnes	XFB	94,5	3.720	N160	4,70	72.5	599	1965	5,40	83.3	660	2165
						N165	5,83	90.0	631	2070	5,97	92.1	662	2172
						N560	5,10	78.7	622	2041	5,43	83.8	661	2169
25,9	400	Swift	A-Frame	92,0	3.622	N160	4,85	74.8	611	2005	5,36	82.7	672	2205
						N165	5,45	84.1	651	2136	5,91	91.2	698	2290

.416 Rigby

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N560	5,00	77.2	616	2021	5,54	85.5	660	2165
26,6	410	Woodleigh	RNSP	92,5	3.642	N160	5,43	83.8	637	2090	5,80	89.5	695	2280
						N165	5,93	91.5	660	2165	6,42	99.1	720	2362
						N560	5,86	90.4	655	2149	6,28	96.9	711	2333
29,2	450	Woodleigh	RNSP	94,5	3.720	N160	5,20	80.2	614	2014	5,67	87.5	663	2175
						N165	5,83	90.0	631	2070	6,17	95.2	682	2238
						N560	5,70	88.0	633	2077	6,14	94.7	680	2231

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
13,0	200	Hornady	HP/XTP	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
15,6	240	Hornady	JTC-Sil	64,5	2.539	N120	2,91	44.9	684	2243	3,43	53.0	780	2560
						N130	3,23	49.8	697	2286	3,68	56.8	780	2558
17,2	265	Hornady	FP	65,0	2.559	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

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
19,4	300	Barnes	TSX FN	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
19,4	300	Barnes	XFN	64,8	2.551	N130	3,10	47.8	547	1795	3,37	52.0	602	1975
19,4	300	Sierra	FN HP	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
22,7	350	Hornady	RN	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	Speer	FN	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	1568	3,52	54.3	568	1864

.458 Winchester Magnum

Test barrel:	635 mm (25"), 1 in 14" twist
Primers:	Large Rifle Magnum
Cases:	Winchester, trim-to length 63,30 mm (2.492")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
22,7	350	Hornady	RN	74,9	2.949	N120	4,13	63.7	712	2336	4,53	69.9	748	2454
						N130	4,46	68.8	730	2395	4,80	74.1	773	2536
						N133	4,72	72.8	730	2395	4,90F	75.6F	756	2480

.458 Winchester Magnum

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
25,9	400	Barnes	XFB	83,0	3.268	N130	4,00	61.7	631	2070	4,36	67.3	688	2257
						N530	4,50	69.4	645	2116	4,70F	72.5F	674	2211
						N135	4,30	66.3	625	2051	4,42F	68.2F	644	2113
25,9	400	Swift	A-Frame	82,0	3.228	N130	4,30	66.3	674	2211	4,55	70.2	710	2329
						N530	4,90	75.6	691	2267	5,10F	78.7F	722	2369
						N135	4,80	74.1	677	2221	4,90F	75.6F	692	2270
32,4	500	Hornady	RN	84,0	3.307	N130	3,60	55.5	557	1827	4,11	63.4	623	2044
						N133	3,85	59.4	564	1850	4,52	69.7	645	2116
						N530	4,20	64.8	589	1932	4,76	73.4	655	2149

F = Case full

.50 Browning

Test barrel:	1140 mm (45”), 1 in 16½” twist
Primers:	CCI35
Cases:	IMI, trim-to length 99,10 mm (3.902”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
41,9	647	Speer	FMJBT	137,5	5.413	N565	13,40	206.8	875	2871	14,22	219.4	919	3015
						N170	13,03	201.1	801	2629	14,76	227.8	894	2932
						N568	14,80	228.4	894	2933	15,44C	238.3C	934	3064
						N570	14,60	225.3	899	2949	15,50C	239.2C	958	3143
						24N41	13,86	213.8	819	2688	14,72	227.2	888	2915
						20N29	15,53	239.7	836	2744	16,61	256.3	922	3024
45,4	700	Barnes	Solid	137,5	5.413	24N41	13,69	211.2	808	2652	15,00	231.5	887	2910
						20N29	15,27	235.6	819	2687	16,61	256.3	908	2978
48,6	750	Barnes	Solid	137,5	5.413	24N41	13,26	204.6	768	2520	14,54	224.4	858	2815
						20N29	14,64	226.0	782	2565	16,23	250.5	871	2857
48,6	750	Hornady	A-MAX	137,5	5.413	N565	12,20	188.3	792	2598	12,75	196.8	827	2713
						N170	12,31	190.0	759	2490	13,99	215.8	842	2763
						N568	13,50	208.3	822	2697	13,90	214.5	844	2769
						N570	13,50	208.3	819	2687	13,90	214.5	862	2828
						24N41	12,97	200.2	764	2508	14,13	218.0	843	2765
						20N29	14,59	225.2	779	2556	15,97	246.4	862	2829
51,8	800	Barnes	Solid	137,5	5.413	24N41	11,79	181.9	722	2369	12,84	198.1	790	2592
						20N29	14,19	219.1	779	2557	15,88	245.0	850	2788
55,1	850	Barnes	Solid	137,5	5.413	24N41	12,34	190.5	716	2349	13,50	208.3	784	2573
						20N29	13,91	214.7	746	2447	15,42	238.0	828	2716

C = Compressed load

HANDGUN RELOADING DATA

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Hornady	HP	62,5	2.461	N120	1,48	22.8	667	2188	1,64	25.3	744	2441
						N130	1,62	25.0	672	2205	1,79	27.6	753	2470
						N133	1,77	27.3	695	2280	1,96	30.2	774	2539
7,8	120	Hornady	SSSP	63,5	2.500	N120	1,32	20.4	606	1988	1,45	22.4	655	2149
						N130	1,45	22.4	610	2001	1,61	24.8	673	2208
						N133	1,62	25.0	630	2067	1,81	27.9	701	2300
8,4	130	Speer	Spitzer	65,0	2.559	N120	1,24	19.1	542	1778	1,38	21.3	596	1955
						N130	1,40	21.6	573	1880	1,55	23.9	626	2054
						N133	1,46	22.5	576	1890	1,62	25.0	633	2077
9,7	150	Sierra	SBT	65,0	2.559	N120	1,17	18.1	513	1683	1,30	20.1	562	1844
						N130	1,31	20.2	535	1755	1,45	22.4	586	1923
						N133	1,38	21.3	542	1778	1,53	23.6	599	1965
						N135	1,44	22.2	538	1765	1,60	24.7	597	1959
10,4	160	Sierra	SBT	66,0	2.598	N120	1,12	17.3	480	1575	1,25	19.3	531	1742
						N130	1,26	19.4	505	1657	1,41	21.8	558	1831
						N133	1,31	20.2	511	1677	1,45	22.4	559	1834
						N135	1,45	22.4	531	1742	1,61	24.8	582	1909
						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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Hornady	HP	56,0	2.205	N120	1,82	28.0	774	2539	1,93	29.8	829	2720
						N130	1,97	30.5	783	2568	2,10	32.4	838	2749
7,8	120	Hornady	SSSP	56,6	2.228	N120	1,67	25.8	687	2255	1,80	27.8	738	2421
						N130	1,81	27.9	707	2318	1,94	29.9	784	2572
						N133	1,94	30.0	714	2343	2,11	32.6	771	2530
9,1	140	Nosler	Ballistic Tip	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
9,7	150	Nosler	Ballistic Tip	60,3	2.374	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
						N133	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
10,4	160	Sierra	HPBT	59,7	2.350	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
						N135	1,67	25.8	588	1929	1,79	27.6	630	2067

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
9,7	150	Nosler	Ballistic Tip	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
10,9	168	Sierra	HPBT	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
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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
3,9	60	Speer	HP[2)]	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
4,6	71	Sierra	FMJ[2)]	33,0	1.299	N340	0,36	5.5	410	1345	0,43	6.7	478	1569
						3N37	0,39	6.0	412	1352	0,49	7.6	493	1616
						3N38	0,53	8.1	471	1546	0,61	9.5	521	1708
4,8	74	Lapua	FMJ[1)]	33,0	1.299	N340	0,35	5.5	406	1331	0,43	6.6	471	1546
						3N37	0,39	5.9	403	1322	0,49	7.6	478	1569
5,8	90	Sierra	JHC[2)]	32,5	1.280	N340	0,29	4.5	308	1011	0,37	5.7	405	1329
						3N37	0,34	5.2	340	1116	0,43	6.6	416	1366
						3N38	0,46	7.1	404	1326	0,53	8.1	452	1482
6,0	93	Lapua	FMJ[1)]	34,0	1.339	N340	0,31	4.7	342	1122	0,39	5.9	401	1316
						3N37	0,33	5.1	349	1146	0,46	7.1	418	1370
						3N38	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

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
5,4	83	Lapua	LWC	24,6	0.969	N310	0,09	1.4	231	758	0,11	1.7	258	846
6,4	98	Lapua	LRN	32,3	1.272	N310	0,12	1.9	256	840	0,14	2.2	277	909
6,4	98	Lapua	LWC	24,6	0.969	N310	0,07	1.1	186	610	0,08	1.2	208	682

.32 S&W Long Wad Cut.

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
5,4	83	Lapua	LWC	24,6	0.969	N310	0,11	1.7	246	807	0,13	2.0	286	938
6,4	98	Lapua	LWC	24,6	0.969	N310	0,09	1.4	233	764	0,12	1.9	257	843

9 mm Browning court / .380 Auto

Test barrel:	82 mm (3”), 1 in 10” twist
Primers:	Small Pistol
Cases:	X-Treme Bullets, trim-to length 17,15 mm (0.680”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
5,8	90	Sig Sauer	V-Crown JHP	25,0	0.984	N310	0,16	2.5	277	909	0,18	2.8	293	961
						N320	0,21	3.2	270	886	0,23	3.5	308	1010
5,9	90	Hornady	HP-XTP	24,9	0.980	N310	0,14	2.1	246	807	0,17	2.6	290	951
						N320	0,20	3.1	266	873	0,23	3.6	319	1047
						N32C	0,22	3.4	270	886	0,23	3.6	268	879
6,2	95	Speer	TMJ	25,0	0.984	N310	0,15	2.3	249	817	0,17	2.6	282	925
						N320	0,21	3.2	265	869	0,23	3.5	309	1014
						N330	0,24	3.7	265	869	0,27	4.2	315	1033
6,5	100	Berry's	HBRN, Copper Plated	25,0	0.984	N310	0,14	2.2	218	715	0,16	2.5	251	823
						N320	0,19	2.9	250	820	0,22	3.4	298	978
						N330	0,22	3.4	257	843	0,25	3.9	295	968
6,5	100	Berry's	Hybrid Hollow Point, Copper Plated	25,0	0.984	N310	0,14	2.2	209	686	0,17	2.6	257	843
						N320	0,19	2.9	241	791	0,22	3.4	292	958
						N330	0,23	3.5	254	833	0,26	4.0	296	971
6,5	100	H&N	HP HS	25,0	0.984	N310	0,13	2.0	232	761	0,15	2.2	267	876
						N320	0,18	2.8	253	830	0,21	3.2	300	984
6,5	100	Hornady	FMJ	25,0	0.984	N310	0,13	2.0	232	761	0,16	2.4	270	886
						N320	0,18	2.7	243	797	0,21	3.2	296	971
						N330	0,21	3.2	243	797	0,25	3.9	306	1004
6,5	100	X-Treme Bullets	RNFP	24,3	0.957	N310	0,14	2.2	247	810	0,17	2.6	273	896
						N320	0,18	2.8	248	814	0,22	3.3	297	974
						N32C	0,18	2.7	239	784	0,22	3.4	280	919

9 mm Luger / 9x19 mm

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
5,8	90	Hornady	HP-XTP	27,0	1.063	N310	0,26	3.9	369	1212	0,27	4.2	384	1260
						N320	0,31	4.8	401	1316	0,34	5.3	421	1380
						N330	0,36	5.6	420	1379	0,39	6.1	439	1440
						N340	0,36	5.5	423	1387	0,40	6.2	452	1483
						N350	0,42	6.4	424	1391	0,47	7.2	456	1496
						3N37	0,42	6.4	437	1434	0,47	7.2	461	1512
6,5	100	H&N	HP HS	28,0	1.102	N310	0,21	3.2	325	1066	0,25	3.9	373	1224
						N320	0,27	4.2	355	1165	0,31	4.8	401	1316
						N330	0,32	4.9	370	1214	0,37	5.6	421	1381
						N340	0,31	4.8	372	1220	0,37	5.7	426	1398

9 mm Luger / 9x19 mm

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,5	100	Speer	HP	27,5	1.083	N320	0,30	4.7	373	1222	0,33	5.1	398	1307
						N330	0,35	5.4	393	1290	0,38	5.9	416	1365
						N340	0,37	5.7	393	1290	0,42	6.4	429	1407
						3N37	0,42	6.4	398	1306	0,47	7.3	434	1423
7,5	115	Barnes	TAC-XP	28,6	1.126	N320	0,18	2.8	264	866	0,22	3.4	308	1010
						N340	0,22	3.5	279	915	0,27	4.1	327	1073
						3N37	0,27	4.2	291	955	0,31	4.8	333	1093
						3N38	0,32	4.9	284	932	0,41C	6.3C	343	1125
7,5	115	Berry´s	HB RN TP, Copper Plated	29,0	1.142	N320	0,27	4.1	319	1047	0,30	4.7	361	1184
						N330	0,31	4.8	334	1096	0,37	5.7	384	1260
						N340	0,32	5.0	279	915	0,37	5.8	388	1273
						3N37	0,36	5.6	341	1119	0,44	6.7	396	1299
						3N38	0,47	7.2	360	1181	0,56C	8.7C	427	1401
7,5	115	Hornady	HP-XTP	29,0	1.142	N320	0,26	4.0	341	1118	0,29	4.5	362	1188
						N330	0,31	4.8	356	1166	0,35	5.4	381	1251
						N340	0,34	5.2	365	1198	0,38	5.9	397	1301
						N350	0,38	5.9	373	1225	0,42	6.4	396	1299
						3N37	0,39	6.0	370	1214	0,44	6.7	398	1305
7,5	115	Lapua	FMJ-RN	29,0	1.142	N320	0,25	3.9	304	997	0,29	4.5	341	1119
						N330	0,29	4.5	328	1076	0,35	5.4	374	1227
						N340	0,31	4.8	344	1129	0,35	5.4	372	1220
						N350	0,35	5.4	344	1129	0,42	6.5	394	1293
						3N37	0,36	5.6	344	1129	0,42	6.5	393	1289
7,5	115	Lehigh Defense	Extreme Penetrator	27,0	1.063	N320	0,19	2.9	237	778	0,22	3.4	276	906
						N330	0,23	3.5	260	853	0,26C	4.0C	297	974
						N340	0,23	3.5	256	840	0,27C	4.2C	304	997
						N350	0,26	4.0	278	912	0,29C	4.5C	307	1007
						3N37	0,28	4.3	241	791	0,34C	5.2C	304	997
7,5	115	Sierra	JHP	26,3	1.035	N320	0,22	3.4	280	919	0,26	4.0	326	1070
						N330	0,26	4.0	300	984	0,32	4.9	359	1178
						N340	0,26	4.0	298	978	0,32	4.9	360	1181
						3N37	0,32	4.9	312	1024	0,37	5.7	362	1188
7,5	115	UP Bullets	Brass Solid PCC	27,6	1.087	N320	0,20	3.1	238	781	0,24	3.7	295	968
						N330	0,24	3.7	253	830	0,28	4.3	312	1024
						N340	0,25	3.9	263	863	0,29	4.5	311	1020
						N350	0,27	4.2	274	899	0,31	4.8	316	1037
						3N37	0,30	4.6	261	856	0,36	5.6	321	1053
						3N38	0,36	5.6	287	942	0,45	6.9	340	1115
7,5	115	X-Treme Bullets	RN HPCB, Copper Plated	29,0	1.142	N320	0,25	3.9	298	978	0,30	4.6	346	1135
						N330	0,30	4.6	316	1037	0,35	5.4	364	1194
						N340	0,30	4.6	315	1033	0,36	5.6	370	1214
						N350	0,33	5.1	320	1050	0,40	6.2	378	1240
						3N37	0,35	5.4	321	1053	0,42	6.5	378	1240
						3N38	0,42	6.5	335	1099	0,51	7.9	396	1299
7,8	120	Lapua	CEPP	28,7	1.130	N320	0,24	3.7	298	978	0,28	4.3	330	1083
						N330	0,29	4.5	326	1070	0,33	5.1	360	1181
						N340	0,29	4.5	326	1070	0,34	5.2	369	1211
						N350	0,34	5.2	340	1115	0,38	5.9	381	1250
						3N37	0,37	5.7	346	1135	0,42	6.5	390	1280
8,0	124	Alsa Pro	FMJ	29,0	1.142	N310	0,19	2.9	249	817	0,22	3.4	287	942
						N320	0,25	3.9	291	955	0,29	4.5	328	1076
						N330	0,29	4.5	304	997	0,34	5.2	348	1142
						N340	0,30	4.6	299	981	0,35	5.4	353	1158
						N350	0,31	4.8	301	988	0,38	5.9	362	1188
						3N37	0,36	5.6	311	1020	0,42	6.5	361	1184
						3N38	0,41	6.3	320	1050	0,50	7.7	379	1243

9 mm Luger / 9x19 mm

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
8,0	124	Berry's	Hybrid Hollow Point, Copper Plated	28,6	1.126	N320	0,23	3.5	278	912	0,28	4.3	329	1079
						N330	0,27	4.2	288	945	0,32	4.9	338	1109
						N340	0,27	4.2	297	974	0,32	4.9	340	1115
						3N37	0,32	4.9	293	961	0,38	5.9	347	1138
						3N38	0,38	5.9	311	1020	0,46	7.1	363	1191
8,0	124	Lapua	FMJ-RN	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
8,0	124	X-Treme Bullets	RN HPCB, Copper Plated	29,0	1.142	N320	0,24	3.7	279	915	0,28	4.3	325	1066
						N330	0,28	4.3	299	981	0,33	5.1	345	1132
						N340	0,28	4.3	296	971	0,33	5.1	346	1135
						N350	0,31	4.8	305	1001	0,36	5.6	356	1168
						3N37	0,33	5.1	307	1007	0,39	6.0	359	1178
						3N38	0,38	5.9	308	1010	0,48	7.4	372	1220
8,1	124	Berry´s	HB RN TP, Copper Plated	29,0	1.142	N320	0,22	3.4	270	886	0,26	4.1	326	1070
						N340	0,27	4.1	300	984	0,32	4.9	352	1155
						N350	0,29	4.5	311	1020	0,34	5.2	358	1175
						3N37	0,30	4.7	309	1014	0,36	5.5	361	1184
						3N38	0,37	5.8	328	1076	0,44	6.7	381	1250
8,1	125	H&N	HP HS	28,0	1.102	N310	0,17	2.6	248	814	0,21	3.2	288	945
						N320	0,23	3.5	287	942	0,28	4.3	331	1086
						N330	0,28	4.3	313	1027	0,33	5.1	350	1148
						N340	0,28	4.3	304	997	0,33	5.1	348	1142
						N350	0,30	4.6	305	1001	0,36	5.6	359	1178
						3N37	0,34	5.2	307	1007	0,41	6.3	363	1191
						3N38	0,40	6.2	321	1053	0,47	7.3	374	1227
8,1	125	Hornady	HAP	28,0	1.102	N310	0,17	2.5	236	774	0,20	3.0	277	909
						N320	0,21	3.2	261	856	0,25	3.9	312	1024
						N330	0,25	3.9	283	928	0,29	4.5	327	1073
						N340	0,25	3.9	282	925	0,30	4.6	332	1089
						3N37	0,30	4.6	289	948	0,35	5.5	335	1099
8,1	125	Sierra	JHP	26,3	1.035	N320	0,21	3.2	273	896	0,25	3.8	316	1037
						N330	0,25	3.9	288	945	0,29	4.5	331	1086
						N340	0,24	3.7	281	922	0,29	4.4	324	1063
						3N37	0,28	4.3	272	892	0,34	5.2	328	1076
8,4	130	Sierra	FMJ	29,0	1.142	N320	0,23	3.6	299	981	0,26	4.0	319	1046
						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
8,8	135	X-Treme Bullets	RNFP Copper Plated	28,5	1.122	N320	0,19	3.0	246	807	0,24	3.7	298	978
						N330	0,23	3.5	270	886	0,28	4.3	320	1050
						N340	0,24	3.7	277	909	0,29	4.4	329	1079
						3N37	0,28	4.3	286	938	0,34	5.2	338	1109
						3N38	0,33	5.1	295	968	0,40	6.1	351	1152
9,1	140	Alsa Pro	RN	29,0	1.142	N310	0,15	2.3	223	732	0,18	2.7	253	830
						N320	0,19	2.9	247	810	0,23	3.5	287	942
						N330	0,23	3.5	267	876	0,27	4.2	308	1010
						N340	0,23	3.5	274	899	0,26	4.0	301	988
						N350	0,25	3.9	272	892	0,30	4.6	316	1037
						3N37	0,27	4.2	271	889	0,32	4.9	317	1040
9,4	145	H&N	RN HS	29,0	1.142	N310	0,17	2.6	242	794	0,21	3.3	279	915
						N320	0,20	3.1	253	830	0,24	3.8	295	968

9 mm Luger / 9x19 mm (cont.)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N330	0,26	4.0	283	928	0,30	4.6	322	1056
						N340	0,27	4.1	288	945	0,31	4.7	322	1056
9,5	147	Berry's	Hybrid Hollow Point, Copper Plated	27,5	1.083	N320	0,18	2.8	235	771	0,22	3.4	276	906
						N330	0,22	3.4	253	830	0,26	4.0	292	958
						N340	0,22	3.4	256	840	0,26	4.0	293	961
						3N37	0,26	4.0	252	827	0,32	4.9	305	1001
9,5	147	Hornady	HP/XTP	29,0	1.142	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
						N340	0,25	3.9	289	948	0,28	4.3	309	1015
						N350	0,29	4.5	302	991	0,32	5.0	326	1070
						3N37	0,30	4.7	298	979	0,33	5.1	321	1052
						N105	0,40	6.1	317	1039	0,41	6.4	338	1108
9,5	147	X-Treme Bullets	RN Heavy Plate	29,4	1.157	N310	0,15	2.3	209	686	0,18	2.8	249	817
						N320	0,20	3.1	247	810	0,24	3.7	289	948
						N330	0,24	3.6	262	860	0,28	4.4	308	1010
						N340	0,25	3.8	263	863	0,29	4.5	309	1014
9,7	150	Lapua	CEPP	28,7	1.130	N330	0,23	3.5	264	867	0,24	3.8	283	929
						N340	0,24	3.8	275	903	0,27	4.1	294	966
						N350	0,27	4.2	285	936	0,30	4.6	304	997
						3N37	0,27	4.2	275	904	0,30	4.7	298	976
10,7	165	X-Treme Bullets	RN Copper Plated HP	28,7	1.130	N320	0,17	2.6	211	692	0,20	3.1	250	820
						N330	0,19	3.0	224	735	0,23	3.5	264	866
						N340	0,20	3.0	227	745	0,23	3.6	265	869
						N350	0,22	3.4	233	764	0,26	4.0	275	902
						3N37	0,23	3.5	234	768	0,28	4.3	277	909
						3N38	0,28	4.4	246	807	0,35	5.4	299	981
						N105	0,33	5.1	272	892	0,39	6.0	311	1020

C = Compressed load

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,5	115	Sierra	FMJ	32,5	1.280	N340	0,41	6.3	425	1395	0,46	7.2	449	1474
						N350	0,48	7.4	419	1374	0,57	8.8	456	1496
						3N37	0,47	7.3	424	1392	0,54	8.3	462	1517
8,0	123	Lapua	FMJ	32,5	1.280	N340	0,38	5.9	384	1261	0,45	6.9	422	1385
						N350	0,45	6.9	388	1272	0,50	7.8	425	1394
						3N37	0,43	6.6	397	1302	0,48	7.5	427	1400

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
6,2	95	Sierra	FMJ	28,9	1.140	N340	0,51	7.8	461	1512	0,58	8.9	504	1652
						N350	0,57	8.8	469	1537	0,66	10.1	518	1699
						3N37	0,56	8.7	469	1539	0,65	10.0	514	1686
7,5	115	Sierra	FMJ	28,9	1.140	N340	0,41	6.3	404	1325	0,50	7.7	449	1473
						N350	0,47	7.3	411	1347	0,56	8.6	460	1509
						3N37	0,49	7.5	416	1365	0,56	8.6	458	1502

.357 SIG (cont.)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
8,0	123	Lapua	FMJ-RN	28,9	1.140	N340	0,39	6.0	381	1250	0,48	7.4	426	1398
						N350	0,47	7.2	394	1293	0,54	8.3	439	1440
						3N37	0,47	7.2	392	1287	0,54	8.3	436	1431

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,5	115	Hornady	HP-XTP	31,5	1.240	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
						N350	0,36	5.6	357	1171	0,41	6.3	386	1266
						3N37	0,42	6.5	385	1263	0,47	7.2	411	1347
7,5	115	Lapua	FMJ	31,5	1.240	N330	0,34	5.2	350	1148	0,39	6.1	394	1294
7,5	115	Sierra	FMJ	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
8,0	123	Lapua	FMJ	31,5	1.240	N330	0,32	4.9	362	1188	0,37	5.8	382	1254
8,4	130	Sierra	FMJ	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
9,5	147	Hornady	HP/XTP	32,0	1.260	N340	0,33	5.1	315	1033	0,36	5.5	335	1097
						N350	0,37	5.7	327	1073	0,40	6.1	346	1134
						3N37	0,38	5.9	334	1096	0,41	6.3	353	1158
						N105	0,51	7.9	360	1181	0,53	8.2	377	1237

.38 Special

Test barrel:	170 mm (6½"), 1 in 18" twist
Primers:	Small Pistol
Cases:	Starline, trim-to length 29,10 mm (1.146")

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
5,5	85	H&N	WC H-HB, copper plated	29,5	1.161	N310	0,22	3.4	277	909	0,30	4.6	351	1152
						N320	0,30	4.6	283	928	0,36	5.6	357	1171
						N32C	0,29	4.5	281	922	0,38	5.9	324	1063
7,1	110	Hornady	HP/XTP	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
						N350	0,43	6.6	355	1165	0,50	7.7	398	1305
						3N37	0,48	7.3	353	1156	0,53	8.2	399	1308
8,1	125	Berry´s	Flat Point, Copper Plated	38,0	1.496	N310	0,31	4.7	283	928	0,36	5.5	345	1132
						N320	0,35	5.4	317	1040	0,41	6.3	375	1230
						N32C	0,35	5.4	300	984	0,41	6.3	350	1148
						N340	0,42	6.5	344	1129	0,47	7.2	393	1289
8,1	125	Hornady	FP/XTP	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
						N350	0,42	6.5	323	1058	0,49	7.5	373	1224
						3N37	0,44	6.8	319	1045	0,49	7.5	367	1204
9,1	140	Lehigh Defense	Xtreme Penetrator	36,5	1.437	N320	0,28	4.3	208	682	0,32	4.9	264	866
						N330	0,33	5.1	246	807	0,36	5.6	296	971
						N340	0,33	5.1	249	817	0,36	5.6	294	965
						N350	0,35	5.4	250	820	0,39	6.0	304	997
						3N37	0,38	5.9	232	761	0,42	6.5	295	968
						3N38	0,42	6.5	245	804	0,50	7.7	313	1027

.38 Special cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
9,1	140	Speer	HP	36,5	1.437	N320	0,30	4.6	268	878	0,35	5.3	320	1051
						N340	0,36	5.6	275	902	0,41	6.2	329	1079
						N350	0,40	6.2	282	925	0,45	6.9	336	1102
						3N37	0,41	6.2	282	925	0,46	7.1	341	1117
9,5	146	Speer	JHP	35,0	1.378	N340	0,30	4.6	261	856	0,35	5.4	306	1004
						N350	0,34	5.2	265	869	0,39	5.9	308	1010
						3N37	0,35	5.4	263	863	0,40	6.1	310	1018
9,6	148	Berry´s	Double End WC, Copper Plated	29,5	1.161	N310	0,19	2.9	172	564	0,22	3.4	233	764
						N320	0,24	3.7	230	755	0,27	4.2	284	932
						N32C	0,28	4.3	242	794	0,31	4.7	274	899
						N340	0,29	4.5	258	846	0,32	4.9	305	1001
9,6	148	Sako	LWC	30,0	1.181	N320	0,20	3.0	237	776	0,23	3.5	267	876
						N330	0,22	3.3	239	784	0,25	3.8	277	910
						N340	0,24	3.6	248	812	0,27	4.1	282	926
						N350	0,27	4.1	255	835	0,30	4.6	294	964
10,2	158	Berry´s	Flat Point	39,0	1.535	N310	0,25	3.9	213	699	0,29	4.4	272	892
						N320	0,35	5.4	273	896	0,38	5.8	317	1040
						N340	0,39	6.0	289	948	0,44	6.8	332	1089
10,2	158	CBC	SJSP	39,3	1.547	N310	0,26	4.0	242	794	0,28	4.3	264	866
						N320	0,31	4.8	272	892	0,35	5.4	304	997
						N330	0,36	5.6	286	938	0,40	6.2	320	1050
						N340	0,36	5.6	292	958	0,41	6.3	319	1047
						N350	0,39	6.0	287	942	0,44	6.8	326	1070
						3N37	0,42	6.5	285	935	0,48	7.4	326	1070
10,2	158	H&N	HP HS	38,6	1.520	N320	0,28	4.3	264	866	0,32	4.9	296	971
						N330	0,34	5.2	290	951	0,38	5.9	322	1056
						N340	0,35	5.4	291	955	0,39	6.0	329	1079
10,2	158	H&N	SWC	36,5	1.437	N310	0,22	3.3	239	784	0,25	3.8	269	883
						N320	0,30	4.6	270	886	0,33	5.0	309	1014
						N340	0,34	5.3	289	948	0,39	6.0	333	1093
10,2	158	Hornady	HP/XTP	36,6	1.441	N310	0,24	3.7	210	689	0,26	4.1	244	801
						N320	0,29	4.5	244	801	0,33	5.1	293	961
						N340	0,34	5.2	261	856	0,38	5.8	310	1017
						3N37	0,40	6,1	267	876	0,43	6.7	320	1050
10,2	158	LOS	RN FP, copper plated	39,3	1.547	N310	0,28	4.4	187	614	0,32	4.9	254	833
						N320	0,34	5.2	264	866	0,39	6.0	313	1027
						N330	0,38	5.8	279	915	0,42	6.5	325	1066
						N340	0,39	6.0	282	925	0,43	6.7	329	1079
						3N37	0,47	7.2	275	902	0,50	7.8	340	1115
10,2	158	Speer	HP	36,5	1.437	N320	0,25	3.9	218	715	0,30	4.6	272	892
						N340	0,32	4.9	241	791	0,37	5.6	300	983
						N350	0,36	5.5	261	855	0,41	6.3	309	1013
						3N37	0,38	5.9	259	848	0,43	6.6	305	999
10,2	158	X-Treme Bullets	SWC CP	36,5	1.437	N310	0,22	3.4	206	676	0,25	3.9	265	869
						N320	0,29	4.4	263	863	0,33	5.2	304	997
						N32C	0,35	5.4	266	873	0,39	6.0	303	994
						N340	0,36	5.6	287	942	0,39	6.0	325	1066
						3N37	0,42	6.5	302	991	0,45	6.9	334	1096
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
11,7	180	H&N	HP HS	39,3	1.547	N310	0,24	3.7	221	725	0,27	4.2	247	810
						N320	0,30	4.6	251	823	0,34	5.2	284	932
						N340	0,34	5.3	261	856	0,38	5.9	301	988
						N350	0,37	5.7	269	883	0,42	6.4	310	1017
						3N37	0,38	5.9	268	879	0,41	6.3	308	1010

.38 Special cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
11,7	180	LOS	Flat Point, Copper Plated	39,3	1.547	N310	0,24	3.8	125	410	0,27	4.2	203	666
						N320	0,29	4.5	222	728	0,33	5.1	265	869
						N340	0,33	5.2	231	758	0,38	5.8	285	935
						N350	0,36	5.6	246	807	0,40	6.2	298	978
						3N37	0,38	5.9	240	787	0,43	6.7	293	961

*) Cowboy Action Shooting load

.357 Magnum

Test barrel:	175 mm (7”), 1 in 18½” twist
Primers:	Small Pistol Magnum
Cases:	Remington, trim-to length 32,60 mm (1.283”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
7,1	110	Hornady	HP/XTP	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
						N350	0,69	10.6	497	1631	0,73	11.2	517	1697
						3N37	0,68	10.5	496	1627	0,73	11.3	518	1701
						N110	1,20	18.5	523	1716	1,35F	20.8F	612	2006
7,1	110	Sierra	JHP	40,0	1.575	N320	0,48	7.4	434	1424	0,57	8.8	489	1604
						N340	0,56	8.6	459	1506	0,67	10.3	522	1713
						3N37	0,62	9.6	474	1555	0,77	11.8	541	1775
						N105	0,80	12.3	516	1693	1,08	16.7	608	1995
						N110	1,18	18.2	538	1765	1,23C	19.0C	565	1854
8,1	125	Hornady	FP/XTP	40,0	1.575	N310	0,39	6.0	371	1217	0,42	6.4	391	1284
						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
8,1	125	Sierra	JHP	40,0	1.575	N320	0,48	7.3	405	1329	0,57	8.8	448	1470
						N340	0,54	8.3	427	1401	0,63	9.7	475	1558
						N350	0,58	9.0	442	1450	0,69	10.7	492	1614
						N105	0,78	12.1	485	1591	0,96	14.8	547	1795
						N110	1,12	17.3	513	1683	1,20C	18.5C	552	1811
9,1	140	Speer	HP	40,0	1.575	N340	0,53	8.2	404	1325	0,56	8.7	422	1385
						N350	0,58	8.9	416	1365	0,62	9.5	437	1433
						3N37	0,59	9.1	417	1368	0,63	9.8	439	1440
						N110	1,02	15.7	457	1499	1,11F	17.1F	502	1647
9,6	148	X-Treme Bullets	WC (copper plated)	34,8[1)]	1.370	N310	0,27	4.2	284	932	0,30A	4.6A	302	991
						N320	0,28	4.3	243	797	0,35A	5.4A	328	1076
						N330	0,33	5.1	238	781	0,39	6.0	320	1050
						N340	0,32	4.9	244	801	0,38	5.9	322	1056
10,2	158	Berry´s	Flat Point	40,0	1.575	N340	0,46	7.1	362	1188	0,50	7.7	378	1240
						3N37	0,46	7.1	350	1148	0,52	8.0	385	1263
						N105	0,55	8.5	328	1076	0,60	9.3	382	1253
						N110	0,75	11.6	358	1175	0,80	12.3	383	1257
10,2	158	CBC	SJSP	40,0	1.575	N320	0,38	5.9	337	1106	0,48	7.3	381	1250
						N340	0,45	6.9	359	1178	0,56	8.6	414	1358
						N350	0,48	7.4	367	1204	0,61	9.4	428	1404
						3N37	0,51	7.9	380	1247	0,62	9.6	433	1421
						N105	0,64	9.8	406	1332	0,81	12.4	472	1549
						N110	0,91	14.1	436	1430	1,11	17.2	508	1667
10,2	158	Hornady	FP/XTP	40,0	1.575	N105	0,76	11.7	427	1401	0,80	12.4	447	1466
10,2	158	Hornady	HP/XTP	40,0	1.575	N340	0,46	7.1	359	1178	0,56	8.6	416	1365
						3N38	0,57	8.8	380	1247	0,72	11.1	455	1493

.357 Magnum cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N110	0,88	13.5	426	1398	1,06	16.3	499	1637
10,2	158	LOS	RN FP, copper plated	40,0	1.575	N320	0,38	5.9	320	1050	0,45	6.9	353	1158
						N32C	0,47	7.3	322	1056	0,56	8.6	374	1227
						N330	0,45	6.9	355	1165	0,52	8.0	380	1247
						N340	0,44	6.8	343	1125	0,53	8.2	387	1270
10,2	158	Speer	HP	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
						N350	0,54	8.3	385	1263	0,58	8.9	400	1314
						3N37	0,53	8.2	377	1237	0,57	8.8	398	1305
						N110	0,98	15.1	451	1480	1,03	15.9	478	1569
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
11,7	180	LOS	HP Copper Plated	40,0	1.575	N340	0,41	6.3	321	1053	0,49	7.6	363	1191
						N350	0,44	6.8	328	1076	0,53	8.2	378	1240
						3N37	0,46	7.2	340	1115	0,56	8.7	388	1273
						N105	0,60	9.3	370	1214	0,71	10.9	420	1378
						N110	0,78	12.0	384	1260	0,94	14.6	452	1483

A = Accuracy load C = Compressed load F = Case full [1] Target load *) Cowboy Action Shooting load

.357 Remington Maximum

Test barrel:	300 mm (12”), 1 in 18½” twist
Primers:	Small Rifle
Cases:	Remington, trim-to length 40,60 mm (1.598”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
10,2	158	Hornady	FP/XTP	48,0	1.890	N350	0,64	9.9	443	1453	0,71	10.9	470	1541
						3N37	0,70	10.8	461	1512	0,74	11.3	478	1568
						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
11,7	180	Nosler	Silhouette	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	Speer	TMJ	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.

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
8,7	135	Hornady	HP-XTP	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
						N340	0,39	6.0	345	1132	0,41	6.3	357	1171
						N350	0,43	6.6	351	1152	0,45	7.0	362	1189
						3N37	0,47	7.3	357	1171	0,49	7.6	369	1210
8,7	135	Nosler	HP	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
10,7	165	PMC	TC-FMJ	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

.40 S&W cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						3N38	0,62	9.6	369	1211	0,64	9.8	382	1252
11,0	170	Hornady	HP	28,6	1.126	N340	0,34	5.2	313	1027	0,36	5.6	324	1063
						N350	0,38	5.9	322	1056	0,40	6.2	333	1091
						3N37	0,39	6.0	322	1056	0,41	6.3	333	1093
11,7	180	Fiocchi	LTC	28,6	1.126	N320	0,23	3.5	269	883	0,26	4.1	295	968
						N340	0,30	4.6	289	948	0,34	5.2	315	1034
						3N37	0,35	5.4	289	948	0,39	6.1	320	1049
11,7	180	Speer	HP	28,6	1.126	N340	0,35	5.4	305	1001	0,37	5.7	316	1037
						N350	0,38	5.9	319	1047	0,40	6.2	329	1078
						3N37	0,38	5.9	303	994	0,40	6.2	315	1035
13,0	200	Speer	TMJ	28,6	1.126	N340	0,30	4.6	267	876	0,32	4.9	277	910
						N350	0,34	5.2	272	892	0,36	5.5	282	925
						3N37	0,33	5.1	265	869	0,35	5.4	277	909
						3N38	0,45	6.9	304	997	0,47	7.3	316	1038
						N105	0,49	7.6	321	1053	0,50	7.7	328	1076

10 mm AUTO

Test barrel:	140 mm (5½”), 1 in 16” twist
Primers:	Large Pistol
Cases:	X-Treme Bullets, trim-to length 25,00 mm (0.988”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
8,7	135	Sierra	JHP	31,7	1.248	N320	0,42	6.5	375	1230	0,48	7.4	417	1368
						N340	0,49	7.6	387	1270	0,58	9.0	443	1453
						N350	0,54	8.3	401	1316	0,62	9.6	448	1470
						3N37	0,58	9.0	394	1293	0,67	10.3	452	1483
10,0	155	Hornady	HP-XTP	32,0	1.260	N320	0,38	5.9	335	1099	0,44	6.8	380	1247
						N340	0,44	6.8	355	1165	0,50	7.0	397	1302
						N350	0,47	7.3	360	1181	0,55	8.5	405	1329
						3N37	0,54	8.3	364	1194	0,62	9.6	414	1358
						N105	0,73	11.3	396	1299	0,81	12.6	446	1463
10,7	165	X-Treme Bullets	RNFP HPCB	32,0	1.260	N320	0,39	6.0	329	1079	0,45	6.9	370	1214
						N340	0,45	6.9	344	1129	0,53	8.2	390	1280
						N350	0,49	7.6	350	1148	0,57	8.8	396	1299
						3N37	0,54	8.3	362	1188	0,62	9.6	404	1325
						3N38	0,64	9.9	379	1243	0,74	11.4	429	1407
11,7	180	Berry’s	Hybrid Hollow Point	32,0	1.260	N320	0,31	4.8	285	935	0,39	6.0	327	1073
						N340	0,40	6.2	316	1037	0,43	6.6	338	1109
11,7	180	Hornady	HP-XTP	32,0	1.260	N320	0,33	5.1	300	984	0,38	5.9	323	1060
						N340	0,39	6.0	310	1017	0,46	7.1	355	1165
						N350	0,43	6.6	319	1047	0,49	7.6	361	1184
						3N37	0,48	7.4	322	1056	0,55	8.5	370	1214
						3N38	0,56	8.6	338	1109	0,64	9.9	393	1289
						N105	0,62	9.6	351	1152	0,69C	10.6C	392	1286
12,6	195	H&N	TC HS	32,0	1.260	N320	0,29	4.5	273	896	0,35	5.4	307	1007
						N340	0,36	5.6	294	965	0,41	6.3	323	1060
						N350	0,39	6.0	299	981	0,45	6.9	325	1066
						3N37	0,43	6.6	303	994	0,50	7.7	344	1129
						3N38	0,50	7.7	317	1040	0,56	8.6	354	1161
13,0	200	Speer	TMJ	31,7	1.248	N340	0,36	5.6	286	938	0,42	6.5	320	1050
						N350	0,39	6.0	291	955	0,45	6.9	320	1050
						3N37	0,43	6.6	300	984	0,49	7.6	330	1083
						3N38	0,50	7.7	312	1024	0,58	9.0	359	1178
						N105	0,58	9.0	326	1070	0,65	10.0	366	1201

10 mm AUTO

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
14,3	220	X-Treme Bullets	RNFP	32,0	1.260	N340	0,33	5.1	263	863	0,38	5.9	284	932
						N350	0,37	5.7	268	879	0,42	6.5	295	968
						3N37	0,40	6.2	272	892	0,47	7.3	316	1037
						3N38	0,46	7.1	287	942	0,52	8.0	323	1060
						N105	0,54	8.3	295	968	0,59C	9.1C	329	1079

C = Compressed load

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
11,0	170	Sierra	JHC	40,1	1.579	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	Hornady	HP/XTP	40,1	1.579	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
11,7	180	Hornady	HP-XTP	37,3	1.469	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
						N350	0,64	9.9	318	1043	0,68	10.5	350	1148
13,0	200	Hornady	HP-XTP	37,3	1.469	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
						N350	0,59	9.1	296	971	0,64	9.9	329	1079
14,3	220	Sierra	FPJ-Match	37,3	1.469	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
						N350	0,50	7.7	254	833	0,56	8.6	289	948
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
15,6	240	Hornady	JTC-Sil	37,6	1.480	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
						N350	0,49	7.6	239	784	0,53	8.2	271	889
16,2	250	Sierra	FPJ	37,3	1.469	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
						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
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

*) 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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
11,7	180	Hornady	HP-XTP	40,7	1.602	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
13,0	200	Hornady	HP-XTP	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
						N350	0,83	12.8	416	1365	0,95	14.6	453	1487
						3N37	0,89	13.7	433	1421	0,98	15.2	462	1515
						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	Sierra	FPJ-Match	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
						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	Hornady	JTC-Sil	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
						N350	0,77	11.9	375	1230	0,83	12.8	399	1308
						3N37	0,78	12.0	372	1220	0,86	13.3	402	1318
						N105	0,95	14.7	404	1325	1,08	16.6	437	1434
						N110	1,32	20.4	435	1427	1,43	22.1	470	1541
16,2	250	Sierra	FPJ-Match	40,7	1.602	N320	0,55	8.5	314	1030	0,63	9.7	344	1130
						N340	0,65	10.0	341	1119	0,73	11.2	370	1213
						N350	0,75	11.6	366	1201	0,85	13.1	395	1295
						N105	0,87	13.4	382	1253	1,08	16.7	429	1406
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
19,4	300	Hornady	HP-XTP	43,6[1)]	1.717	N340	0,62	9.6	304	997	0,68	10.5	323	1061
						N350	0,68	10.5	315	1033	0,76	11.7	344	1128
						3N37	0,67	10.3	308	1010	0,74	11.4	336	1102
						N105	0,85	13.1	349	1145	0,94	14.6	375	1231
						N110	1,21	18.7	384	1260	1,31	20.2	419	1374
19,4	300	Sierra	JSP	43,6[1)]	1.717	N340	0,61	9.4	296	971	0,66	10.2	319	1046
						N350	0,64	9.9	296	971	0,72	11.1	326	1071
						3N37	0,65	10.0	305	1001	0,73	11.2	332	1089
						N105	0,82	12.7	342	1122	0,90	13.8	368	1208
						N110	1,15	17.7	369	1211	1,23	19.1	398	1305

[1)] The cartridge overall length exceeds the CIP maximum. *) Cowboy Action Shooting load

.45 Auto / .45 ACP

Test barrel:	127 mm (5”), 1 in 16” twist
Primers:	Large Pistol
Cases:	Remington, trim-to length 22,70 mm (0.893”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
12,0	185	Berry´s	Flat Point, Copper Plated	28,4	1.118	N310	0,27	4.2	250	820	0,31	4.8	286	938
						N320	0,36	5.6	280	919	0,41	6.3	318	1043
						N330	0,42	6.5	286	938	0,49	7.5	336	1102
						N340	0,43	6.6	288	945	0,50	7.7	335	1099

.45 Auto / .45 ACP

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
12,0	185	Berry´s	HBRN, Copper Plated	32,1	1.264	N310	0,30	4.7	262	860	0,36	5.5	299	981
						N320	0,41	6.3	288	945	0,47	7.3	331	1086
						N32C	0,43	6.6	276	906	0,53	8.2	323	1060
						N330	0,49	7.5	298	978	0,55	8.5	346	1135
						N340	0,49	7.6	298	978	0,56	8.6	348	1142
12,0	185	Berry's	Hybrid Hollow Point, Copper Plated	31,0[3]	1.220	N320	0,41	6.3	293	961	0,47	7.3	334	1096
						N340	0,49	7.6	307	1007	0,53	8.2	344	1129
						N350	0,53	8.2	299	981	0,61	9.4	362	1188
						3N37	0,55	8.5	291	955	0,66	10.2	351	1152
12,0	185	H&N	HP HS	30,0	1.181	N310	0,27	4.2	263	863	0,32	4.9	296	971
						N320	0,37	5.7	283	928	0,44	6.7	328	1076
						N32C	0,39	6.0	279	915	0,47	7.2	319	1047
						N330	0,45	7.0	297	974	0,51	7.9	346	1135
						N340	0,45	7.0	293	961	0,53	8.1	346	1135
12,0	185	Hornady	HP/XTP	31,2	1.228	N310	0,29	4.4	250	820	0,33	5.2	285	935
						N320	0,39	6.0	284	932	0,45	7.0	326	1070
						N340	0,46	7.1	297	974	0,53	8.2	345	1132
						N350	0,50	7.7	292	958	0,59	9.1	354	1161
12,7	195	H&N	SWC	31,0	1.220	N310	0,25	3.9	252	827	0,30	4.6	283	928
						N320	0,36	5.5	275	902	0,41	6.3	313	1027
						N32C	0,36	5.5	266	873	0,42	6.4	299	981
						N330	0,41	6.3	278	912	0,47	7.3	325	1066
						N340	0,42	6.5	284	932	0,48	7.4	325	1066
13,0	200	Berry´s	HB Flat Point, Copper Plated	29,4	1.157	N310	0,25	3.9	222	728	0,31	4.7	264	866
						N320	0,37	5.6	260	853	0,41	6.4	303	994
						N330	0,43	6.6	272	892	0,49	7.5	321	1053
						N340	0,42	6.5	274	899	0,49	7.6	321	1053
						N350	0,46	7.1	274	899	0,54	8.3	325	1066
						3N37	0,48	7.4	262	860	0,58	8.9	325	1066
						3N38	0,59	9.1	274	899	0,67	10.3	331	1086
13,0	200	Berry's	Hybrid Hollow Point, Copper Plated	31,0[2]	1.220	N320	0,38	5.9	272	892	0,44	6.8	318	1043
						N340	0,43	6.6	289	948	0,51	7.9	329	1079
						N350	0,49	7.6	286	938	0,56	8.6	333	1093
						3N37	0,51	7.9	266	873	0,62	9.6	334	1096
13,0	200	H&N	RN HS	31,0	1.220	N310	0,27	4.2	254	833	0,32	4.9	285	935
						N320	0,37	5.8	274	899	0,43	6.6	315	1033
						N32C	0,40	6.1	272	892	0,47	7.3	309	1014
						N330	0,43	6.7	282	925	0,50	7.7	328	1076
						N340	0,45	6.9	286	938	0,52	8.0	334	1096
						N350	0,49	7.6	288	945	0,56	8.7	340	1115
						3N37	0,51	7.9	282	925	0,60	9.3	339	1112
						3N38	0,62	9.5	286	938	0,73	11.3	353	1158
13,0	200	H&N	SWC HS	30,7	1.209	N310	0,26	4.0	251	823	0,30	4.7	283	928
						N320	0,35	5.5	270	886	0,40	6.2	311	1020
						N32C	0,36	5.5	260	853	0,43	6.7	300	984
						N330	0,40	6.2	274	899	0,47	7.2	321	1053
						N340	0,40	6.2	276	906	0.48	7.4	326	1070
						N350	0,44	6.8	271	889	0,51	7.9	323	1060
						3N37	0,44	6.8	261	856	0,52	8.0	316	1037
						3N38	0,57	8.7	272	892	0,66	10.1	334	1096
13,0	200	Hornady	HAP	31,5	1.240	N310	0,25	3.9	243	797	0,30	4.6	276	906
						N320	0,36	5.5	270	886	0,41	6.3	310	1017
						N32C	0,36	5.5	260	853	0,44	6.7	300	984
						N330	0,43	6.6	278	912	0,50	7.7	328	1076
						N340	0,42	6.5	278	912	0,50	7.7	327	1073
						N350	0,48	7.4	283	928	0,54	8.4	325	1066

.45 Auto / .45 ACP

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						3N37	0,49	7.5	274	899	0,58	9.0	335	1099
						3N38	0,60	9.2	280	919	0,70	10.8	347	1138
13,0	200	Sig Sauer	V-Crown JHP	31,9	1.256	N320	0,39	6.0	279	915	0,45	6.9	316	1037
						N340	0,46	7.1	293	961	0,52	8.0	329	1079
						N350	0,51	7.9	287	942	0,57	8.8	335	1099
						3N37	0,54	8.3	277	909	0,62	9.6	333	1093
14,6	225	X-Treme Bullets	FB	29,9	1.177	N310	0,22	3.4	191	627	0,27	4.1	231	758
						N320	0,31	4.7	225	738	0,36	5.5	269	883
						N32C	0,29	4.5	220	722	0,34	5.3	254	833
						N330	0,37	5.7	246	807	0,42	6.5	286	938
						N340	0,37	5.7	246	807	0,43	6.6	287	942
						N350	0,40	6.2	244	801	0,47	7.3	294	965
						3N37	0,43	6.6	239	784	0,50	7.8	293	961
						3N38	0,53	8.1	245	804	0,61	9.4	300	984
14,9	230	Berry's	Hybrid Hollow Point, Copper Plated	30,4[1]	1.197	N320	0,30	4.6	228	748	0,36	5.6	275	902
						N340	0,37	5.7	248	814	0,43	6.6	290	951
						N350	0,41	6.3	248	814	0,47	7.3	293	961
						3N37	0,43	6.6	228	748	0,53	8.2	295	968
14,9	230	Hornady	HP / XTP	31,6[1]	1.244	N320	0,30	4.6	234	768	0,36	5.6	270	886
						N340	0,36	5.6	238	781	0,42	6.5	284	932
						N350	0,42	6.5	252	827	0,48	7.4	297	974
						3N37	0,43	6.6	237	778	0,52	8.0	299	981
14,9	230	LOS	RN	31,0	1.220	N310	0,23	3.5	217	712	0,27	4.2	248	814
						N320	0,32	4.9	243	797	0,37	5.7	282	925
						N330	0,37	5.6	249	817	0,43	6.6	294	965
						N340	0,38	5.8	250	820	0,43	6.6	293	961
						N350	0,42	6.5	253	830	0,48	7.3	297	974
						3N37	0,42	6.5	243	797	0,50	7.8	295	968
						3N38	0,51	7.9	247	810	0,60	9.2	304	997
14,9	230	Sierra	FMJ	32,2	1.268	N310	0,24	3.7	207	679	0,29	4.5	245	804
						N320	0,33	5.1	244	801	0,38	5.9	281	922
						N330	0,40	6.2	258	846	0,45	6.9	292	958
						N340	0,40	6.2	259	850	0,45	6.9	293	961
						3N37	0,46	7.1	245	804	0,55	8.5	301	988

[1] X-Treme Bullets case [2] X-Treme Bullets case [3] X-Treme Bullets case

.45 Colt

Test barrel:	150 mm (6”), 1 in 16” twist
Primers:	Large Pistol
Cases:	Starline, trim-to length 32,50 mm (1.279”)

This data is to be used only for modern guns like Ruger Blackhawk and alike.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
13,0	200	H&N	HP HS	39,5	1.555	N320	0,53	8.2	284	932	0,59	9.1	320	1050
						N340	0,61	9.4	295	968	0,70	10.8	331	1086
						N350	0,68	10.5	288	945	0,77	11.9	338	1109
						3N37	0,70	10.8	282	925	0,79	12.2	326	1070
						3N38	0,78	12.0	278	912	0,88	13.6	337	1106
						N110	1,07	16.5	281	922	1,24	19.1	340	1115
13,0	200	S N S Cast Bullets	RNFP	40,0	1.574	N320	0,50	7.7	264	866	0,58	9.0	319	1047
						N340	0,63	9.7	297	974	0,68	10.5	328	1076
						N350	0,68	10.5	290	951	0,75	11.6	333	1093
						3N37	0,68	10.5	270	886	0,80	12.3	331	1086
13,0	200	Sierra	FPJ	38,9	1.531	N320	0,52	8.0	280	919	0,58	9.0	310	1017

.45 Colt

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N340	0,60	9.3	275	902	0,67	10.3	317	1040
						N350	0,68	10.5	291	955	0,73	11.3	332	1089
						3N37	0,70	10.8	278	912	0,78	12.0	322	1056
14,9	230	Sierra	FMJ	40,6	1.598	N320	0,48	7.4	251	823	0,53	8.2	282	925
						N340	0,57	8.8	263	863	0,65	10.0	299	981
						N350	0,66	10.2	274	899	0,69	10.6	301	988
						3N37	0,65	10.0	256	840	0,73	11.3	300	984
						N110	1,02	15.7	259	850	1,17	18.1	312	1024
16,2	250	Hornady	HP-XTP	40,5	1.594	N320	0,42	6.5	223	732	0,49	7.6	258	846
						N340	0,53	8.2	243	797	0,59	9.1	274	899
						N350	0,56	8.6	241	791	0,63	9.7	278	912
						3N37	0,60	9.3	228	748	0,69	10.6	278	912
						3N38	0,71	11.0	248	814	0,79	12.2	289	948
						N110	1,00	15.4	244	801	1,10	17.0	292	958
16,2	250	S N S Cast Bullets	RNFP	40,0	1.575	N320	0,42	6.5	235	771	0,48	7.4	273	896
						N340	0,48	7.4	235	771	0,58	9.0	285	935
						N350	0,52	8.0	237	778	0,60	9.3	287	942
						3N37	0,56	8.6	234	768	0,69	10.6	287	942

.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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
12,0	185	Hornady	HP/XTP	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	Speer	TMJ-SWC	38,5	1.516	3N37	0,91	14.0	487	1598	1,00	15.4	513	1683
						N110	1,49	22.9	528	1731	1,64	25.2	575	1885
14,9	230	Hornady	FMJ-RN	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	Hornady	HP-XTP	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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
12,0	185	Hornady	HP/XTP[1)]	41,7	1.642	N350	1,18	18.2	537	1762	1,39	21.4	593	1946
						3N37	1,14	17.6	531	1742	1,36	21.0	588	1929
						N105	1,72	26.5	606	1988	1,90	29.3	653	2142
14,6	225	Speer	HP	42,7	1.681	3N37	1,09	16.8	474	1555	1,27	19.6	523	1716
						N105	1,59	24.5	536	1759	1,73	26.7	580	1903
						N110	2,00	30.9	566	1857	2,17	33.5	614	2014
16,2	250	Hornady	HP/XTP	42,8	1.685	3N37	1,01	15.6	437	1434	1,18	18.2	487	1598
						N105	1,39	21.4	481	1578	1,57	24.2	536	1759
						N110	1,82	28.1	523	1716	1,99	30.7	569	1867
19,4	300	Speer	Plated HP	44,5	1.752	3N37	0,99	15.3	396	1299	1,10	17.0	433	1421

.454 Casull

cont.

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
						N105	1,28	19.8	431	1414	1,49	23.0	484	1588
						N110	1,71	26.4	474	1555	1,86	28.7	514	1686

[1)] The crimping is done is over the bullet ogive.

.460 S&W Magnum

Test barrel:	269 mm (10½”), 1 in 20” twist
Primers:	Large Rifle
Cases:	Starline, trim-to length 45,60 mm (1.790”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
14,3	220	Lehigh Defense	Xtreme Defense	57,2	2.252	3N38	1,55	23.9	465	1526	1,90	29.3	528	1732
						N110	2,00	30.9	492	1614	2,60C	40.1C	585	1919
14,9	230	Hornady	HAP	54,5	2.146	3N38	1,50	23.1	462	1516	1,93	29.8	536	1759
						N110	2,29	35.3	533	1749	2,73C	42.1C	594	1949
14,9	230	Hornady	HP / XTP	54,5	2.146	3N38	1,50	23.1	463	1519	1,82	28.1	510	1673
						N110	2,30	35.5	533	1749	2,70C	41.7C	588	1929
15,9	245	Lehigh Defense	Xtreme Penetrator	57,5	2.264	3N38	1,45	22.4	405	1329	1,77	27.3	490	1608
						N110	2,11	32.6	486	1594	2,50C	38.6C	543	1781
16,2	250	Hornady	FTX	57,7	2.272	3N38	1,35	20.8	432	1417	1,70	26.2	493	1617
						N110	1,99	30.7	485	1591	2,40	37.0	548	1798
16,2	250	Hornady	HP/XTP	53,8	2.118	3N38	1,40	21.6	432	1417	1,75	27.0	497	1631
						N110	1,90	29.3	477	1565	2,45	37.8	552	1811
16,2	250	Lehigh Defense	Xtreme Penetrator	56,8	2.236	3N38	1,42	21.9	420	1378	1,85	28.5	493	1617
						N110	2,10	32.4	485	1591	2,50C	38.6C	547	1795
19,4	300	Hornady	HP-XTP	55,3	2.177	3N38	1,40	21.6	404	1325	1,60	24.7	438	1437
						N110	2,00	30.9	455	1493	2,30	35.5	498	1634
						N120	2,50	38.6	424	1391	3,00C	46.3C	518	1699
21,1	325	Barnes	Buster FN FB	55,7	2.193	3N38	1,29	19.9	354	1161	1,55	23.9	405	1329
						N110	1,70	26.2	396	1299	2,20	34.0	463	1519

C = Compressed load

.50 AE

Test barrel:	150 mm (6”), 1 in 19” twist
Primers:	Large Pistol
Cases:	Speer, trim-to length 32,50 mm (1.280”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
19,4	300	IMI	JHP	40,0	1.575	N105	1,26	19.4	395	1296	1,38	21.3	436	1430
						N110	1,64	25.3	396	1299	1,86	28.7	456	1496
						N120	2,11	32.6	363	1191	2,33	36.0	417	1368
21,1	325	Speer	UCHP	40,0	1.575	N105	1,15	17.7	357	1171	1,26	19.4	406	1332
						N110	1,56	24.1	386	1266	1,75	27.0	437	1434
						N120	1,99	30.7	348	1142	2,23	34.4	408	1339

.500 S&W Magnum

Test barrel:	280 mm (11”), 1 in 18” twist
Primers:	Large Rifle
Cases:	Starline, trim-to length 41,00 mm (1.614”)

Bullet						Powder	Starting load				Maximum load			
Weight		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		**Weight**		**Velocity**	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
19,4	300	Speer	TMJ	51,0	2.008	3N38	1,90	29.3	535	1755	2,20	33.9	583	1913
						N105	1,98	30.6	536	1759	2,33	36.0	599	1965
						N110	2,59	40.0	570	1870	2,95	45.5	652	2139
22,7	350	Hornady	HP/XTP	50,4	1.984	3N38	1,64	25.3	468	1535	2,00	30.9	537	1762
						N105	1,75	27.0	487	1598	2,02	31.2	522	1713
						N110	2,19	33.8	521	1709	2,51	38.7	574	1883
						N120	2,76	42.6	503	1650	2,90F	44.7F	539	1768
25,9	400	Sierra	JSP	52,1	2.051	3N38	1,63	25.2	441	1447	1,85	28.5	486	1594
						N105	1,62	25.0	440	1444	2,01	31.0	505	1657
						N110	2,11	32.6	485	1591	2,42	37.3	536	1759

F = Case full

PERSONAL LOADS

Caliber	Bullet, type and weight [g] or [grs]	Powder	Charge [g] or [grs]	Muzzle vel. [m/s] or [fps]	Notes

PERSONAL LOADS

Caliber	Bullet, type and weight [g] or [grs]	Powder	Charge [g] or [grs]	Muzzle vel. [m/s] or [fps]	Notes

PERSONAL LOADS

Caliber	Bullet, type and weight [g] or [grs]	Powder	Charge [g] or [grs]	Muzzle vel. [m/s] or [fps]	Notes

PERSONAL LOADS

Caliber	Bullet, type and weight [g] or [grs]	Powder	Charge [g] or [grs]	Muzzle vel. [m/s] or [fps]	Notes

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PERSONAL LOADS

Caliber	Bullet, type and weight [g] or [grs]	Powder	Charge [g] or [grs]	Muzzle vel. [m/s] or [fps]	Notes

VIHTAVUORI SMOKELESS LOADS FOR
COWBOY ACTION SHOOTING

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 powder in either end of the case. This is sometimes seen as a velocity change between the first shot and the following shots.

The shot to shot deviations in velocity and pressure are normally increased when using load which leaves the cases half empty. For this reason such loads are not recommended for target loads. The data below is tested in a way that the powder is as much as possible in the primer side before firing, and therefore, the pressures and the velocities represent the maximum values which were obtained using our test equipment and cartridge components indicated in the table.

3) Risk for underload detonation

This risk is always present when using highly reduced loads of any smokeless powder. The large free space in the case may generate a pressure wave which can cause, in the worst case, powder to burn as a shock wave, i.e. to detonate, instead of normal fast burning process. The extremely sharp pressure peaks involved in detonation can destroy the weapon and may lead to serious injury.

All these loads given here are extensively pressure tested and no signs of underload detonation were found. We strongly recommend everyone to follow strictly these tables to minimize the risk for underload detonation.

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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
9,4	145		LSWC	37,5	1.476	N32C	0,32	4.9	307	1007	0,37	5.7	314	1030
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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[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
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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[fps]**
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		Mfg	Type/Name	C.O.L.		Type	Weight		Velocity		Weight		Velocity	
[g]	[grs]			[mm]	[in.]		[g]	[grs]	[m/s]	[fps]	**[g]**	**[grs]**	**[m/s]**	**[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
						N330	0,41	6.3	238	781	0,49	7.5	293	961

RELOADING DATA FOR
SHOTGUN 12/76 (3”)

Lead Shot — Shell: Fiocchi Plastic Green

Shot Load 36 g / 11/4 oz					Starting load				Maximum load			
					Weight		Velocity		Weight		Velocity	
Powder	Primer	Wad	Overshot card	Crimp	[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
N320	Fio. 616	B&P Z2M H-24	Paper	Roll Crimp	1,75	27.0	401	1316	1,82	28.1	411	1348
N340	Fio. 616	B&P Z2M H-24	Paper	Roll Crimp	1,75	27.0	367	1204	2,15	33.2	422	1385
3N37	Fio. 616	B&P Z2M H-24	Paper	Roll Crimp	2,00	30.9	372	1220	2,40	37.0	436	1430

Lead Shot — Shell: Fiocchi Plastic Green

Shot Load 40 g / 13/8 oz					Starting load				Maximum load			
					Weight		Velocity		Weight		Velocity	
Powder	Primer	Wad	Overshot card	Crimp	[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
N320	Fio. 616	B&P Z2M H-21	Paper	Roll Crimp	1,60	24.7	367	1204	1,74	26.9	385	1263
N340	Fio. 616	B&P Z2M H-21	Paper	Roll Crimp	1,85	28.5	378	1240	2,10	32.4	416	1365
3N37	Fio. 616	B&P Z2M H-24	Paper	Roll Crimp	2,00	30.9	363	1191	2,55	39.4	433	1421
N105	Fio. 616	B&P Z2M H-21	Paper	Roll Crimp	2,70	41.7	360	1181	4,01	61.9	521	1709

Lead Shot — Shell: Fiocchi Plastic Green

Shot Load 44 g / 11/2 oz					Starting load				Maximum load			
					Weight		Velocity		Weight		Velocity	
Powder	Primer	Wad	Overshot card	Crimp	[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
N340	Fio. 616	B&P Z2M H-24	Paper	Roll Crimp	1,73	26.7	357	1171	1,90	29.3	379	1243
3N37	Fio. 616	B&P Z2M H-24	Paper	Roll Crimp	2,05	31.6	357	1171	2,50	38.6	418	1371
N105	Fio. 616	B&P Z2M H-24	Paper	Roll Crimp	2,70	41.7	362	1188	3,35	51.7	445	1460

Lead Shot — Shell: Fiocchi Plastic Green

Shot Load 48 g / 15/8 oz					Starting load				Maximum load			
					Weight		Velocity		Weight		Velocity	
Powder	Primer	Wad	Overshot card	Crimp	[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
3N37	Fio. 616	B&P Z2M H-18	Paper	Roll Crimp	1,85	28.5	357	1171	2,36	36.4	397	1302

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

Steel Shot Nickel Plated — Shell: Fiocchi T4 Plastic

Shot Load 28 g / 1 oz					Starting load				Maximum load			
					Weight		Velocity		Weight		Velocity	
Powder	Primer	Wad	Overshot card	Crimp	[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
N320	Fio. 616	B&P Steel 28	Paper	Roll Crimp	1,20	18.5	358	1175	1,55	23.9	414	1358
N340	Fio. 616	B&P Steel 28	Paper	Roll Crimp	1,60	24.7	366	1201	1,85	28.5	410	1345
3N37	Fio. 616	B&P Steel 28	Paper	Roll Crimp	1,60	24.7	360	1181	1,85	28.5	385	1263
N105	Fio. 616	B&P Steel 28	Paper	Roll Crimp	2,30	35.5	358	1175	3,00	46.3	429	1407

Steel Shot Nickel Plated — Shell: Fiocchi T4 Plastic

Shot Load 32 g / 11/8 oz					Starting load				Maximum load			
					Weight		Velocity		Weight		Velocity	
Powder	Primer	Wad	Overshot card	Crimp	[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
N320	Fio. 616	B&P Steel 32	Paper	Roll Crimp	1,30	20.1	364	1194	1,45	22.4	393	1289
N340	Fio. 616	B&P Steel 32	Paper	Roll Crimp	1,50	23.1	368	1207	1,65	25.5	403	1322
3N37	Fio. 616	B&P Steel 32	Paper	Roll Crimp	1,65	25.5	355	1165	1,95	30.1	416	1365
N105	Fio. 616	B&P Steel 32	Paper	Roll Crimp	2,30	35.5	362	1188	2,59	40.0	415	1362

Steel Shot Nickel Plated — Shell: Fiocchi T4 Plastic

Shot Load 35 g / 11/4 oz					Starting load				Maximum load			
					Weight		Velocity		Weight		Velocity	
Powder	Primer	Wad	Overshot card	Crimp	[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
N340	Fio. 616	B&P Steel 35	Paper	Roll Crimp	1,40	21.6	364	1194	1,50	23.1	375	1230
3N37	Fio. 616	B&P Steel 35	Paper	Roll Crimp	1,65	25.5	369	1211	1,71	26.4	384	1260
N105	Fio. 616	B&P Steel 35	Paper	Roll Crimp	2,20	34.0	359	1178	2,61	40.3	416	1365

Steel Shot Nickel Plated — Shell: Fiocchi T4 Plastic

Shot Load 44 g / 11/2 oz					Starting load				Maximum load			
					Weight		Velocity		Weight		Velocity	
Powder	Primer	Wad	Overshot card	Crimp	[g]	[grs]	[m/s]	[fps]	[g]	[grs]	[m/s]	[fps]
3N37	Fio. 616	B&P Steel 44	Paper	Roll Crimp	1,60	24.7	358	1175	1,65	25.5	362	1188
3N38	Fio. 616	B&P Steel 44	Paper	Roll Crimp	1,70	26.2	311	1020	2,00	30.9	362	1188
N105	Fio. 616	B&P Steel 44	Paper	Roll Crimp	2,30	35.5	368	1207	2,50	38.6	398	1306

This data has been obtained using a 28” test barrel.
Velocity has been measured using light gate digital sensors at a distance of 2,5 m from muzzle acc. to C.I.P. method.
All loads have been pressure tested according to the C.I.P. method.
Data has been obtained using 3 mm shots (U.S. size No. 5) with loads measured in [g]. All [oz] weights are indicative.

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

PERSONAL LOADS

Caliber	Bullet, type and weight [g] or [grs]	Powder	Charge [g] or [grs]	Muzzle vel. [m/s] or [fps]	Notes

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PERSONAL LOADS

Caliber	Bullet, type and weight [g] or [grs]	Powder	Charge [g] or [grs]	Muzzle vel. [m/s] or [fps]	Notes

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	N330	N340	N350	3N37	3N38
Bulk density (g/l)	560	550	620	620	660	720	730
Energy content (J/g)	4100	4100	4100	4100	4100	4100	4000

N500 High Energy Reloading Powders for Rifles

	N540	N550	N555	N560	N565	N568	N570
Bulk density (g/l)	940	940	900	960	960	907	960
Energy content (J/g)	4000	3900	3700	4000	4000	3850	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 in³) Measures: sides & height 95 x 75 x 140 mm	net weight	gross weight
N110, N120, N130, N133, N135, N140, N150, N160, N165, N170 24N41, 20N29	1.0 lbs	1.1 lbs
N540, N550, N555, N560, N565, N568, N570	1.0 lbs	1.1 lbs

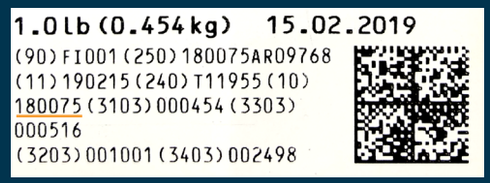
Consumer package, bottle 1,2 ltr (73.2 in³) Measures: sides & height 95 x 75 x 226 mm	net weight	gross weight
N110, N120, N130, N133, N135, N140, N150, N160, N165, N170	1,0 kg	1,1 kg
24N41, 20N29, N540, N550, N555, N560, N565, N568, N570	1,0 kg	1,1 kg
N310, N320, N330, N340, N350, 3N37, 3N38	0,5 kg	0,6 kg
N310, N320, N330, N340, N350, 3N37, 3N38	1.0 lbs	1.2 lbs

Consumer package, canister 4,5 ltr (274.6 in³) 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, N540, N550, N555, N560, N565, N568, N570	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.

LOT NUMBER

All Vihtavuori powder bottle labels have a white area with specific information shown in number sequences. The lot information is shown after item number (10). For instance, the lot number in the example picture is 180075.



BURNING RATE CHART

Current canister powders in order of *approximate* burning rate.
This list is for reference only and **not** to be used for developing loads.

Fast Burning

Vihtavuori	Norma	RWS	VECTAN	Reload Swiss	IMR	Hodgdon	Accurate	W-W	Alliant	Ramshot
						Titewad			E³	
						Trail Boss	Nitro-100NF	WST		
N310		P805	Ba10			HP38				
		P801			Trail Boss IMR Target	Titegroup		Super Handicap 231	Bullseye	
						Clays				Competition
N320			Ba9-1/2	RS12	Hi-Skor700X		No. 2		Red Dot	
			AS			Clays Int'l			PP 1200-R American Select	
									Promo	Zip
		P804	A1						Green Dot	
		P803				Clays Univer.	No. 5	Win Clean 244	Unique	
N330			Ba9			HS-6		WSF Auto Comp	Power Pistol	
N340			SP8	RS20		CFE Pistol		Super Field	Herco	Silhouette
3N37			A0			Longshot				
N350					Hi-Skor 800X					True Blue
3N38			SP2 Pract.	RS24				572	Blue Dot	
						HS-7	No. 7		Steel	
									2400	Enforcer
			SP3				No. 9			
		P806					4100			
N110		R910		RS30	IMR4227	H110 H4198		296	PP 300-MP	
						Li'l Gun				
	200	R901				CFE BLK H4227	5744		410	
N120				RS36	IMR4198		1680		Reloder 7	
							2015			
		R902			IMR3031	Benchmark			Reloder 11	
						H322				
N130	201		SP10			BL(C)-2	2460	748	Reloder 10X	
N133	202		Tubal3000		8208XBR	CFE 223			PP 2000-MR	X-Terminator
		R903				H335	2495			
			SP9		IMR4895	Leverevolution	2520			
				RS40	IMR4166	H4895	4064		PP Varmint Reloder 12	TAC
N135					IMR4064				AR-Comp	
			SP7			Varget				
N140	203B	R907		RS50		H380	2700		Reloder 15	Big Game
N540				RS52		H414		760	PP 4000-MR	
N150	URP	R904	Tubal5000			H4350	4350		Reloder 16 Reloder 17	
N550				RS60	IMR4350	HYBRID 100V		StaBALL 6.5	Reloder 19	
N555	204		SP11	RS62	IMR4451	H450				Hunter
N160			Tubal7000		IMR4831	H4831SC				
N560	MRP	R905			IMR4955	H4831				
N165			Tubal8000	RS70	IMR7828SSC	Super- Performance	MagPro		Reloder 22 Reloder 23	
	217				IMR7828	H1000			Reloder 25	Magnum
N170					IMR7977 IMR8133	Retumbo			Reloder 26	LRT
N565			SP13	RS76		H870				
N568										
N570				RS80		50BMG			Reloder 33 Reloder 50	
24N41						US869				
20N29										

Slow Burning

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UNITED STATES

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SCAN THE CODE & GO SHOPPING!

.308 Winchester

Cases: Lapua, trim to length

Bullet specifications

Bullet manufacturer: Berger

Bullet type: Hybrid Target

Bullet weight: 10,0 g

Your search returned 5 different loads:

You can sort results by clicking header cells that have arrow icons in them.

Bullet				Powder	Load			
g			mm		g		m/s	
Weight	Mfg	Type	C.O.L	Type	Weight start	Weight max	Velocity start	Velocity max
10,0	Berger	Hybrid Target	71,0	N135	2,41	2,61	750	812
10,0	Berger	Hybrid Target	71,0	N140	2,58	2,80	754	819
10,0	Berger	Hybrid Target	71,0	N540	2,64	2,85	768	842
10,0	Berger	Hybrid Target	71,0	N150	2,61	2,84	761	829
10,0	Berger	Hybrid Target	71,0	N550	2,76	3,01	759	840

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- Choose your preferred units (metrics or imperial)
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- Filter the results by desired bullet specifications i.e. bullet manufacturer, type and weight.
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