



# Руководство по снаряжению патронов центрального воспламенения порохом Vihtavuori

11 редакция



VIHTAVUORI

## Таблица скоростей горения

Примерные данные о скорости горения существующих марок порохов.  
Таблица не предназначена для снаряжения патронов,  
а является лишь справочным материалом

|                   | Vihtavuori | Norma  | RWS          | VECTAN           | PB               | IMR                                       | Hodgdon                               | Accurate               | W-W                             | Alliant   | Ramshot      |
|-------------------|------------|--------|--------------|------------------|------------------|---|---------------------------------------|------------------------|---------------------------------|---|--------------|
| Быстрое горение   | N310       | R1     | P805<br>P801 | Ba10             |                  |   | Titewad<br>HP38<br>Titegroup<br>Clays | Nitro 100<br>Solo 1000 | WST<br>231<br>452<br>WSL<br>473 | E <sup>2</sup><br>Bullseye                      |              |
|                   | N320       |        |              | AS               |                  | Trail Boss<br>Hi-Skor700X<br>PB<br>SR7625 | Clays Int'l                           | Solo 1250              |                                 | Red Dot   | Competition  |
|                   | N32C       |        | P804<br>P803 | A1               |                  |   | Clays Univer.                         | No. 5                  | WSF<br>540<br>WAP               | American Select<br>Promo<br>Green Dot<br>Unique | Zip          |
|                   | N330       |        |              | Ba9<br>SP8<br>A0 | PCL501<br>PCL504 | SR4756                                    | HS-6<br>Longshot                      |                        |                                 | Power Pistol<br>Herco                           | Silhouette   |
|                   | N340       |        |              |                  |                  | Hi-Skor 800X                              |                                       |                        |                                 |   | True Blue    |
|                   | 3N37       |        |              | SP2 Pract.       |                  |   | HS-7                                  | No. 7                  | 571                             | Blue Dot<br>Steel<br>2400                       | Enforcer     |
|                   | N350       |        |              |                  |                  |   |                                       | No. 9                  |                                 |   |              |
|                   | 3N38       |        |              |                  |                  |   |                                       | 4100                   | 296<br>680                      |   |              |
|                   | N105       |        |              |                  |                  |   |                                       | 5744<br>1680<br>2015   |                                 | 410<br>Reloder 7                                |              |
|                   |            | R-123  | P806<br>R910 | SP3              | PCL512           | SR4759<br>IMR4227                         | H110<br>H4198<br>Li'l Gun<br>H4227    |                        |                                 | Reloder 11                                      |              |
| Медленное горение | N110       | 200    | R901         | Ba6              |                  | IMR4198                                   | Benchmark<br>H322<br>BL(C)-2          | 2230<br>2460           | 748                             | Reloder 10X                                     | X-Terminator |
|                   | N120       |        | R902         | Tubal2000        | PCL507           | IMR3031                                   | H335                                  | 2495<br>2520<br>4064   |                                 | Reloder 12                                      | TAC          |
|                   | N130       | 201    |              | SP10             |                  | 8208XBR                                   | H4895                                 |                        |                                 | Reloder 15                                      | Big Game     |
|                   | N133       | 202    | R903         | Tubal3000        |                  | IMR4895<br>IMR4064                        | H4895                                 |                        |                                 | Reloder 17<br>Reloder 19                        | Hunter       |
|                   | N530       |        |              | SP9              |                  | IMR4320                                   | Varget<br>H380<br>H414<br>H4350       | 2700<br>4350           | WMR<br>785                      | Reloder 22<br>Reloder 25                        | Magnum       |
|                   | N140       | 2038   | R907         | SP7              | PCL511           | IMR4350                                   | H450                                  |                        |                                 |   |              |
|                   | N540       |        |              |                  |                  | IMR4831                                   | H4831SC<br>H4831                      | 3100                   |                                 |   |              |
|                   | N150       | URP    | R904         | Tubal5000        |                  | IMR7828SSC<br>IMR7828                     | H1000<br>Retumbo<br>H870<br>50BMG     | 8700                   |                                 |   |              |
|                   | N550       | 204    |              | SP11             |                  |   |                                       |                        |                                 |   |              |
|                   | N160       |        |              | Tubal7000        |                  |   |                                       |                        |                                 |   |              |
|                   | N560       | MRP    | R905         | Tubal8000        |                  |   |                                       |                        |                                 |   |              |
|                   | N165       | MRP(2) |              |                  |                  |   |                                       |                        |                                 |   |              |
|                   | N170       |        |              |                  |                  |   |                                       |                        |                                 |   |              |
|                   | N570       |        |              |                  |                  |   |                                       |                        |                                 |   |              |
|                   | 24N41      |        |              |                  |                  |   |                                       |                        |                                 |   |              |
|                   | 20N29      |        |              |                  |                  |   |                                       |                        |                                 |   |              |

## Винтовочные пороха

### Пороха серии N100

Пороха серии N100 прежде всего предназначены для винтовочных патронов и имеют соответствующую скорость горения для снаряжения патронов калибром от .204 Ruger и .22 Hornet до .338 Lapua Magnum и .30-378 Weatherby Magnum. Серия включает 10 видов порохов:

#### N110

Наиболее быстро горящий порох Vihtavuuti. Аналогичен Hodgdon H110 и Winchester 296. Может использоваться в патронах калибра .22 Hornet и .30 Carbine, а также патронах «магнум» для пистолетов и револьверов. Типичные применения включают: .22 Hornet, .25-20 Winchester, .357 Magnum, .357 S&W, Magnum, .41 Magnum, .44 Magnum, .454 Casull и .500 S&W.

#### N120

Медленнее горящий порох для винтовочных патронов калибра .22 с малым объемом гильзы. Скорость этого пороха нуждается в более высоком давлении чем N110 для оптимизации горения. По своей природе это порох ограниченного применения. Скорость горения где-то между IMR4227 и снятым с производства Winchester 680. Область применения: 7,62x39, .30-30 Winchester и .444 Marlin.

#### N130

Этот порох используется в заводских патронах .22 и 6 мм PPC. Может использоваться для легких пуль в калибре .223 а также в патронах с прямыми гильзами типа .45-70 Government и .458 Winchester Magnum. По скорости горения очень близок к Hodgdon H322, Accurate 2230.

#### N133

Выбор большинства стрелков в бенчресте использующих калибр 6 мм PPC. Также он идеально подходит для .222 Remington, .223 Remington и .45-70 Government и других применений, где необходим относительно быстро горящий порох. По скорости горения близок к Norma 201, Hodgdon H335 и Vectan SP10.

#### N155

Порох отлично подходящий для .308 Winchester с пуль легче 10 грамм (155 гран). По скорости горения близок к Accurate 2520, IMR 4064 и Hodgdon H4895. Подходит для патронов от .222 Remington до .458 Winchester Magnum.

#### N140

Действительно универсальный порох часто используемый вместо IMR4320, Reloder 15 и Hodgdon H830. Также хорошо подходит для .223 Remington, .22-250 Remington, .308 Winchester, .30-06 Springfield, 8x57IS (8mm Mauser) и .375 H&H Magnum.

#### N150

Умеренно медленный порох, который может помочь улучшить баллистику винтовочных патронов, когда N140 уже оказывается слишком быстрым, а N160 еще несколько медленный. Обычно используется с тяжелыми пулями в гильзах со средним объемом. Хорошо работает в патронах .308 Winchester, 6,5x55SE и .30-06 Springfield.

#### N160

Медленный порох для патронов Magnum и патронов с большим объемом гильзы и сравнительно малым диаметром пули. Скорость горения N160 приближается к скорости Reloder 19, Winchester WMR и различных 4831. Примерами идеального применения являются: .243 Winchester, 6,5-.284 Norma, 7 мм Weatherby Magnum, .300 Winchester Magnum, .338 Winchester Magnum и все короткие магнумы Winchester.

#### N165

Очень медленно горящий «магнум»-порох для использования с тяжелыми пулями. Характеристики подобны Norma MRP и Reloder 22. Применение — с тяжелыми пулями в калибрах от 6,5x55SE до .416 Rigby.

#### N170

Самый медленный из порохов Vihtavuori и один из самых медленных порохов для релодинга из общедоступных у любых производителей. По характеристикам похож на Hodgdon H1000 и Accurate 8700. Оптимальные характеристики при применении с поясковыми «магнумами» такими как .300 Weatherby Magnum, также подходит для .300 Remington Ultra Magnum и .338 Lapua Magnum.

### Пороха серии N500

Добавление нитроглицерола в традиционные основные пороха добавляет возможность управления еще одной баллистической характеристикой: энергоемкостью. Vihtavuori обозначает пороха с добавлением нитроглицерола (до 25%) индексом NC и выделяет их в отдельную серию N500.

## Винтовочные пороха

Типовой состав высокоэнергетического пороха включает следующие компоненты:

- нитроцеллюлоза,
- покровное вещество,
- вещество, подавляющее пламя,
- нитроглицерол,
- стабилизатор,
- присадка для уменьшения износа ствола.

Геометрически пороха серии N500 соответствуют порохам серии N100. Несмотря на то, что эти новые пороха более энергоемки они не влекут большой износ ствола благодаря тому, что порох покрыт специальным веществом снижающим износ.

Пороха серии N500 отлично работают при любых температурах, их стабильность выше чем у привычных порохов серий N100 и N300.

Чувствительность к температуре, прежде всего, определяется типом оружия и патрона. Используемая технология производства позволяет реализовать высокую насыпную плотность, что в свою очередь позволяет вместить большее количество пороха в ограниченный объем.

Высокоэнергетические пороха Vihtavuori выпускаются в следующих сериях:

### N530

Самый быстрогорящий порох серии, скорость его горения приближается к данному показателю у N135 и Hodgdon BL-C(2). Изначально созданный специально для патронов калибра 5,56 мм НАТО, он неплохо показал себя в патронах .45-70 и .308 Winchester с массой пули до 10 грам.

### N540

Быстрогорящий порох со скоростью горения как у N140 и приближающейся к таковой у Hodgdon H414 и Winchester 760. Порох подходит в случаях, когда нужна повышенная мощность, к примеру, в патронах .223 Remington, .308 Winchester и .30-06 Springfield с более тяжелыми пулями.

### N550

Скорость горения соответствует N150 и приближается к IMR 4350 и Reloder 19.

Хороший выбор для мощных патронов 6,5x55 SE, .308 Winchester, .30-06 Springfield других.

### N560

Скорость горения является промежуточной между

N160 и N165 и приближается к Norma MRP и Reloder 22. Порох предназначен для патронов Magnum, позволяя взять максимум от .270 Winchester, 7 мм Remington Magnum, 7 мм Weatherby Magnum и .338 Lapua Magnum.

### N570

Младший член семейства N500 отличающийся наиболее медленным горением. Скорость горения N570 примерно соответствует N170, но выше чем у 24N41. Характеристики этого высокоэнергетического крупногранульного пороха особенно высоки в патронах большой емкости, таких как 6,5-.284 Norma, .300 Winchester Magnum, .300 Remington Ultra Magnum, .338 Lapua Magnum, .338 Lapua Magnum и .30-378 Weatherby Magnum.

## Пороха для .50 BMG

Для .50 BMG существуют два типа порохов Vihtavuori: 24N41 и 20N29. Их скорость горения ниже, а размер гранул выше, чем у порохов серии N100. Относительная скорость горения 24N41 равняется 39, у 20N29 соответственно 36, в то время как у N110 — 100. Таким образом, 24N41 горит несколько быстрее чем 20N29. Кроме того имеется информация по снаряжению для некоторых других винтовочных калибров Magnum этими порохами, 20N29 заслужили хорошую репутацию будучи использованы в патронах .300 Lapua Magnum и .20-378 Weatherby Magnum.

## Пороха для пистолетных патронов

Пистолетные пороха включают пять порохов серии N300, три специальных пороха и один специально разработанный для Cowboy Action Shooting:

### N310

Очень быстро горящий порох, соревнующийся с Bullseye и Accurate No. 2. Имеет применения в очень широком диапазоне от .32 S&W до .45 ACP.

### N320

Пистолетный порох с относительно высокой скоростью горения. Применим во многих популярных пистолетных патронах. Современные данные включают 9мм Luger, .38 Special, .357 Magnum, .44 Magnum, .45 ACP и .45 (long) Colt. Скорость горения, в общем, чуть быстрее, чем у 231 или примерно такая же как у Red Dot.

### Tin Star (N32C)

Специальный порох, разработанный для Cowboy Action Shooters для стрельбы свинцовыми пулями из револьверов и винтовок. Он отличается низкой насыпной плотностью (меньше свободного места в гильзе) сгорает очень чисто со скоростью промежуточной N320 и N330. В наличии есть данные для снаряжения патронов .38 Special и .44 Magnum.

### N330

Скорость горения несколько ниже чем у N320 и соответствует Allient Unique и Vectan Ba 9. Изначально разработанный для 9мм Luger сейчас используется также в .38 Special, .40 S&W, .44S&W Special и .45 (long) Colt.

### N340

Превосходный универсальный порох для пистолетных патронов со скоростью горения как у Accurate No5 или Allient Herco. В настоящее время имеются данные для следующих пистолетных патронов: .30 Luger, 9мм Luger, .357 SIG, .38 Super Auto, .38 Special, .357 Magnum, .40 S&W, 10 mm AUTO, .44 S&W Special, .44 Remington Magnum, .45 ACP and .45 Colt.

### N350

Это самый медленно горящий порох в серии N300. Скорость горения примерно такая же как у Blue Dot, “Hi-Skor” 800-X или No. 7. В настоящее время доступны данные для: 9мм Luger, .38 Super Auto, .38 Special, .357 Magnum, .44 Magnum и .45 Auto.

### 3N37

Изначально разработанный для патронов .22 калибра

доказал свою эффективность во всех стрелковых дисциплинах. Скорость его горения приближается к N350 и Vectan A0. В настоящее время имеются данные для всех распространенных пистолетных патронов.

### 3N38

Этот порох специально разработан для спортивной стрельбы из 9 мм Luger, .38 Super Auto и .40 S&W со средней массой пули с высокой скоростью. Скорость горения соответствует Vectan SP 2.

### N105 Super Magnum

Этот специальный порох имеет скорость горения между N350 и N110. Он специально разработан для пистолетных патронов с тяжелыми пулями и/или увеличенным объемом гильзы. Данные по релоадингу в настоящее время включают 9x21мм, .38 Super Auto, .357 Magnum, .40S&W, 10мм Auto, .44 Remington Magnum и .45 Winchester Magnum.

## О табличных данных

### Как использовать данные

Наши табличные данные по винтовочным и пистолетным патронам обычно содержат максимальные количества пороха, которые не должны быть превышены. В некоторых случаях указаны также изначальные заряды. В настоящее время эта брошюра содержит все данные, которые мы можем предоставить. Будьте уверены, что вы используете правильные данные и правильный удельный вес пули.

При уменьшении заряда пороха всего на 5 % от максимума, давление падает примерно на 10 %, при этом скорость падает всего на 3 %. Важно: при снаряжении патрона следите за его длиной (C.O.L.). Более короткий патрон может повысить давление вдвое. Максимальная длина патрона лимитируется возможностями оружия. Табличные данные были получены при температуре 68 градусов по Фаренгейту и относительной влажности 55 %. Эти данные могут отличаться от тех, которые вы получите, используя ваше оружие в других условиях. Никогда не превышайте максимально допустимые заряды. Начните с минимального заряда указанного в таблице. Если размер минимального заряда не указан, используйте заряд на 15 % меньше максимума. При заряджании патронов с максимальным зарядом пороха в 10 гран или менее при отстреле 10 патронов с минимальным зарядом (15 % менее максимума), повысьте заряд на 0.2 грана и отстреляйте еще 10 патронов. Повторяйте процедуру до тех пор, пока не достигнете максимального указанного заряда. Та же процедура распространяется на более тяжелые заряды, при снаряжении патронов с навеской пороха от 11 до 25 гран повышайте навеску порциями по 0.5 гран. Для зарядов более 25 гран шаг увеличения заряда составляет 1.0 гран. Если даже один патрон покажет признаки превышения давления, прекратите снаряжение. Не отстреливайте более ни единого патрона. Обратитесь за квалифицированной помощью! Обычным признаком превышения давления является расплющенный капсюль. Выдутое в полость экстрактора донце гильзы является более опасным признаком. Выбитые капсюли являются еще более серьезным признаком. Лопнувшая гильза может свидетельствовать о браке гильзы или об опасном превышении давления.

В случае превышения давления лучше остановится, чем потом жалеть. Стоит ли рисковать получением серьезных травм? Лучше утилизировать все бракованные

патроны. Прочтите правила безопасности при снаряжении патронов в этом руководстве

### Давление

Существует масса факторов способных изменить баллистические характеристики патрона даже при соблюдении всех требований к снаряжению патрона. Например: внутренние размеры оружия могут существенно колебаться даже у образцов одной модели. Развиваемое давление также может отличаться у оружия разных моделей. Замена любого компонента патрона на иной может существенно изменить общие характеристики.

Кроме того на баллистические характеристики могут повлиять колебания температуры. Не каждая пуля той же массы и диаметра создаст аналогичное давление. Использование гильзы другого производителя также может оказать серьезное влияние. Существует масса причин влияющих на давление.

Кроме того очень важно, чтобы релоадер имел достаточную квалификацию и осуществлял снаряжение патрона в соответствии с наставлениями и справочными материалами по релоадингу. Данные предоставленные этой книгой не предназначены для лиц не знакомых с процессом релоадинга. Это руководство должно быть дополнено книгами по процедурам снаряжения патронов: Lapua Reloading Manual, the DBI Metallic Cartridge Reloading, the Vihtavuori Reloading Manual или другими авторитетными изданиями содержащими всю необходимую информацию.

## Особенности бездымного пороха и его хранения

### Особенности бездымного пороха

Бездымные пороха созданы для горения в определенных условиях с определенной скоростью.

Бездымные пороха производятся в трех формах:

1. Тонкие круглые хлопья
2. Небольшие цилиндры
3. Небольшие шарики

Одноосновные пороха используют в своей основе нитроцеллюлозу.

Двухосновные пороха основаны на нитроцеллюлозе и нитроглицерине.

Все бездымные пороха крайне огнеопасны и легко воспламеняются.

Бездымные пороха не нуждаются в атмосферном кислороде для горения так как насыщены кислородом и могут воспламениться даже в таком ограниченном пространстве как гильза. Воспламенение происходит при нагреве до температуры воспламенения. Это может произойти при следующих условиях:

1. Контакта с пламенем, огнем или капсюлем.
2. Электроискра.
3. Нагрев в результате контакта с раскаленным объектом.

Горение пороха производит большое количество газов и тепла. Если порох находится малом объеме - начинает расти давление. Объем газов, выделяемых при давлении настолько велик, что только если давление может быть стравлено или объем камеры достаточно велик, можно удержать давление на безопасном уровне.

Порох отличается от взрывчатых веществ, таких как динамит или нитроглицерин. Взрывчатые вещества, несмотря на то что в своей основе имеют те же компоненты, что и порох, детонируют при переходе из твердого состояния в газообразное, создавая ударные (взрывные) волны, разрушающие находящуюся в контакте ма-

терию. Эти волны настолько опасны, что практически очень трудно избежать их воздействия даже при детонации небольшого количества взрывчатого вещества.

Бездымный порох существенно отличается от черного горением вне патрона.

Черный порох и в патроне, и на открытом воздухе горит практически с одинаковой скоростью.

При горении на открытом пространстве бездымный порох безвредно сгорает с оранжево-синим пламенем. Горение сопровождается большим количеством коричневого дыма с резким запахом. После горения остаются пепел и остатки пороха. Пламя может повлечь серьезные ожоги.

Горение происходит совсем по-другому при сгорании под давлением внутри гильзы. В этом случае почти совсем не производится дым. Эффективность горения зависит от давления, под которым находится порох. Если порох находится под слишком сильным давлением, то при горении может разрушиться контейнер, в котором находится.

Именно поэтому Департамент транспорта вел правила транспортировки порохов и ввел испытания транспортных контейнеров с использованием огня. В случае воспламенения такие контейнеры отрываются, выпуская излишнее давление.

## Хранение бездымного пороха

### Как проверить пригодность бездымного пороха

Хотя современные бездымные пороха, как правило, на подвержены ухудшению качества при надлежащих условиях хранения, требования безопасности требуют проверки пороха на предмет признаков порчи и их возможных последствий.

Ухудшение качества может быть проверено на запахи путем открытия крышки на контейнере.

Испорченный порох имеет раздражающе кислый запах. (Не путать с запахом распространенных растворителей, таких как спирт, эфир и ацетон).

Проверьте, не подвергался ли порох воздействию высоких температур, так как это может привести к ухудшению. Также продукты воздействия кислот могут вызвать самовозгорание из-за тепла, выделяемого в результате реакции. Никогда не используйте порох из старых патронов и не пытайтесь смешать старый порох с новым. Не накапливайте большие запасы пороха. Лучший способ избавиться от просроченного бездымного пороха это сжечь его в открытом изолированном месте в небольшой мелкой яме (не более дюйма глубиной). Количество единоразово сжигаемого пороха не должно превышать один фунт. Используйте для воспламенения дорожку из небольшого количества пороха, так чтобы человек мог отступить на безопасное расстояние, прежде чем основная куча воспламенится.

### Хранение бездымного пороха

Бездымный порох легко воспламеняется, поэтому он должен быть защищен от случайного воздействия пламени, искр или высоких температурах. По этой причине желательно, чтобы емкость для хранения была изготовлена из изоляционного материала для защиты пороха от внешних источников тепла.

Помещение для хранения бездымного пороха должно быть построено следующим образом:

1. Должны быть огнеупорными и обеспечивать теплоизоляцию.
2. Достаточно большими, чтобы обеспечить выход газообразных продуктов сгорания, в случае случайного воспламенения.

Нужно понимать, что стены помещения небольшого объема, заполненное до предела, могут не выдержать давления газов при воспламенении и разрушиться. Эффект при этом будет подобен или идентичен эффекту, возникающему при взрыве.

Поэтому в хранилище должно находиться только наименьшее количество требуемого для работы бездымного пороха, при этом в строгом соответствии со всеми действующими правилами противопожарной безопасности.

## Хранение бездымного пороха

### Рекомендации по хранению бездымного пороха

Храните порох в прохладном, сухом месте. Убедитесь, что место, выбранное для хранения свободно от любых возможных источников избыточного тепла и изолировано от открытого огня, печей, водонагревателей и т.д. Не храните бездымный порох там, где он будет подвергаться воздействию солнечных лучей. Избегайте хранения в местах работы механического или электрического оборудования. Предохраняйте порох от жары в складских помещениях или искр, которые могут возникнуть в результате перегрузки электрических сетей.

НЕ ХРАНИТЕ бездымный порох вместе с растворителями, горючими газами или легковоспламеняющимися материалами. Храните порох только в специальных контейнерах.

Не используйте для хранения емкости, не предназначенные для пороха.

Как проверить состояние бездымного пороха.

НЕ КУРИТЕ в местах хранения пороха. Размещайте знаки запрещающие курение в этих местах.

Шафы для хранения должны быть выполнены из изолирующих материалов и с тонкими стенками, со швами обеспечивающими вентиляцию.

Не храните старые пороха. Регулярно проводите проверку состояния порохов. Незамедлительно уничтожайте испорченные пороха.

Соблюдайте все правила, касающиеся порядка хранения порохов. Не храните весь ваш порох в одном месте. Если можете, используйте разные места хранения. Несколько небольших контейнеров являются более безопасными, чем один или несколько больших контейнеров.

СОБЛЮДАЙТЕ правила хранения и пороха. Немедленно убирайте просыпанный порох.

Приведенная выше информация была предоставлена с разрешения SAAMI: Институт производителей спортивного оружия и боеприпасов, Inc PO Box 838, Branford, 06405.



## Безопасность при релоадинге

Релоадинг (самостоятельное снаряжение патронов) — увлекательное и полезное хобби, которым легко можно заниматься безопасно. Но, как и во многих других человеческих занятиях, неаккуратность или неряшливость могут сделать релоадинг опасным. Сущность безопасности при релоадинге состоит в надлежащем обращении и хранении капсюлей и пороха.

Одинаково важным является беспрекословное следование инструкциям, даваемым производителями оборудования для релоадинга, а также компонентов для него.

Прежде чем начать, прочтите правила безопасности и помните о них в процессе релоадинга. Внимание, уделяемое деталям, и спокойствие гарантируют безопасность и качество!

- Если возможно, обучитесь методике релоадинга у опытного релоадера.
- Занимайтесь релоадингом только того, когда имеете возможность уделять ему все свое внимание. Не занимайтесь релоадингом, если устали или больны. Разрабатывайте собственную методику релоадинга для избежания ошибок. **Избегайте спешки, снаряжайте в спокойном месте и имейте в виду — совершенно никакого релоадинга не может быть под влиянием алкоголя или наркотиков!**
- Всегда надевайте предохранительные очки. Релоадинг без защитных очков сопряжен с неоправданным риском.
- Храните порох и капсюли вне досягаемости детей и вдали от тепла и открытого огня. **Следуйте инструкциям производителей, размещенным на канистре с порохом. Никогда не курите во время снаряжения патронов!**
- Держите в зоне досягаемости пороха не больше, чем необходимо. Немедленно возвращайте неиспользованный порох в его оригинальный контейнер для сохранения его идентичности и полезного времени использования.
- Не используйте порох, если невозможно его точно идентифицировать. Утилизируйте весь неидентифицированный порох в соответствии с инструкциями на вашей пороховой канистре. **Имейте в виду, что метод проб и ошибок может привести к серьезным увечьям!**
- **Не храните капсюли в куче! Этим вы создаете бомбу!** Капсюли в куче с очень большой вероятностью могут массово детонировать. Взрыв нескольких сотен капсюлей сравним с взрывом ручной гранаты в комнате! Не прилагайте усилий при любых работах с капсюлями. Уделяйте особое внимание при наполнении и работе с подающими трубками автоматических капсюляторов. Храните капсюли в их оригинальной заводской упаковке до использования. Возвращайте неиспользованные капсюли в их оригинальную упаковку. Не используйте капсюли, если их невозможно идентифицировать. Утилизируйте их в соответствии с ин-

струкциями производителей. Начинайте снаряжение со стартового заряда в соответствии с данными для снаряжаемого патрона. Если нет информации о стартовом заряде, используйте заряд на 10% меньший приведенного максимального заряда. Увеличивайте заряд небольшими приращениями, наблюдая за признаками избыточного давления на капсюле и донце гильзы после каждого приращения. **Если вы обнаружили признаки избыточного давления, немедленно прекратите стрельбу и уменьшите заряд. Всегда разбирайте испорченные патроны. НИКОГДА НЕ ПРЕВЫШАЙТЕ МАКСИМАЛЬНЫХ ЗАРЯДОВ!**

- Визуально проверяйте уровень пороха в гильзах, чтобы быть абсолютно уверенным в том, что вы не засыпали двойной заряд. При выстреле двойным зарядом может случиться повреждение оружия, ранение стрелка или даже смерть.
- Если вы меняете партию любого компонента, или если вы меняете любой из компонентов ваших самостоятельно снаряженных патронов, вы должны снова разрабатывать и проверить ваш заряд, начиная со стартовых навесок. Различные компоненты, а также компоненты из различных производственных партий могут вызывать изменения давления в патроне.
- Вы должны строго следовать указаниям по общей длине патрона (C.O.L), приведенным в таблицах по релоадингу. Изменение глубины посадки пули оказывает существенное влияние на давление в патроннике.
- Никогда не используйте заряды меньше приведенного стартового заряда.
- Соблюдайте порядок на столе для релоадинга. Убирайте просыпанный порох и капсюли сразу же и полностью. Помните, что стол для релоадинга не является временным местом хранения других инструментов, использованных автомобильных запчастей и т.д.
- Используйте оборудование для релоадинга только в соответствии с рекомендациями производителя. Тщательно изучите инструкции и не стесняйтесь задавать вопросы, если чего-либо не понимаете.
- Будьте осторожны и благоразумны!

## Безопасность при релоадинге

### Возможность отравления свинцом

Постоянная работа со свинцом может, как было выяснено, создавать накопление свинца в живых организмах, особенно в нервной системе, что может постепенно вызывать серьезное ухудшение здоровья. Некоторые неиспользовавшиеся компоненты для релоадинга, а также стреляные гильзы могут содержать свинец или производные свинца, поэтому существует возможность отравления релоадера в процессе релоадинга. Капсюли и пули содержат свинец, и могут оставлять его следы на стреляных гильзах тоже.

Существуют различные способы, которыми свинец может попадать внутрь тела. Тем не менее, двумя наиболее частыми и стоящими упоминания являются губы и вдыхание. Таким образом, соблюдая простые меры предосторожности, описанные ниже, существующая возможность отравления и его опасные последствия могут быть уменьшены.

- **МОЙТЕ РУКИ** тщательно теплой водой с мылом после стрельбы или релоадинга.
- **НЕ ЕШЬТЕ ИЛИ НЕ ПЕЙТЕ** во время процесса релоадинга. При обращении со стреляными гильзами остаточные частицы свинца, скорее всего, перейдут на ваши руки. Таким образом, при на еду могут перейти эти частицы, и процесс релоадинга приведет к возможному воздействию свинца. Не дотрагивайтесь руками до носа или рта во время сессии релоадинга.
- **ХОРОШЕньКО УБИРАЙТЕСЬ И СОДЕРЖИТЕ В ЧИСТОТЕ ВАШЕ МЕСТО ДЛЯ РЕЛОАДИНГА.** Регулярная уборка предотвращает накопление остаточных продуктов. Используйте тряпку или швабру для очистки стола для релоадинга, а также пола под ним. **НЕ ПРИМЕНЯЙТЕ ПЫЛЕСОС!** Использование этого устройства несет потенциальный риск засасывания просыпанного пороха. Более того, обычный пылесос распыляет больше, чем собирает. Не селите ковров на месте для релоадинга. Ковер трудно содержать свободным от пыли, и он может создавать статические заряды, которые могут случайно воспламенить капсюль.
- **СТАРАЙТЕСЬ НЕ ВДЫХАТЬ ПЫЛЬ В РАЙОНЕ МЕСТА ДЛЯ РЕЛОАДИНГА.** При использовании сухого наполнителя при вибрационной чистке гильз имейте в виду, что остаточный свинец со стреляных гильз переходит на сухой наполнитель, где и собирается в процессе использования. Носите респиратор при высыпании сухого наполнителя из вибрационного барабана, и старайтесь не просыпать этот наполнитель на ваш стол для релоадинга.

# Rifle Reloading Data

## Disclaimer

All of this reloading information has been provided by Nammo Lapua Oy. The data given here were obtained in laboratory conditions following strictly the CIP (Commission Internationale 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 12 AND 13 OF THIS GUIDE.

## .204 Ruger

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

| Bullet |       |            |         |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|------------|---------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name  | Mfg     | 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    | Blitz King | Sierra  | 57,1   | 2.248 | N130   | 1,48          | 22.8  | 1106     | 3629  | 1,62         | 25.0  | 1213     | 3980  |
|        |       |            |         |        |       | N135   | 1,59          | 24.5  | 1112     | 3648  | 1,75         | 27.0  | 1228     | 4029  |
|        |       |            |         |        |       | N530   | 1,56          | 24.1  | 1070     | 3510  | 1,75         | 27.0  | 1225     | 4019  |
| 2,6    | 40    | V-Max      | Hornady | 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    | HPBT       | Berger  | 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 |       | Type/Name   | Mfg   | 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    | Spire Point | Speer | 43,5   | 1.713 | N110   | 0,52          | 8.0   | 713      | 2338  | 0,65         | 10.1  | 813      | 2668  |
| 2,9    | 45    | Spitzer     | Speer | 43,5   | 1.713 | N110   | 0,48          | 7.3   | 654      | 2144  | 0,60         | 9.3   | 746      | 2448  |
| 3,2    | 50    | Spitzer     | Speer | 43,5   | 1.713 | N110   | 0,47          | 7.3   | 609      | 1997  | 0,56         | 8.7   | 693      | 2274  |
| 3,6    | 55    | Spitzer     | Speer | 43,5   | 1.713 | N120   | 0,62          | 9.5   | 612      | 2008  | 0,74         | 11.3  | 724      | 2375  |
|        |       |             |       |        |       | 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

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

## .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 |       | Type/Name  | Mfg     | 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    | V-Max      | Hornady | 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    | Blitz King | Sierra  | 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    | Soft Point | Sierra  | 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    | SPSX       | Hornady | 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  |
| 3,3    | 51    | HPCE       | Lapua   | 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    | HPBT       | Sierra  | 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    | Soft Point | Lapua   | 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  |
| 3,6    | 55    | FMJ        | Lapua   | 54,0   | 2.126 | N135   | 1,40          | 21.6  | 896      | 2940  | 1,50         | 23.1  | 956      | 3136  |
|        |       |            |         |        |       | 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  |
| 3,9    | 60    | HP         | Hornady | 54,0   | 2.126 | 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  |
|        |       |            |         |        |       | N120   | 1,07          | 16.5  | 806      | 2644  | 1,20         | 18.5  | 881      | 2890  |
|        |       |            |         |        |       | 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 |       | Type/Name   | Mfg   | 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    | Spire Point | Speer | 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    | Spitzer     | Speer | 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  |
| 3,2    | 50    | TNT-HP      | Speer | 57,0   | 2.244 | N135   | 1,64          | 25.3  | 1010     | 3314  | 1,68F        | 25.9F | 1034     | 3392  |
|        |       |             |       |        |       | 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  |

F = Case full

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

| <div>.223 Remington</div> |       |                      |         |        |       | (cont.) | Test barrel: 620 mm (25"), 1 in 12" twist<br>Primers: Small Rifle<br>Cases: Lapua, trim-to length 44,50 mm (1.752") |       |          |       |              |       |          |       |
|---------------------------|-------|----------------------|---------|--------|-------|---------|---|-------|----------|-------|--------------|-------|----------|-------|
| Bullet                    |       |                      |         |        |       | Powder  | Starting load   |       |          |       | Maximum load |       |          |       |
| Weight                    |       | Type/Name            | Mfg     | 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    | HPCE                 | Lapua   | 57,0   | 2.244 | N120    | 1,23  | 19.0  | 909      | 2982  | 1,37         | 21.1  | 991      | 3251  |
|                           |       |                      |         |        |       | N130    | 1,35  | 20.8  | 930      | 3051  | 1,51         | 23.3  | 1018     | 3340  |
|                           |       |                      |         |        |       | N530    | 1,53  | 23.6  | 963      | 3159  | 1,66         | 25.6  | 1052     | 3451  |
|                           |       |                      |         |        |       | N133    | 1,45  | 22.4  | 943      | 3094  | 1,61         | 24.8  | 1033     | 3389  |
|                           |       |                      |         |        |       | N135    | 1,54  | 23.8  | 957      | 3140  | 1,68F        | 25.9  | 1034     | 3392  |
| 3,4                       | 52    | HPBT                 | Sierra  | 57,0   | 2.244 | N130    | 1,37  | 21.1  | 936      | 3071  | 1,54         | 23.8  | 1028     | 3373  |
|                           |       |                      |         |        |       | N133    | 1,46  | 22.5  | 948      | 3110  | 1,62         | 25.0  | 1033     | 3389  |
|                           |       |                      |         |        |       | N135    | 1,54  | 23.8  | 808      | 2651  | 1,66F        | 25.6F | 1039     | 3409  |
| 3,6                       | 55    | Soft Point           | Lapua   | 56,5   | 2,224 | N120    | 1,09  | 16.8  | 820      | 2690  | 1,31         | 20.2  | 939      | 3081  |
|                           |       |                      |         |        |       | N130    | 1,21  | 18.7  | 857      | 2812  | 1,42         | 21.9  | 959      | 3146  |
|                           |       |                      |         |        |       | N133    | 1,36  | 21.0  | 876      | 2874  | 1,56         | 24.1  | 980      | 3215  |
|                           |       |                      |         |        |       | N530    | 1,44  | 22.2  | 891      | 2923  | 1,61         | 24.8  | 995      | 3264  |
|                           |       |                      |         |        |       | N135    | 1,43  | 22.1  | 899      | 2949  | 1,64F        | 25.3F | 1004     | 3294  |
| 3,6                       | 55    | FMJBT                | Hornady | 57,0   | 2.244 | N140    | 1,57  | 24.2  | 915      | 3002  | 1,74F        | 26.9F | 1014     | 3327  |
|                           |       |                      |         |        |       | N120    | 1,21  | 18.7  | 889      | 2917  | 1,34         | 20.7  | 960      | 3150  |
|                           |       |                      |         |        |       | N130    | 1,41  | 21.8  | 956      | 3136  | 1,52         | 23.5  | 1013     | 3323  |
|                           |       |                      |         |        |       | N530    | 1,50  | 23.1  | 941      | 3087  | 1,62         | 25.0  | 1022     | 3353  |
|                           |       |                      |         |        |       | N133    | 1,43  | 22.1  | 928      | 3045  | 1,59         | 24.5  | 1006     | 3301  |
| 3,6                       | 55    | FMJ                  | Lapua   | 57,0   | 2.244 | 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  |
|                           |       |                      |         |        |       | N120    | 1,21  | 18.7  | 876      | 2874  | 1,35         | 20.8  | 953      | 3127  |
|                           |       |                      |         |        |       | N130    | 1,33  | 20.5  | 895      | 2936  | 1,50         | 23.1  | 985      | 3232  |
|                           |       |                      |         |        |       | N530    | 1,51  | 23.3  | 931      | 3054  | 1,64         | 25.3  | 1015     | 3330  |
| 3,9                       | 60    | HP                   | Hornady | 57,0   | 2.244 | N133    | 1,43  | 22.1  | 911      | 2989  | 1,59         | 24.5  | 999      | 3278  |
|                           |       |                      |         |        |       | N135    | 1,51  | 23.3  | 927      | 3041  | 1,68F        | 25.9F | 999      | 3278  |
|                           |       |                      |         |        |       | N140    | 1,61  | 24.8  | 917      | 3009  | 1,77F        | 27.3F | 1004     | 3294  |
|                           |       |                      |         |        |       | 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  |
| 4,0                       | 62    | FMJBT                | Speer   | 57,4   | 2.260 | 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  |
|                           |       |                      |         |        |       | N530    | 1,43  | 22.1  | 861      | 2825  | 1,56         | 24.1  | 953      | 3127  |
|                           |       |                      |         |        |       | N135    | 1,43  | 22.1  | 852      | 2795  | 1,60         | 24.7  | 942      | 3091  |
|                           |       |                      |         |        |       | N140    | 1,62  | 25.0  | 901      | 2956  | 1,70F        | 26.2F | 943      | 3094  |
| 4,5                       | 69    | HPBT <sup>1)</sup>   | Sierra  | 57,0   | 2.244 | N133    | 1,34  | 20.7  | 792      | 2598  | 1,48         | 22.8  | 867      | 2844  |
|                           |       |                      |         |        |       | N135    | 1,40  | 21.6  | 804      | 2638  | 1,54         | 23.8  | 875      | 2871  |
|                           |       |                      |         |        |       | N140    | 1,53  | 23.6  | 820      | 2690  | 1,68         | 25.9  | 897      | 2943  |
|                           |       |                      |         |        |       | N540    | 1,56  | 24.1  | 824      | 2703  | 1,71         | 26.4  | 910      | 2986  |
| 4,5                       | 69    | Scenar <sup>1)</sup> | Lapua   | 57,4   | 2.260 | N530    | 1,37  | 21.1  | 809      | 2654  | 1,47         | 22.7  | 869      | 2851  |
|                           |       |                      |         |        |       | N133    | 1,31  | 20.2  | 789      | 2589  | 1,42         | 21.9  | 849      | 2785  |
|                           |       |                      |         |        |       | N135    | 1,37  | 21.1  | 796      | 2612  | 1,49         | 23.0  | 862      | 2828  |
|                           |       |                      |         |        |       | N140    | 1,48  | 22.8  | 823      | 2700  | 1,60         | 24.7  | 879      | 2884  |
| 4,9                       | 75    | BTHP <sup>2)</sup>   | Hornady | 57,4   | 2.260 | N540    | 1,50  | 23.1  | 807      | 2648  | 1,65         | 25.5  | 895      | 2936  |
|                           |       |                      |         |        |       | N135    | 1,34  | 20.7  | 752      | 2467  | 1,51         | 23.3  | 830      | 2723  |
|                           |       |                      |         |        |       | N140    | 1,43  | 22.1  | 754      | 2474  | 1,62         | 25.0  | 843      | 2766  |
|                           |       |                      |         |        |       | N540    | 1,50  | 23.1  | 773      | 2536  | 1,67         | 25.8  | 863      | 2831  |
| 5,0                       | 77    | Scenar               | Lapua   | 57,4   | 2.260 | N530    | 1,25  | 19.3  | 712      | 2336  | 1,44         | 22.2  | 812      | 2664  |
|                           |       |                      |         |        |       | N135    | 1,22  | 18.8  | 701      | 2300  | 1,39         | 21.5  | 803      | 2635  |
|                           |       |                      |         |        |       | N140    | 1,35  | 20.8  | 704      | 2310  | 1,57         | 24.2  | 801      | 2628  |
|                           |       |                      |         |        |       | N540    | 1,41  | 21.8  | 720      | 2362  | 1,59         | 24.5  | 814      | 2671  |

F = Case full    <sup>1)</sup> 1 in 10" twist    <sup>2)</sup> 1 in 7" twist     = Accuracy load  
<sup>3)</sup> Test barrel with a long throat to accept the C.O.L. of 65 mm (2,559")

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

.223 Remington

(cont.)

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 |       | Type/Name          | Mfg    | 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    | HPBT <sup>2)</sup> | Sierra | 57,4   | 2.260 | N530   | 1,28          | 19.8  | 712      | 2336  | 1,43         | 22.1  | 795      | 2608  |
|        |       |                    |        |        |       | N135   | 1,27          | 19.6  | 706      | 2316  | 1,46         | 22.5  | 791      | 2595  |
|        |       |                    |        |        |       | N140   | 1,36          | 21.0  | 712      | 2336  | 1,60         | 24.7  | 810      | 2657  |
|        |       |                    |        |        |       | N540   | 1,47          | 22.7  | 740      | 2428  | 1,64         | 25.3  | 828      | 2717  |
| 5,2    | 80    | HPBT <sup>3)</sup> | Sierra | 64,8   | 2.551 | N530   | 1,30          | 20.0  | 713      | 2339  | 1,50         | 23.1  | 801      | 2630  |
|        |       |                    |        |        |       | N135   | 1,22          | 18.8  | 711      | 2333  | 1,40         | 21.6  | 788      | 2587  |
|        |       |                    |        |        |       | N140   | 1,34          | 20.7  | 730      | 2395  | 1,49         | 23.0  | 807      | 2646  |
|        |       |                    |        |        |       | N540   | 1,39          | 21.4  | 730      | 2395  | 1,53         | 23.7  | 808      | 2652  |
| 5,8    | 90    | HPBT               | Sierra | 59,8   | 2.354 | N140   | 1,25          | 19.3  | 640      | 2100  | 1,44         | 22.2  | 742      | 2434  |
|        |       |                    |        |        |       | N150   | 1,24          | 19.1  | 648      | 2126  | 1,48         | 22.8  | 748      | 2454  |
|        |       |                    |        |        |       | N540   | 1,34          | 20.7  | 678      | 2224  | 1,52         | 23.5  | 762      | 2500  |
| 5,8    | 90    | HPBT               | Berger | 62,4   | 2.457 | N140   | 1,25          | 19.3  | 646      | 2119  | 1,41         | 21.8  | 735      | 2411  |
|        |       |                    |        |        |       | N150   | 1,26          | 19.4  | 651      | 2136  | 1,46         | 22.5  | 741      | 2431  |
|        |       |                    |        |        |       | N540   | 1,34          | 20.7  | 682      | 2238  | 1,49         | 23.0  | 759      | 2490  |

F = Case full    <sup>1)</sup> 1 in 10" twist    <sup>2)</sup> 1 in 7" twist    <sup>3)</sup> Test barrel with a long throat to accept the C.O.L. of 65 mm (2,559")

| .223 WSSM |       |            |       |        |       | Test barrel: 640 mm (25"), 1 in 8" twist<br>Primers: Large Rifle<br>Cases: Winchester, trim-to length 42,20 mm (1.661 ") |               |       |          |       |              |       |          |       |
|-----------|-------|------------|-------|--------|-------|--|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Bullet    |       |            |       |        |       | Powder   | Starting load |       |          |       | Maximum load |       |          |       |
| Weight    |       | Type/Name  | Mfg   | 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    | HPCE       | Lapua | 54,6   | 2.150 | N135   | 2,10          | 32.4  | 1011     | 3317  | 2,61         | 40.3  | 1180     | 3871  |
|           |       |            |       |        |       | N530   | 2,22          | 34.3  | 1055     | 3461  | 2,59         | 40.0  | 1205     | 3953  |
|           |       |            |       |        |       | N140   | 2,49          | 38.4  | 1074     | 3524  | 2,83         | 43.7  | 1183     | 3881  |
| 3,6       | 55    | Soft Point | Lapua | 54,5   | 2.146 | N135   | 2,09          | 32.3  | 1001     | 3284  | 2,49         | 38.4  | 1119     | 3671  |
|           |       |            |       |        |       | N530   | 2,14          | 33.0  | 1009     | 3310  | 2,48         | 38.3  | 1147     | 3763  |
|           |       |            |       |        |       | N140   | 2,24          | 34.6  | 996      | 3268  | 2,68         | 41.4  | 1140     | 3740  |
| 4,5       | 69    | Scenar     | Lapua | 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  |



.22-250 Remington

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

| Bullet |       |                    |         |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|--------------------|---------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name          | Mfg     | 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    | Blitz King         | Sierra  | 56,9   | 2.240 | 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    | SP                 | Sierra  | 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  |
| 3,3    | 51    | HPCE               | Lapua   | 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    | FMJ                | Lapua   | 59,6   | 2.346 | N135   | 1,75          | 27.0  | 936      | 3071  | 1,98         | 30.6  | 1040     | 3412  |
|        |       |                    |         |        |       | N140   | 1,94          | 29.9  | 959      | 3146  | 2,17         | 33.5  | 1050     | 3445  |
|        |       |                    |         |        |       | N540   | 2,03          | 31.3  | 972      | 3189  | 2,29         | 35.3  | 1085     | 3560  |
|        |       |                    |         |        |       | N150   | 1,98          | 30.6  | 968      | 3176  | 2,25         | 34.7  | 1057     | 3468  |
| 3,6    | 55    | Soft Point         | Lapua   | 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    | HP                 | Hornady | 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    | TSX                | Barnes  | 59,7   | 2,350 | N140   | 1,67          | 25.8  | 831      | 2726  | 1,90         | 29.3  | 930      | 3051  |
|        |       |                    |         |        |       | N540   | 1,82          | 28.1  | 865      | 2838  | 2,09         | 32.3  | 974      | 3196  |
|        |       |                    |         |        |       | N150   | 1,72          | 26.5  | 843      | 2766  | 1,98         | 30.6  | 943      | 3094  |
|        |       |                    |         |        |       | N140   | 1,71          | 26.4  | 820      | 2690  | 1,98         | 30.6  | 914      | 2999  |
| 4,5    | 69    | HPBT <sup>1)</sup> | Lapua   | 59,6   | 2.346 | 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  |
|        |       |                    |         |        |       |        |               |       |          |       |              |       |          |       |

<sup>1)</sup> 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 |       | Type/Name | Mfg    | 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    | HPFB      | Euber  | 53,6   | 2.110 | N130   | 1,52          | 23.4  | 843      | 2766  | 1,68         | 25.9  | 928      | 3045  |
| 4,5    | 70    | HPBT      | Sierra | 53,6   | 2.110 | N133   | 1,63          | 25.2  | 840      | 2756  | 1,83C        | 28.2C | 951      | 3120  |
|        |       |           |        |        |       | N120   | 1,39          | 21.5  | 809      | 2654  | 1,55         | 23.9  | 901      | 2956  |
|        |       |           |        |        |       | N130   | 1,47          | 22.7  | 820      | 2690  | 1,69         | 26.1  | 934      | 3064  |
|        |       |           |        |        |       | N133   | 1,59          | 24.6  | 826      | 2710  | 1,79C        | 27.6C | 935      | 3068  |

C = Compressed load

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

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 |       | Type/Name            | Mfg    | 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    | HPBT                 | Sierra | 57,0   | 2.244 | N133   | 1,64          | 25.3  | 864      | 2834  | 1,86         | 28.7  | 957      | 3140  |
| 5,0    | 77    | HP                   | Lapua  | 57,0   | 2.244 | N135   | 1,88          | 29.0  | 901      | 2956  | 2,20         | 33.9  | 1009     | 3310  |
|        |       |                      |        |        |       | 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    | Silver Jacket HP     | Lapua  | 60,0   | 2.362 | N133   | 1,85          | 28.5  | 884      | 2900  | 2,01         | 31.0  | 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  |
|        |       |                      |        |        |       | N140   | 1,62          | 25.0  | 775      | 2543  | 1,88         | 29.0  | 877      | 2877  |
| 5,5    | 85    | TSX                  | Barnes | 58,5   | 2.303 | N540   | 1,72          | 26.5  | 803      | 2635  | 1,97         | 30.4  | 908      | 2979  |
|        |       |                      |        |        |       | N150   | 1,63          | 25.2  | 776      | 2546  | 1,90         | 29.3  | 874      | 2867  |
|        |       |                      |        |        |       | N140   | 1,75          | 27.0  | 790      | 2592  | 2,03         | 31.3  | 879      | 2884  |
|        |       |                      |        |        |       | N540   | 1,89          | 29.2  | 816      | 2677  | 2,11         | 32.6  | 915      | 3002  |
| 5,8    | 90    | Naturalis            | Lapua  | 54,7   | 2.154 | N150   | 1,81          | 27.9  | 795      | 2608  | 2,10         | 32.4  | 887      | 2910  |
|        |       |                      |        |        |       | N140   | 1,68          | 26.0  | 788      | 2584  | 1,93         | 29.8  | 871      | 2858  |
|        |       |                      |        |        |       | N540   | 1,69          | 26.1  | 757      | 2484  | 2,20         | 33.9  | 952      | 3123  |
|        |       |                      |        |        |       | N135   | 1,85          | 28.5  | 830      | 2723  | 2,04         | 31.5  | 906      | 2972  |
| 5,8    | 90    | Silver Jacket Scenar | Lapua  | 60,0   | 2.362 | N140   | 1,96          | 30.2  | 847      | 2779  | 2,12         | 32.7  | 922      | 3025  |
|        |       |                      |        |        |       | N540   | 2,02          | 31.2  | 854      | 2802  | 2,19         | 33.8  | 936      | 3071  |
|        |       |                      |        |        |       | 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  |
| 6,5    | 100   | Mega                 | Lapua  | 55,3   | 2.177 | N140   | 1,67          | 25.8  | 746      | 2447  | 1,87         | 28.9  | 821      | 2694  |
| 6,8    | 105   | Scenar               | Lapua  | 60,0   | 2.362 | N540   | 1,75          | 27.0  | 756      | 2480  | 1,97         | 30.4  | 846      | 2776  |
|        |       |                      |        |        |       | N140   | 1,83          | 28.2  | 763      | 2503  | 2,02         | 31.2  | 843      | 2766  |
|        |       |                      |        |        |       | N150   | 1,85          | 28.5  | 769      | 2523  | 2,05         | 31.6  | 841      | 2759  |
|        |       |                      |        |        |       | N540   | 1,88          | 29.0  | 777      | 2549  | 2,08         | 32.1  | 861      | 2825  |

= Accuracy load

.243 WSSM

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

| Bullet |       |           |       |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg   | 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    | HP        | Lapua | 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    | Naturalis | Lapua | 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   | SP        | Lapua | 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  |

## .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 |       | Type/Name            | Mfg     | C.O.L. |       | Type   | Weight        |       | Velocity |       | Weight       |       | Velocity |       |
| [g]    | [grs] |                      |         | [mm]   | [in.] |        | [g]           | [grs] | [m/s]    | [fps] | [g]          | [grs] | [m/s]    | [fps] |
| 3,7    | 58    | V-Max                | Hornady | 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  |
| 5,0    | 77    | HP                   | Lapua   | 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    | FMJ                  | Hornady | 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    | TSX                  | Barnes  | 67,0   | 2.638 | N150   | 2,15          | 33.2  | 828      | 2717  | 2,55         | 39.4  | 949      | 3114  |
|        |       |                      |         |        |       | N540   | 2,19          | 33.8  | 857      | 2812  | 2,56         | 39.5  | 981      | 3219  |
|        |       |                      |         |        |       | 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    | Partition            | Nosler  | 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  |
| 5,8    | 90    | Naturalis            | Lapua   | 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    | FMJ                  | Sierra  | 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    | Scenar               | Lapua   | 68,3   | 2.689 | N540   | 2,27          | 35.0  | 860      | 2822  | 2,54         | 39.2  | 962      | 3156  |
|        |       |                      |         |        |       | N150   | 2,08          | 32.1  | 817      | 2680  | 2,44         | 37.7  | 914      | 2999  |
|        |       |                      |         |        |       | N550   | 2,46          | 38.0  | 865      | 2838  | 2,68         | 41.4  | 967      | 3173  |
|        |       |                      |         |        |       | N160   | 2,52          | 38.9  | 847      | 2779  | 2,83         | 43.7  | 952      | 3123  |
| 6,5    | 100   | Grand Slam           | Speer   | 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   | Scenar <sup>1)</sup> | Lapua   | 68,3   | 2.689 | N150   | 1,95          | 30.1  | 729      | 2392  | 2,27         | 35.0  | 821      | 2694  |
|        |       |                      |         |        |       | N550   | 2,34          | 36.1  | 782      | 2566  | 2,59         | 40.0  | 890      | 2920  |
|        |       |                      |         |        |       | N160   | 2,43          | 37.5  | 766      | 2513  | 2,70         | 41.7  | 869      | 2851  |
|        |       |                      |         |        |       | N165   | 2,62          | 40.4  | 783      | 2569  | 3,00         | 46.3  | 894      | 2933  |

<sup>1)</sup> The test barrel rifle twist 1 in 8"

## 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 |       | Type/Name | Mfg     | 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    | V-Max     | Hornady | 70,4   | 2.772 | N140   | 2,47          | 38.1  | 1053     | 3455  | 2,80         | 43.2  | 1173     | 3848  |
|        |       |           |         |        |       | N540   | 2,68          | 41.4  | 1084     | 3556  | 3,01         | 46.5  | 1207     | 3960  |
|        |       |           |         |        |       | N150   | 2,50          | 38.6  | 1055     | 3461  | 2,91         | 44.9  | 1176     | 3858  |
| 5,5    | 85    | Partition | Nosler  | 70,4   | 2.772 | N140   | 1,97          | 30.4  | 858      | 2815  | 2,49         | 38.4  | 983      | 3225  |
|        |       |           |         |        |       | N150   | 2,11          | 32.6  | 868      | 2848  | 2,47         | 38.1  | 973      | 3192  |
|        |       |           |         |        |       | N540   | 2,25          | 34.7  | 899      | 2949  | 2,65         | 40.9  | 1012     | 3320  |
|        |       |           |         |        |       | N550   | 2,41          | 37.2  | 903      | 2963  | 2,85         | 44.0  | 1022     | 3353  |
| 5,0    | 77    | HP        | Lapua   | 70,4   | 2.772 | N140   | 2,38          | 36.7  | 933      | 3061  | 2,71         | 41.8  | 1046     | 3432  |
|        |       |           |         |        |       | N540   | 2,55          | 39.4  | 971      | 3186  | 2,84         | 43.8  | 1073     | 3520  |
|        |       |           |         |        |       | N150   | 2,50          | 38.6  | 950      | 3117  | 2,80         | 43.2  | 1051     | 3448  |
|        |       |           |         |        |       | N550   | 2,73          | 42.1  | 972      | 3189  | 3,01         | 46.5  | 1093     | 3586  |
| 5,8    | 90    | Scenar    | Lapua   | 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  |
| 5,8    | 90    | Naturalis | Lapua   | 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  |

## .240 Weatherby Magnum

Test barrel: 600 mm (25"), 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 |       | Type/Name | Mfg     | 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    | HP        | Hornady | 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    | HP        | Lapua   | 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    | Scenar    | Lapua   | 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   | Mega      | Lapua   | 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   | Spitzer   | Speer   | 77,8   | 3.063 | N160   | 2,83          | 43.6  | 852      | 2795  | 3,15         | 48.7  | 935      | 3068  |
|        |       |           |         |        |       | N560   | 3,23          | 49.8  | 887      | 2910  | 3,47         | 53.5  | 962      | 3157  |
|        |       |           |         |        |       | N165   | 3,33          | 51.3  | 895      | 2936  | 3,57         | 55.2  | 969      | 3180  |

**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

.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 |       | Type/Name | Mfg   | 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    | SPBT      | Speer | 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   | SPBT      | Speer | 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  |
|        |       |           |       |        |       | N560   | 3,16          | 48.8  | 900      | 2954  | 3,59         | 55.4  | 990      | 3248  |
|        |       |           |       |        |       | N165   | 3,44          | 53.0  | 922      | 3024  | 3,66         | 56.5  | 979      | 3212  |
|        |       |           |       |        |       | N170   | 3,55          | 54.7  | 885      | 2902  | 4,05         | 62.5  | 975      | 3199  |
|        |       |           |       |        |       | 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  |
|        |       |           |       |        |       | N560   | 2,81          | 43.3  | 798      | 2619  | 3,24         | 50.0  | 890      | 2920  |
|        |       |           |       |        |       | N165   | 2,69          | 41.5  | 777      | 2548  | 3,13         | 48.3  | 853      | 2799  |
|        |       |           |       |        |       | N170   | 3,17          | 48.9  | 802      | 2630  | 3,59         | 55.4  | 873      | 2864  |
|        |       |           |       |        |       | N160   | 2,75          | 42.4  | 791      | 2597  | 3,09         | 47.7  | 871      | 2858  |
|        |       |           |       |        |       | N560   | 2,95          | 45.6  | 818      | 2685  | 3,33         | 51.4  | 903      | 2963  |
|        |       |           |       |        |       | N165   | 3,03          | 46.8  | 817      | 2681  | 3,38         | 52.2  | 889      | 2917  |
|        |       |           |       |        |       | N170   | 3,35          | 51.7  | 817      | 2682  | 3,81         | 58.8  | 904      | 2966  |

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 |       | Type/Name | Mfg    | 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   | FMJ       | Lapua  | 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   | Scenar    | Lapua  | 57,1   | 2.248 | N130   | 1,40          | 21.6  | 674      | 2211  | 1,76         | 27.2  | 840      | 2756  |
|        |       |           |        |        |       | N530   | 1,60          | 24.7  | 729      | 2392  | 1,90         | 29.3  | 858      | 2815  |
|        |       |           |        |        |       | N133   | 1,57          | 24.2  | 728      | 2388  | 1,90         | 29.3  | 854      | 2802  |
| 7,0    | 108   | Scenar    | Lapua  | 57,1   | 2.248 | N130   | 1,40          | 21.6  | 671      | 2201  | 1,69         | 26.1  | 791      | 2595  |
|        |       |           |        |        |       | N530   | 1,44          | 22.2  | 690      | 2264  | 1,73         | 26.7  | 821      | 2694  |
|        |       |           |        |        |       | N133   | 1,51          | 23.3  | 689      | 2260  | 1,80         | 27.8  | 804      | 2638  |
| 7,8    | 120   | TSX       | Barnes | 53,0   | 2,087 | N530   | 1,34          | 20.7  | 592      | 1942  | 1,62         | 25.0  | 707      | 2320  |
|        |       |           |        |        |       | N133   | 1,17          | 18.1  | 578      | 1896  | 1,58         | 24.4  | 678      | 2224  |
|        |       |           |        |        |       | N540   | 1,58          | 24.4  | 631      | 2070  | 1,88         | 29.0  | 751      | 2464  |
| 8,0    | 123   | Scenar    | Lapua  | 57,1   | 2.248 | N530   | 1,47          | 22.7  | 635      | 2083  | 1,73         | 26.7  | 763      | 2503  |
|        |       |           |        |        |       | N133   | 1,36          | 21.0  | 609      | 1998  | 1,73         | 26.7  | 745      | 2444  |
|        |       |           |        |        |       | N135   | 1,29          | 19.9  | 593      | 1946  | 1,75         | 27.0  | 741      | 2431  |
| 8,8    | 136   | Scenar L  | Lapua  | 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  |
| 9,0    | 139   | Scenar    | Lapua  | 57,1   | 2.248 | N540   | 1,67          | 25.8  | 661      | 2169  | 1,83         | 28.2  | 741      | 2431  |
|        |       |           |        |        |       | 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  |
| 9,1    | 140   | Naturalis | Lapua  | 57,5   | 2.264 | 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  |
|        |       |           |        |        |       | 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  |

LIGHT GREY TEXT BOX INDICATES MAXIMUM LOAD - USE WITH CAUTION!  
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6,5 mm Grendel (cont.)

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 |       | Type/Name | Mfg   | C.O.L. |       | Type   | Weight        |       | Velocity |       | Weight       |       | Velocity |       |
| [g]    | [grs] |           |       | [mm]   | [in.] |        | [g]           | [grs] | [m/s]    | [fps] | [g]          | [grs] | [m/s]    | [fps] |
| 9,3    | 144   | FMJBT     | Lapua | 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   | Mega      | Lapua | 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 |       | Type/Name           | Mfg    | 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   | FMJ                 | Lapua  | 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   | Scenar              | Lapua  | 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  |
| 7,0    | 108   | Scenar              | Lapua  | 69,5   | 2.736 | N150   | 2,17          | 33.5  | 831      | 2726  | 2,53         | 39.0  | 954      | 3130  |
|        |       |                     |        |        |       | N133   | 1,96          | 30.2  | 807      | 2648  | 2,20         | 33.9  | 882      | 2894  |
|        |       |                     |        |        |       | 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  |
| 7,8    | 120   | Scenar <sup>L</sup> | Lapua  | 69,5   | 2.736 | 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  |
|        |       |                     |        |        |       | N140   | 1,80          | 27.8  | 731      | 2398  | 2,35         | 36.3  | 853      | 2799  |
| 7,8    | 120   | TSX                 | Barnes | 64,5   | 2.539 | 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  |
|        |       |                     |        |        |       | N150   | 1,99          | 30.7  | 690      | 2264  | 2,43         | 37.5  | 830      | 2723  |
| 8,0    | 123   | Scenar              | Lapua  | 69,5   | 2.736 | N540   | 2,20          | 34.0  | 748      | 2454  | 2,48         | 38.3  | 846      | 2776  |
|        |       |                     |        |        |       | N550   | 2,35          | 36.3  | 750      | 2461  | 2,70         | 41.7  | 872      | 2861  |
|        |       |                     |        |        |       | 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  |
| 8,1    | 125   | Partition           | Nosler | 65,0   | 2.559 | 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  |
|        |       |                     |        |        |       | N140   | 1,95          | 30.1  | 715      | 2346  | 2,35         | 36.3  | 820      | 2690  |
|        |       |                     |        |        |       | N150   | 2,01          | 31.0  | 727      | 2385  | 2,40         | 37.0  | 829      | 2720  |
| 8,4    | 130   | TSX                 | Barnes | 64,5   | 2.539 | N540   | 2,18          | 33.6  | 760      | 2493  | 2,44         | 37.7  | 858      | 2815  |
|        |       |                     |        |        |       | N150   | 1,81          | 27.9  | 597      | 1959  | 2,31         | 35.6  | 765      | 2510  |
|        |       |                     |        |        |       | N540   | 2,08          | 32.1  | 691      | 2267  | 2,42         | 37.3  | 819      | 2687  |
|        |       |                     |        |        |       | N550   | 2,23          | 34.4  | 694      | 2277  | 2,60         | 40.1  | 821      | 2694  |
| 8,8    | 136   | Scenar <sup>L</sup> | Lapua  | 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  |



| 6,5 x 47 Lapua |  |  |  |  |  | (cont.)  |  |  |  |  |  |  |  |  |  |
|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                |  |  |  |  |  | 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 |       | Type/Name | Mfg   | C.O.L. |       | Type   | Weight |               | Velocity |       | Weight |              | Velocity |       |  |
| [g]    | [grs] |           |       | [mm]   | [in.] |        | [g]    | [grs]         | [m/s]    | [fps] | [g]    | [grs]        | [m/s]    | [fps] |  |
| 9,0    | 139   | Scenar    | Lapua | 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   | Naturalis | Lapua | 66,0   | 2.598 | N140   | 1,95   | 30.1          | 660      | 2165  | 2,30   | 35.5         | 772      | 2533  |  |
|        |       |           |       |        |       | N150   | 2,00   | 30.9          | 663      | 2175  | 2,32   | 35.8         | 769      | 2523  |  |
|        |       |           |       |        |       | N540   | 2,10   | 32.4          | 697      | 2287  | 2,35   | 36.3         | 789      | 2589  |  |
|        |       |           |       |        |       | N550   | 2,25   | 34.7          | 698      | 2290  | 2,51   | 38.7         | 793      | 2602  |  |
| 10,1   | 156   | Mega      | Lapua | 63,2   | 2.488 | N150   | 1,78   | 27.5          | 598      | 1962  | 2,12   | 32.7         | 710      | 2329  |  |
|        |       |           |       |        |       | N540   | 2,01   | 31.0          | 650      | 2133  | 2,26   | 34.9         | 753      | 2470  |  |
|        |       |           |       |        |       | N550   | 2,12   | 32.7          | 696      | 2283  | 2,43   | 37.5         | 769      | 2523  |  |

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

| Bullet |       |                      |        |        |       | Powder |        | Starting load |          |       |        | Maximum load |          |       |  |
|--------|-------|----------------------|--------|--------|-------|--------|--------|---------------|----------|-------|--------|--------------|----------|-------|--|
| Weight |       | Type/Name            | Mfg    | 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    | HP                   | Sierra | 71,1   | 2.799 | N150   | 2,88   | 44.5          | 937      | 3073  | 3,03   | 46.8         | 1013     | 3323  |  |
| 6,5    | 100   | HP                   | Sierra | 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  |  |
| 6,5    | 100   | FMJ                  | Lapua  | 70,0   | 2.756 | N530   | 2,34   | 36.1          | 880      | 2887  | 2,53   | 39.0         | 938      | 3077  |  |
|        |       |                      |        |        |       | N135   | 2,21   | 34.1          | 802      | 2631  | 2,55   | 39.3         | 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      | 2690  |  |
| 6,5    | 100   | Scenar               | Lapua  | 75,0   | 2.953 | N160   | 3,08   | 47.5          | 862      | 2828  | 3,39   | 52.3         | 946      | 3104  |  |
|        |       |                      |        |        |       | 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  |  |
|        |       |                      |        |        |       | N150   | 2,37   | 36.6          | 793      | 2602  | 2,69   | 41.5         | 870      | 2853  |  |
|        |       |                      |        |        |       | N550   | 2,58   | 39.8          | 790      | 2592  | 2,97   | 45.8         | 938      | 3077  |  |
| 7,0    | 108   | Scenar               | Lapua  | 78,0   | 3.071 | N160   | 2,78   | 42.9          | 790      | 2592  | 3,01   | 46.4         | 928      | 3045  |  |
|        |       |                      |        |        |       | 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  |  |
|        |       |                      |        |        |       | N160   | 2,80   | 43.2          | 820      | 2690  | 3,05   | 47.1         | 920      | 3018  |  |
| 7,0    | 108   | Silver Jacket Scenar | Lapua  | 80,0   | 3.150 | N560   | 3,19   | 49.2          | 867      | 2843  | 3,35   | 51.7         | 950      | 3117  |  |
|        |       |                      |        |        |       | N165   | 3,16   | 48.8          | 860      | 2822  | 3,28F  | 50.7F        | 902      | 2959  |  |
|        |       |                      |        |        |       | N140   | 2,42   | 37.3          | 825      | 2707  | 2,68   | 41.3         | 893      | 2931  |  |
|        |       |                      |        |        |       | N540   | 2,52   | 38.9          | 827      | 2713  | 2,74   | 42.2         | 902      | 2958  |  |
|        |       |                      |        |        |       | N150   | 2,49   | 38.4          | 819      | 2687  | 2,70   | 41.7         | 889      | 2917  |  |
|        |       |                      |        |        |       | N550   | 2,85   | 44.0          | 891      | 2923  | 3,00   | 46.3         | 955      | 3133  |  |
|        |       |                      |        |        |       | N160   | 2,97   | 45.8          | 881      | 2890  | 3,19   | 49.2         | 945      | 3100  |  |
| 7,8    | 120   | HPBT                 | Sierra | 76,8   | 3.024 | N560   | 3,19   | 49.2          | 887      | 2910  | 3,38   | 52.2         | 956      | 3136  |  |
|        |       |                      |        |        |       | 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  |  |
| 7,8    | 120   | Scenar <sup>L</sup>  | Lapua  | 77,0   | 3.031 | N560   | 3,12   | 48.1          | 823      | 2700  | 3,41   | 52.7         | 932      | 3056  |  |
|        |       |                      |        |        |       | N135   | 2,08   | 32.1          | 763      | 2503  | 2,31   | 35.6         | 820      | 2690  |  |

F = Case full

| 6,5 x 55 Swedish Mauser |  |  |  |  |  | Test barrel: 630 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 |       | Type/Name            | Mfg    | 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    | HP                   | Sierra | 71,1   | 2.799 | N150   | 2,88   | 44.5          | 937      | 3073  | 3,03   | 46.8         | 1013     | 3323  |  |
| 6,5    | 100   | HP                   | Sierra | 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  |  |
| 6,5    | 100   | FMJ                  | Lapua  | 70,0   | 2.756 | N530   | 2,34   | 36.1          | 880      | 2887  | 2,53   | 39.0         | 938      | 3077  |  |
|        |       |                      |        |        |       | N135   | 2,21   | 34.1          | 802      | 2631  | 2,55   | 39.3         | 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      | 2690  |  |
| 6,5    | 100   | Scenar               | Lapua  | 75,0   | 2.953 | N160   | 3,08   | 47.5          | 862      | 2828  | 3,39   | 52.3         | 946      | 3104  |  |
|        |       |                      |        |        |       | 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  |  |
|        |       |                      |        |        |       | N150   | 2,37   | 36.6          | 793      | 2602  | 2,69   | 41.5         | 870      | 2853  |  |
|        |       |                      |        |        |       | N550   | 2,58   | 39.8          | 790      | 2592  | 2,97   | 45.8         | 938      | 3077  |  |
| 7,0    | 108   | Scenar               | Lapua  | 78,0   | 3.071 | N160   | 2,78   | 42.9          | 790      | 2592  | 3,01   | 46.4         | 928      | 3045  |  |
|        |       |                      |        |        |       | 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  |  |
|        |       |                      |        |        |       | N160   | 2,80   | 43.2          | 820      | 2690  | 3,05   | 47.1         | 920      | 3018  |  |
| 7,0    | 108   | Silver Jacket Scenar | Lapua  | 80,0   | 3.150 | N560   | 3,19   | 49.2          | 867      | 2843  | 3,35   | 51.7         | 950      | 3117  |  |
|        |       |                      |        |        |       | N165   | 3,16   | 48.8          | 860      | 2822  | 3,28F  | 50.7F        | 902      | 2959  |  |
|        |       |                      |        |        |       | N140   | 2,42   | 37.3          | 825      | 2707  | 2,68   | 41.3         | 893      | 2931  |  |
|        |       |                      |        |        |       | N540   | 2,52   | 38.9          | 827      | 2713  | 2,74   | 42.2         | 902      | 2958  |  |
|        |       |                      |        |        |       | N150   | 2,49   | 38.4          | 819      | 2687  | 2,70   | 41.7         | 889      | 2917  |  |
|        |       |                      |        |        |       | N550   | 2,85   | 44.0          | 891      | 2923  | 3,00   | 46.3         | 955      | 3133  |  |
|        |       |                      |        |        |       | N160   | 2,97   | 45.8          | 881      | 2890  | 3,19   | 49.2         | 945      | 3100  |  |
| 7,8    | 120   | HPBT                 | Sierra | 76,8   | 3.024 | N560   | 3,19   | 49.2          | 887      | 2910  | 3,38   | 52.2         | 956      | 3136  |  |
|        |       |                      |        |        |       | 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  |  |
| 7,8    | 120   | Scenar <sup>L</sup>  | Lapua  | 77,0   | 3.031 | N560   | 3,12   | 48.1          | 823      | 2700  | 3,41   | 52.7         | 932      | 3056  |  |
|        |       |                      |        |        |       | N135   | 2,08   | 32.1          | 763      | 2503  | 2,31   | 35.6         | 820      | 2690  |  |

= Accuracy load

C = Compressed load

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

LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

(cont.)

6,5 x 55 Swedish Mauser

Test barrel: 630 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 |       | Type/Name            | Mfg    | 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   | Scenar <sup>L</sup>  | Lapua  | 77,0       | 3.031  | N140          | 2,18  | 33.6     | 786   | 2579         | 2,42  | 37.3     | 822   | 2697 |
|        |       |                      |        |            |        | N150          | 2,31  | 35.6     | 800   | 2625         | 2,52  | 38.9     | 855   | 2805 |
|        |       |                      |        |            |        | N160          | 2,84  | 43.8     | 842   | 2762         | 2,96  | 45.7     | 880   | 2887 |
|        |       |                      |        |            |        | N560          | 3,03  | 46.8     | 847   | 2779         | 3,23  | 49.8     | 907   | 2976 |
| 8,0    | 123   | Scenar               | Lapua  | 80,0       | 3.150  | N530          | 2,17  | 33.5     | 792   | 2598         | 2,35  | 36.3     | 848   | 2782 |
|        |       |                      |        |            |        | N140          | 2,20  | 34.0     | 745   | 2444         | 2,40  | 37.0     | 810   | 2657 |
|        |       |                      |        |            |        | N540          | 2,44  | 37.7     | 749   | 2456         | 2,68  | 41.4     | 827   | 2715 |
|        |       |                      |        |            |        | N150          | 2,24  | 34.6     | 740   | 2428         | 2,47  | 38.1     | 815   | 2674 |
|        |       |                      |        |            |        | N550          | 2,67  | 41.2     | 837   | 2746         | 2,88  | 44.4     | 901   | 2956 |
|        |       |                      |        |            |        | N160          | 2,69  | 41.5     | 807   | 2648         | 2,92  | 45.1     | 869   | 2851 |
|        |       |                      |        |            |        | N560          | 3,03  | 46.8     | 841   | 2759         | 3,19  | 49.2     | 898   | 2946 |
|        |       |                      |        |            |        | N140          | 2,35  | 36.3     | 787   | 2582         | 2,56  | 39.5     | 842   | 2762 |
| 8,0    | 123   | Silver Jacket Scenar | Lapua  | 80,0       | 3.150  | N540          | 2,56  | 39.5     | 825   | 2707         | 2,74  | 42.3     | 883   | 2897 |
|        |       |                      |        |            |        | N150          | 2,40  | 37.0     | 780   | 2559         | 2,62  | 40.4     | 834   | 2738 |
|        |       |                      |        |            |        | N550          | 2,41  | 37.2     | 768   | 2520         | 2,73  | 42.1     | 857   | 2811 |
|        |       |                      |        |            |        | N160          | 2,75  | 42.4     | 792   | 2598         | 2,88  | 44.5     | 831   | 2726 |
| 8,4    | 130   | TSX                  | Barnes | 71,2       | 2,803  | N560          | 3,09  | 47.7     | 845   | 2772         | 3,22  | 49.7     | 901   | 2956 |
|        |       |                      |        |            |        | N160          | 2,72  | 42.0     | 815   | 2674         | 2,99  | 46.1     | 886   | 2907 |
|        |       |                      |        |            |        | N560          | 3,06  | 47.2     | 838   | 2749         | 3,25  | 50.2     | 902   | 2959 |
|        |       |                      |        |            |        | N165          | 3,24  | 50.0     | 862   | 2828         | 3,40  | 52.5     | 909   | 2982 |
| 8,4    | 130   | HPBT                 | Norma  | 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 |
|        |       |                      |        |            |        | 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 |
| 8,8    | 136   | Scenar <sup>L</sup>  | Lapua  | 80,0       | 3.50   | N550          | 2,57  | 39.7     | 800   | 2625         | 2,73  | 42.1     | 841   | 2759 |
|        |       |                      |        |            |        | N160          | 2,73  | 42.1     | 778   | 2552         | 2,93  | 45.2     | 840   | 2756 |
|        |       |                      |        |            |        | N560          | 2,90  | 44.8     | 802   | 2631         | 3,07  | 47.4     | 857   | 2812 |
|        |       |                      |        |            |        | N165          | 3,02  | 46.6     | 813   | 2667         | 3,20  | 49.4     | 861   | 2825 |
|        |       |                      |        |            |        | N150          | 2,28  | 35.2     | 704   | 2310         | 2,55  | 39.4     | 779   | 2555 |
|        |       |                      |        |            |        | N550          | 2,50  | 38.6     | 743   | 2438         | 2,71  | 41.8     | 813   | 2667 |
|        |       |                      |        |            |        | N160          | 2,73  | 42.1     | 738   | 2421         | 2,98  | 46.0     | 810   | 2656 |
|        |       |                      |        |            |        | N560          | 2,88  | 44.4     | 753   | 2470         | 3,20  | 49.4     | 846   | 2777 |
| 9,0    | 139   | Scenar               | Lapua  | 80,0       | 3.150  | N165          | 3,00  | 46.3     | 765   | 2510         | 3,23  | 49.9     | 833   | 2732 |
|        |       |                      |        |            |        | 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 |
|        |       |                      |        |            |        | N160          | 2,40  | 37.0     | 732   | 2402         | 2,67  | 41.2     | 790   | 2592 |
|        |       |                      |        |            |        | N560          | 2,73  | 42.1     | 736   | 2415         | 3,06  | 47.2     | 826   | 2710 |
|        |       |                      |        |            |        | N165          | 2,86  | 44.1     | 766   | 2513         | 3,10  | 47.8     | 833   | 2733 |
|        |       |                      |        |            |        | N150          | 2,25  | 34.7     | 729   | 2392         | 2,48  | 38.3     | 785   | 2575 |
| 9,0    | 139   | Silver Jacket Scenar | Lapua  | 80,0       | 3.150  | N550          | 2,37  | 36.6     | 712   | 2336         | 2,61  | 40.3     | 799   | 2622 |
|        |       |                      |        |            |        | N160          | 2,54  | 39.2     | 748   | 2454         | 2,80  | 43.3     | 795   | 2610 |
|        |       |                      |        |            |        | N560          | 2,73  | 42.1     | 736   | 2415         | 3,06  | 47.3     | 826   | 2711 |
|        |       |                      |        |            |        | N165          | 2,94  | 45.4     | 788   | 2585         | 3,12  | 48.1     | 841   | 2759 |
|        |       |                      |        |            |        | N150          | 2,08  | 32.1     | 671   | 2201         | 2,36  | 36.4     | 744   | 2441 |
|        |       |                      |        |            |        | N550          | 2,51  | 38.7     | 765   | 2510         | 2,68  | 41.4     | 815   | 2674 |
|        |       |                      |        |            |        | N160          | 2,48  | 38.3     | 719   | 2359         | 2,79  | 43.1     | 791   | 2595 |
|        |       |                      |        |            |        | N560          | 2,76  | 42.6     | 736   | 2415         | 3,12  | 48.1     | 821   | 2694 |
| 9,1    | 140   | Naturalis            | Lapua  | 76,5       | 3.012  | N165          | 2,85  | 44.0     | 771   | 2530         | 3,09  | 47.7     | 831   | 2726 |

= Accuracy load

(cont.)

6,5 x 55 Swedish Mauser

Test barrel: 630 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 |       | Type/Name | Mfg    | 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   | HPBT      | Sierra | 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 |
|        |       |           |        |            |        | N560          | 2,93  | 45.2     | 779   | 2556         | 3,13  | 48.3     | 844   | 2770 |
| 9,3    | 144   | FMJBT     | Lapua  | 79,0       | 3.110  | N165          | 3,00  | 46.3     | 766   | 2513         | 3,24  | 50.0     | 834   | 2735 |
|        |       |           |        |            |        | 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 |
|        |       |           |        |            |        | N560          | 2,91  | 44.8     | 756   | 2479         | 3,15  | 48.6     | 850   | 2789 |
|        |       |           |        |            |        | N165          | 2,70  | 41.7     | 720   | 2362         | 3,18  | 49.1     | 837   | 2746 |
|        |       |           |        |            |        | 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 |
|        |       |           |        |            |        | N150          | 2,10  | 32.4     | 653   | 2142         | 2,33  | 36.0     | 711   | 2331 |
| 10,0   | 155   | HPBT      | Sierra | 79,0       | 3.110  | 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 |
|        |       |           |        |            |        | N560          | 2,66  | 41.0     | 702   | 2303         | 2,93  | 45.2     | 779   | 2556 |
|        |       |           |        |            |        | N165          | 2,75  | 42.4     | 690   | 2264         | 3,08  | 47.6     | 769   | 2522 |
|        |       |           |        |            |        | N170          | 2,90  | 44.7     | 677   | 2221         | 3,32C | 51.2C    | 779   | 2555 |
|        |       |           |        |            |        | 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 |
| 10,1   | 156   | Mega      | Lapua  | 73,0       | 2.874  | N570          | 3,02  | 46.6     | 730   | 2395         | 3,20F | 49.4F    | 774   | 2539 |

F = Case full C = Compressed load

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

Test barrel: Sauer STR 200

Primers: Large Rifle

Cases: LAPUA, trim-to length 54,8 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 the Krag-Jørgensen, 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

| Bullet |       |              |       |            | Powder | Starting load        |      |          |       | Maximum load |                      |          |       |       |       |
|--------|-------|--------------|-------|------------|--------|----------------------|------|----------|-------|--------------|----------------------|----------|-------|-------|-------|
| Weight |       | Type/Name    | Mfg   | C.O.L.     | Type   | Weight               |      | Velocity |       | Weight       |                      | Velocity |       |       |       |
| [g]    | [grs] |              |       | [mm] [in.] |        | Barrel length 670 mm | [g]  | [grs]    | [m/s] | [fps]        | Barrel length 670 mm | [g]      | [grs] | [m/s] | [fps] |
| 6,5    | 100   | Scenar GB504 | Lapua | 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  |       |

Bullet

7,0 g / 108 gr

LAPUA GB464 Scenar

C.O.L. 80 mm / 3.150 inch

| Powder | Starting load |       |                              |       |       |      |        |       | Maximum load                 |       |       |      |       |       |     |       |       |     |       |       |
|--------|---------------|-------|------------------------------|-------|-------|------|--------|-------|------------------------------|-------|-------|------|-------|-------|-----|-------|-------|-----|-------|-------|
| Type   | Weight        |       | Velocity, barrel length [mm] |       |       |      | Weight |       | Velocity, barrel length [mm] |       |       |      |       |       |     |       |       |     |       |       |
|        | [g]           | [grs] | 670                          | [m/s] | [fps] | 700  | [m/s]  | [fps] | 740                          | [m/s] | [fps] | 670  | [m/s] | [fps] | 700 | [m/s] | [fps] | 740 | [m/s] | [fps] |
| N140   | 2,32          | 35.8  | 796                          | 2610  | 804   | 2639 | 816    | 2677  | 2,70                         | 41.7  | 890   | 2921 | 900   | 2953  | 913 | 2995  |       |     |       |       |
| N540   | 2,66          | 41.1  | 842                          | 2762  | 852   | 2795 | 865    | 2838  | 2,95                         | 45.5  | 942   | 3091 | 953   | 3128  | 968 | 3176  |       |     |       |       |
| N150   | 2,39          | 36.9  | 800                          | 2624  | 809   | 2654 | 821    | 2694  | 2,78                         | 42.9  | 898   | 2947 | 908   | 2980  | 922 | 3025  |       |     |       |       |
| N550   | 2,80          | 43.2  | 849                          | 2785  | 858   | 2815 | 870    | 2854  | 3,04                         | 46.9  | 996   | 3268 | 948   | 3109  | 961 | 3153  |       |     |       |       |
| N160   | 2,81          | 43.4  | 837                          | 2745  | 844   | 2769 | 854    | 2802  | 3,16                         | 48.8  | 929   | 3047 | 937   | 3074  | 948 | 3110  |       |     |       |       |
| N560   | 3,14          | 48.5  | 831                          | 2726  | 839   | 2753 | 850    | 2789  | 3,50                         | 54.0  | 949   | 3114 | 959   | 3146  | 972 | 3189  |       |     |       |       |

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

LOADS LESS THAN MINIMUM CHARGES SHOWN ARE NOT RECOMMENDED

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(cont.)  
**6,5 x 55 SE / 6,5 x 55 SKAN**

Test barrel: Sauer STR 200  
Primers: Large Rifle  
Cases: LAPUA, trim-to length 54,8 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 the Krag-Jørgensen, 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

|               |                      |       |                              |       |                                 |       |       |       |                          |       |                              |       |       |       |       |       |
|---------------|----------------------|-------|------------------------------|-------|---------------------------------|-------|-------|-------|--------------------------|-------|------------------------------|-------|-------|-------|-------|-------|
| <b>Bullet</b> | 7,8 g / 120 gr       |       |                              |       | LAPUA GB547 Scenar <sup>L</sup> |       |       |       | C.O.L 77 mm / 3.031 inch |       |                              |       |       |       |       |       |
| <b>Powder</b> | <b>Starting load</b> |       |                              |       |                                 |       |       |       | <b>Maximum load</b>      |       |                              |       |       |       |       |       |
| Type          | Weight               |       | Velocity, barrel length [mm] |       |                                 |       |       |       | Weight                   |       | Velocity, barrel length [mm] |       |       |       |       |       |
|               |                      |       | 670                          |       | 700                             |       | 740   |       |                          |       | 670                          |       | 700   |       | 740   |       |
|               | [g]                  | [grs] | [m/s]                        | [fps] | [m/s]                           | [fps] | [m/s] | [fps] | [g]                      | [grs] | [m/s]                        | [fps] | [m/s] | [fps] | [m/s] | [fps] |
| N135          | 2,08                 | 32.1  | 739                          | 2425  | 744                             | 2441  | 752   | 2467  | 2,43                     | 37.5  | 829                          | 2720  | 834   | 2736  | 842   | 2762  |
| N140          | 2,18                 | 33.6  | 761                          | 2497  | 767                             | 2516  | 774   | 2539  | 2,59                     | 40.0  | 844                          | 2769  | 849   | 2785  | 856   | 2808  |
| N540          | 2,32                 | 35.8  | 800                          | 2625  | 801                             | 2628  | 807   | 2648  | 2,81                     | 43.4  | 890                          | 2920  | 898   | 2946  | 907   | 2976  |
| N150          | 2,31                 | 35.6  | 751                          | 2464  | 754                             | 2474  | 761   | 2497  | 2,65                     | 40.9  | 841                          | 2759  | 848   | 2782  | 856   | 2808  |
| N550          | 2,62                 | 40.4  | 816                          | 2677  | 820                             | 2690  | 827   | 2713  | 2,95                     | 45.5  | 894                          | 2933  | 904   | 2966  | 917   | 3009  |
| N160          | 2,84                 | 43.8  | 772                          | 2533  | 784                             | 2572  | 791   | 2595  | 3,07                     | 47.4  | 857                          | 2812  | 874   | 2867  | 899   | 2949  |
| N560          | 3,03                 | 46.8  | 810                          | 2657  | 820                             | 2690  | 828   | 2717  | 3,32                     | 51.2  | 901                          | 2956  | 916   | 3005  | 932   | 3058  |

| Bullet | 8,0 g / 123 gr |       |                              |       | LAPUA GB489 Scenar |       |       |       | C.O.L 80 mm / 3.150 inch |       |                              |       |       |       |       |       |
|--------|----------------|-------|------------------------------|-------|--------------------|-------|-------|-------|--------------------------|-------|------------------------------|-------|-------|-------|-------|-------|
| Powder | Starting load  |       |                              |       |                    |       |       |       | Maximum load             |       |                              |       |       |       |       |       |
| Type   | Weight         |       | Velocity, barrel length [mm] |       |                    |       |       |       | Weight                   |       | Velocity, barrel length [mm] |       |       |       |       |       |
|        |                |       | 670                          |       | 700                |       | 740   |       |                          |       | 670                          |       | 700   |       | 740   |       |
|        | [g]            | [grs] | [m/s]                        | [fps] | [m/s]              | [fps] | [m/s] | [fps] | [g]                      | [grs] | [m/s]                        | [fps] | [m/s] | [fps] | [m/s] | [fps] |
| N140   | 2,20           | 34.0  | 750                          | 2462  | 755                | 2477  | 761   | 2497  | 2,55                     | 39.4  | 833                          | 2734  | 838   | 2750  | 845   | 2772  |
| N540   | 2,47           | 38.1  | 788                          | 2586  | 795                | 2607  | 803   | 2635  | 2,79                     | 43.1  | 881                          | 2892  | 889   | 2915  | 898   | 2946  |
| N150   | 2,24           | 34.6  | 741                          | 2432  | 748                | 2454  | 757   | 2484  | 2,60                     | 40.1  | 830                          | 2724  | 838   | 2749  | 848   | 2782  |
| N550   | 2,67           | 41.2  | 805                          | 2641  | 816                | 2676  | 830   | 2723  | 2,94                     | 45.4  | 883                          | 2895  | 894   | 2934  | 910   | 2986  |
| N160   | 2,71           | 41.8  | 763                          | 2502  | 779                | 2557  | 802   | 2631  | 3,02                     | 46.6  | 845                          | 2773  | 864   | 2835  | 889   | 2917  |
| N560   | 3,04           | 46.9  | 801                          | 2628  | 814                | 2669  | 830   | 2723  | 3,27                     | 50.5  | 888                          | 2913  | 902   | 2958  | 920   | 3018  |

|               |                      |       |                              |       |                                 |       |       |       |                          |       |                              |       |       |       |       |       |
|---------------|----------------------|-------|------------------------------|-------|---------------------------------|-------|-------|-------|--------------------------|-------|------------------------------|-------|-------|-------|-------|-------|
| <b>Bullet</b> | 8,8 g / 136 gr       |       |                              |       | LAPUA GB546 Scenar <sup>L</sup> |       |       |       | C.O.L 80 mm / 3.150 inch |       |                              |       |       |       |       |       |
| <b>Powder</b> | <b>Starting load</b> |       |                              |       |                                 |       |       |       | <b>Maximum load</b>      |       |                              |       |       |       |       |       |
| Type          | Weight               |       | Velocity, barrel length [mm] |       |                                 |       |       |       | Weight                   |       | Velocity, barrel length [mm] |       |       |       |       |       |
|               |                      |       | 670                          |       | 700                             |       | 740   |       |                          |       | 670                          |       | 700   |       | 740   |       |
|               | [g]                  | [grs] | [m/s]                        | [fps] | [m/s]                           | [fps] | [m/s] | [fps] | [g]                      | [grs] | [m/s]                        | [fps] | [m/s] | [fps] | [m/s] | [fps] |
| N540          | 2,39                 | 36.9  | 736                          | 2415  | 742                             | 2434  | 749   | 2457  | 2,72                     | 42,0  | 841                          | 2759  | 846   | 2776  | 852   | 2795  |
| N150          | 2,29                 | 35.3  | 711                          | 2333  | 718                             | 2356  | 726   | 2382  | 2,58                     | 39,8  | 821                          | 2694  | 824   | 2703  | 830   | 2723  |
| N550          | 2,57                 | 39.7  | 757                          | 2484  | 763                             | 2503  | 769   | 2523  | 2,80                     | 43,2  | 856                          | 2808  | 862   | 2828  | 870   | 2854  |
| N160          | 2,73                 | 42.1  | 741                          | 2431  | 748                             | 2454  | 755   | 2477  | 3,05                     | 47,1  | 852                          | 2795  | 857   | 2812  | 865   | 2838  |
| N560          | 2,9                  | 44.8  | 786                          | 2579  | 794                             | 2605  | 801   | 2628  | 3,20                     | 49,4  | 884                          | 2900  | 892   | 2927  | 901   | 2956  |
| N165          | 3,02                 | 46.6  | 779                          | 2556  | 787                             | 2582  | 795   | 2608  | 3,30C                    | 50,9C | 868                          | 2848  | 876   | 2874  | 885   | 2904  |

|        |                |       |                              |       |                    |       |       |       |                          |       |                              |       |       |       |       |       |
|--------|----------------|-------|------------------------------|-------|--------------------|-------|-------|-------|--------------------------|-------|------------------------------|-------|-------|-------|-------|-------|
| Bullet | 9,0 g / 139 gr |       |                              |       | LAPUA GB458 Scenar |       |       |       | C.O.L 80 mm / 3.150 inch |       |                              |       |       |       |       |       |
| Powder | Starting load  |       |                              |       |                    |       |       |       | Maximum load             |       |                              |       |       |       |       |       |
| Type   | Weight         |       | Velocity, barrel length [mm] |       |                    |       |       |       | Weight                   |       | Velocity, barrel length [mm] |       |       |       |       |       |
|        |                |       | 670                          |       | 700                |       | 740   |       |                          |       | 670                          |       | 700   |       | 740   |       |
|        | [g]            | [grs] | [m/s]                        | [fps] | [m/s]              | [fps] | [m/s] | [fps] | [g]                      | [grs] | [m/s]                        | [fps] | [m/s] | [fps] | [m/s] | [fps] |
| N150   | 2,12           | 32.7  | 696                          | 2284  | 699                | 2295  | 704   | 2310  | 2,40                     | 37.0  | 781                          | 2563  | 785   | 2575  | 790   | 2592  |
| N550   | 2,37           | 36.6  | 738                          | 2421  | 743                | 2438  | 750   | 2461  | 2,72                     | 42.0  | 825                          | 2705  | 830   | 2724  | 838   | 2749  |
| N160   | 2,41           | 37.2  | 723                          | 2373  | 730                | 2395  | 735   | 2411  | 2,84                     | 43.8  | 817                          | 2679  | 824   | 2704  | 830   | 2723  |
| N560   | 2,87           | 44.3  | 771                          | 2529  | 776                | 2546  | 783   | 2569  | 3,18                     | 49.1  | 866                          | 2842  | 872   | 2862  | 880   | 2887  |
| N165   | 2,86           | 44.1  | 758                          | 2488  | 765                | 2508  | 773   | 2536  | 3,25                     | 50.2  | 847                          | 2777  | 854   | 2801  | 863   | 2831  |

C = Compressed load

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

**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 |       | Type/Name            | Mfg   | 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   | FMJ                  | Lapua | 70     | 2,756 | N150   | 2,71          | 41.8  | 872      | 2861  | 3,22         | 49.7  | 973      | 3192  |
|        |       |                      |       |        |       | N550   | 3,09          | 47.7  | 895      | 2936  | 3,48         | 53.7  | 1019     | 3343  |
|        |       |                      |       |        |       | N160   | 3,08          | 47.5  | 855      | 2805  | 3,77         | 58.2  | 1002     | 3287  |
| 6,5    | 100   | Scenar               | Lapua | 75     | 2,953 | N150   | 2,79          | 43.1  | 910      | 2986  | 3,23         | 49.8  | 999      | 3278  |
|        |       |                      |       |        |       | N550   | 3,08          | 47.5  | 892      | 2927  | 3,48         | 53.7  | 1019     | 3343  |
|        |       |                      |       |        |       | N160   | 3,10          | 47.8  | 865      | 2838  | 3,77         | 58.2  | 1004     | 3294  |
| 7,0    | 108   | Scenar               | Lapua | 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  |
|        |       |                      |       |        |       | N560   | 3,47          | 53.5  | 927      | 3041  | 3,81         | 58.9  | 1031     | 3384  |
| 7,0    | 108   | Silver Jacket Scenar | Lapua | 79,0   | 3.110 | N165   | 3,52          | 54.3  | 922      | 3025  | 4,04         | 62.4  | 1042     | 3419  |
|        |       |                      |       |        |       | N160   | 3,11          | 48.0  | 883      | 2897  | 3,73         | 57.6  | 1002     | 3287  |
|        |       |                      |       |        |       | N560   | 3,51          | 54.2  | 911      | 2989  | 3,85         | 59.5  | 1023     | 3357  |
| 8,0    | 123   | Scenar               | Lapua | 79,0   | 3.110 | N165   | 3,61          | 55.7  | 919      | 3015  | 4,10         | 63.2  | 1033     | 3391  |
|        |       |                      |       |        |       | 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  |
| 7,8    | 120   | Scenar <sup>L</sup>  | Lapua | 79,0   | 3.110 | N560   | 3,28          | 50.6  | 867      | 2844  | 3,65         | 56.3  | 963      | 3158  |
|        |       |                      |       |        |       | 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  |
| 8,0    | 123   | Silver Jacket Scenar | Lapua | 79,0   | 3.110 | N560   | 3,32          | 51.2  | 831      | 2726  | 3,73         | 57.6  | 956      | 3136  |
|        |       |                      |       |        |       | N165   | 3,40          | 52.5  | 834      | 2736  | 3,80         | 58.6  | 942      | 3091  |
|        |       |                      |       |        |       | N160   | 2,94          | 45.4  | 833      | 2733  | 3,38         | 52.2  | 935      | 3068  |
| 8,8    | 136   | Scenar <sup>L</sup>  | Lapua | 79,0   | 3,110 | N560   | 3,37          | 52.0  | 872      | 2861  | 3,77         | 58.2  | 981      | 3218  |
|        |       |                      |       |        |       | N165   | 3,35          | 51.7  | 859      | 2818  | 3,98         | 61.5  | 971      | 3186  |
|        |       |                      |       |        |       | N550   | 2,75          | 42.4  | 770      | 2526  | 3,13         | 48.3  | 879      | 2884  |
| 9,0    | 139   | Scenar               | Lapua | 79,0   | 3.110 | N160   | 2,83          | 43.7  | 754      | 2474  | 3,38         | 52.2  | 868      | 2848  |
|        |       |                      |       |        |       | N560   | 3,22          | 49.7  | 795      | 2608  | 3,62         | 55.9  | 935      | 3068  |
|        |       |                      |       |        |       | N165   | 3,26          | 50.3  | 783      | 2569  | 3,65         | 56.3  | 892      | 2927  |
| 9,0    | 139   | Silver Jacket Scenar | Lapua | 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  |
|        |       |                      |       |        |       | N560   | 2,60          | 40.1  | 758      | 2487  | 3,19         | 49.2  | 869      | 2851  |
| 9,1    | 140   | Naturalis            | Lapua | 74,7   | 2.941 | N560   | 3,22          | 49.7  | 812      | 2664  | 3,53         | 54.5  | 904      | 2967  |
|        |       |                      |       |        |       | N165   | 3,02          | 46.6  | 793      | 2602  | 3,62         | 55.9  | 899      | 2948  |
|        |       |                      |       |        |       | N160   | 2,87          | 44.3  | 753      | 2470  | 3,20         | 49.4  | 824      | 2703  |
| 9,3    | 144   | FMJBT                | Lapua | 79,0   | 3.110 | 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  |
|        |       |                      |       |        |       | N160   | 2,80          | 43.2  | 783      | 2569  | 3,14         | 48.5  | 841      | 2759  |
| 10,1   | 156   | Mega                 | Lapua | 74,0   | 2.913 | N560   | 3,18          | 49.1  | 802      | 2631  | 3,43         | 52.9  | 876      | 2874  |
|        |       |                      |       |        |       | N165   | 2,90          | 44.7  | 766      | 2513  | 3,61         | 55.7  | 875      | 2871  |
|        |       |                      |       |        |       | N570   | 3,54          | 54.6  | 798      | 2618  | 3,70F        | 57.1F | 830      | 2723  |
|        |       |                      |       |        |       | 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  |

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

F = Case full

.270 Winchester

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

| Bullet |       |               |           |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|---------------|-----------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name     | Mfg       | 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   | Spitzer       | Speer     | 80,0   | 3.150 | N150   | 2,88          | 44.5  | 898      | 2945  | 3,42         | 52.8  | 998      | 3273  |
|        |       |               |           |        |       | N160   | 3,80          | 58.6  | 953      | 3127  | 4,27C        | 65.8C | 1057     | 3468  |
|        |       |               |           |        |       | N165   | 4,00          | 61.7  | 966      | 3170  | 4,53C        | 69.9C | 1070     | 3509  |
| 7,5    | 115   | Match King    | Sierra    | 83,5   | 3.287 | N150   | 2,56          | 39.5  | 833      | 2733  | 2,94         | 45.4  | 924      | 3031  |
|        |       |               |           |        |       | N550   | 2,87          | 44.3  | 871      | 2858  | 3,18         | 49.1  | 954      | 3130  |
|        |       |               |           |        |       | N160   | 2,98          | 46.0  | 844      | 2769  | 3,54         | 54.6  | 958      | 3143  |
| 8,4    | 130   | SP            | Remington | 82,0   | 3.228 | N160   | 3,34          | 51.5  | 847      | 2779  | 3,76         | 58.0  | 940      | 3083  |
|        |       |               |           |        |       | N560   | 3,64          | 56.2  | 876      | 2873  | 3,97         | 61.3  | 955      | 3132  |
| 8,4    | 130   | SPBT          | Speer     | 83,0   | 3.268 | N165   | 3,54          | 54.6  | 850      | 2787  | 4,02         | 62.0  | 942      | 3089  |
| 8,8    | 135   | HPBT          | Sierra    | 83,0   | 3.268 | N160   | 2,90          | 44.8  | 822      | 2697  | 3,66         | 56.5  | 929      | 3048  |
|        |       |               |           |        |       | N165   | 3,65          | 56.3  | 844      | 2769  | 3,90         | 60.2  | 927      | 3041  |
|        |       |               |           |        |       | N560   | 3,62          | 55.9  | 876      | 2874  | 3,91         | 60.3  | 957      | 3140  |
|        |       |               |           |        |       | N550   | 2,63          | 40.6  | 758      | 2487  | 3,08         | 47.5  | 859      | 2818  |
|        |       |               |           |        |       | N560   | 3,12          | 48.1  | 789      | 2589  | 3,60         | 55.6  | 888      | 2913  |
| 9,1    | 140   | A-Frame       | Swift     | 82,0   | 3,228 | N165   | 3,05          | 47.1  | 790      | 2592  | 3,59         | 55.4  | 867      | 2844  |
|        |       |               |           |        |       | N550   | 2,44          | 37.7  | 737      | 2418  | 3,01         | 46.5  | 860      | 2822  |
|        |       |               |           |        |       | N560   | 3,12          | 48.1  | 798      | 2618  | 3,48         | 53.7  | 882      | 2894  |
| 9,7    | 150   | Ballistic Tip | Nosler    | 83,5   | 3.287 | N165   | 2,90          | 44.8  | 772      | 2533  | 3,42         | 52.8  | 862      | 2828  |
|        |       |               |           |        |       | N160   | 2,92          | 45.1  | 730      | 2395  | 3,39         | 52.3  | 842      | 2762  |
|        |       |               |           |        |       | N560   | 3,13          | 48.3  | 742      | 2434  | 3,66         | 56.5  | 870      | 2854  |
| 9,7    | 150   | TSX           | Barnes    | 82,0   | 3.228 | N165   | 3,10          | 47.8  | 734      | 2408  | 3,74         | 57.7  | 870      | 2854  |
|        |       |               |           |        |       | N550   | 2,44          | 37.7  | 712      | 2336  | 2,93         | 45.2  | 821      | 2694  |
|        |       |               |           |        |       | N560   | 2,90          | 44.8  | 746      | 2448  | 3,36         | 51.9  | 847      | 2779  |
| 10,4   | 160   | Partition     | Nosler    | 84,6   | 3.331 | N165   | 2,71          | 41.8  | 713      | 2339  | 3,27         | 50.5  | 819      | 2687  |
|        |       |               |           |        |       | 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: Norma, trim-to length 64,50 mm (2.539”)

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 |       | Type/Name | Mfg       | 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   | PSP       | Remington | 79,0   | 3.110 | N550   | 4,33          | 66.8  | 1037     | 3401  | 4,64         | 71.7  | 1117     | 3666  |
|        |       |           |           |        |       | N160   | 4,60          | 71.0  | 1043     | 3421  | 4,85         | 74.9  | 1108     | 3634  |
|        |       |           |           |        |       | N165   | 5,08          | 78.4  | 1045     | 3428  | 5,38         | 83.0  | 1115     | 3658  |
| 8,5    | 130   | PSPCL     | Remington | 82,2   | 3.236 | N160   | 4,31          | 66.5  | 939      | 3080  | 4,61         | 71.1  | 1001     | 3284  |
|        |       |           |           |        |       | N165   | 4,62          | 71.3  | 931      | 3055  | 4,93         | 76.0  | 997      | 3270  |
|        |       |           |           |        |       | N560   | 4,71          | 72.7  | 947      | 3108  | 4,98         | 76.9  | 1004     | 3294  |
| 8,7    | 135   | HPBT      | Sierra    | 83,0   | 3.268 | N160   | 4,21          | 65.0  | 903      | 2964  | 4,43         | 68.3  | 965      | 3167  |
|        |       |           |           |        |       | N165   | 4,55          | 70.2  | 923      | 3029  | 4,70         | 72.5  | 989      | 3244  |
|        |       |           |           |        |       | N560   | 4,61          | 71.2  | 956      | 3137  | 4,81         | 74.2  | 1013     | 3323  |
| 9,71   | 50    | Partition | Nosler    | 82,5   | 3.248 | N165   | 4,34          | 67.0  | 877      | 2876  | 4,68         | 72.2  | 936      | 3072  |
|        |       |           |           |        |       | N560   | 4,38          | 67.6  | 900      | 2954  | 4,60         | 71.0  | 955      | 3134  |
|        |       |           |           |        |       | N170   | 4,76          | 73.4  | 886      | 2906  | 5,11         | 78.8  | 955      | 3134  |

7 mm-08 Remington

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

| Bullet |       |                     |        |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|---------------------|--------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name           | Mfg    | 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   | SP                  | Sierra | 69,5   | 2.736 | N135   | 2,33          | 36.0  | 822      | 2697  | 2,66         | 41.1  | 915      | 3002  |
|        |       |                     |        |        |       | N140   | 2,64          | 40.7  | 865      | 2838  | 2,90         | 44.8  | 934      | 3064  |
|        |       |                     |        |        |       | N150   | 2,71          | 41.8  | 861      | 2825  | 2,97         | 45.8  | 936      | 3071  |
| 8,4    | 130   | HPBT                | Sierra | 70,6   | 2.780 | N540   | 2,68          | 41.4  | 867      | 2844  | 2,95         | 45.5  | 956      | 3136  |
|        |       |                     |        |        |       | N135   | 2,30          | 35.5  | 796      | 2612  | 2,48         | 38.3  | 855      | 2805  |
|        |       |                     |        |        |       | N140   | 2,49          | 38.4  | 812      | 2664  | 2,71         | 41.8  | 882      | 2894  |
|        |       |                     |        |        |       | N150   | 2,62          | 40.4  | 825      | 2707  | 2,85         | 44.0  | 899      | 2949  |
| 9,1    | 140   | Ballistic Tip       | Nosler | 69,6   | 2.740 | N540   | 2,63          | 40.6  | 850      | 2789  | 2,83         | 43.7  | 918      | 3012  |
|        |       |                     |        |        |       | N135   | 2,21          | 34.1  | 759      | 2490  | 2,42         | 37.3  | 826      | 2710  |
|        |       |                     |        |        |       | N140   | 2,40          | 37.0  | 773      | 2536  | 2,66         | 41.1  | 752      | 2467  |
| 9,7    | 150   | Scenar <sup>L</sup> | Lapua  | 71,0   | 2.795 | N150   | 2,55          | 39.4  | 791      | 2595  | 2,79         | 43.1  | 861      | 2825  |
|        |       |                     |        |        |       | N540   | 2,54          | 39.2  | 801      | 2628  | 2,77         | 42.7  | 877      | 2877  |
|        |       |                     |        |        |       | 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  |
| 9,7    | 150   | TSX                 | Barnes | 69,5   | 2.736 | 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  |
|        |       |                     |        |        |       | N540   | 2,42          | 37.3  | 741      | 2431  | 2,66         | 41.1  | 824      | 2703  |
| 9,7    | 150   | MatchKing           | Sierra | 69,5   | 2.736 | 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  |
|        |       |                     |        |        |       | N140   | 2,26          | 34.9  | 728      | 2388  | 2,57         | 39.7  | 813      | 2667  |
| 10,4   | 160   | Naturalis           | Lapua  | 69,5   | 2,736 | N150   | 2,36          | 36.4  | 737      | 2418  | 2,69         | 41.5  | 824      | 2703  |
|        |       |                     |        |        |       | N540   | 2,44          | 37.7  | 762      | 2500  | 2,69         | 41.5  | 843      | 2766  |
|        |       |                     |        |        |       | N550   | 2,65          | 40.9  | 769      | 2523  | 2,88         | 44.4  | 851      | 2792  |
|        |       |                     |        |        |       | N540   | 2,16          | 33.3  | 693      | 2274  | 2,38         | 36.7  | 761      | 2497  |
| 10,4   | 160   | Naturalis           | Lapua  | 69,5   | 2,736 | 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  |

7 mm-08 Remington

(cont.)

Test barrel: 610 mm (24"), 1 in 9½" twist

Primers: Large Rifle

Cases: Lapua .308Win necked down, trim-to length 51,5 mm (2.028")

| Bullet |       |                     |        |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|---------------------|--------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name           | Mfg    | 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   | SBT                 | Sierra | 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   | HPBT                | Sierra | 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   | TSX                 | Barnes | 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   | 181   | Scenar <sup>L</sup> | Lapua  | 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  |

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 |       | Type/Name     | Mfg    | 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   | Spitzer       | Sierra | 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   | Ballistic Tip | Nosler | 77,5   | 3.051 | N140   | 2,58          | 39.7  | 736      | 2415  | 2,82         | 43.5  | 802      | 2630  |
|        |       |               |        |        |       | N150   | 2,65          | 40.9  | 747      | 2451  | 2,90         | 44.8  | 810      | 2657  |
| 10,4   | 160   | SPBT          | Sierra | 77,5   | 3.051 | N150   | 2,50          | 38.6  | 691      | 2267  | 2,76         | 42.7  | 754      | 2474  |
|        |       |               |        |        |       | N160   | 3,04          | 47.0  | 726      | 2381  | 3,26         | 50.3  | 793      | 2603  |
| 11,3   | 175   | Mag-Tip       | Speer  | 77,0   | 3.031 | N160   | 2,76          | 42.5  | 659      | 2162  | 3,06         | 47.1  | 726      | 2383  |
|        |       |               |        |        |       | N165   | 2,94          | 45.4  | 666      | 2184  | 3,32         | 51.2  | 740      | 2429  |

7 x 57R

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

Primers: Large Rifle

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

| Bullet |       |               |        |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|---------------|--------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name     | Mfg    | 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   | Spitzer       | Sierra | 76,5   | 3.012 | N135   | 2,58          | 39.7  | 785      | 2574  | 2,79         | 43.1  | 857      | 2812  |
|        |       |               |        |        |       | N140   | 2,72          | 41.9  | 791      | 2594  | 2,97         | 45.8  | 870      | 2855  |
|        |       |               |        |        |       | N150   | 2,74          | 42.3  | 797      | 2613  | 3,00         | 46.3  | 873      | 2863  |
| 9,1    | 140   | Ballistic Tip | Nosler | 77,5   | 3.051 | N140   | 2,47          | 38.1  | 707      | 2320  | 2,74         | 42.2  | 777      | 2549  |
|        |       |               |        |        |       | N150   | 2,53          | 39.0  | 718      | 2354  | 2,81         | 43.4  | 787      | 2581  |
| 10,4   | 160   | Naturalis     | Lapua  | 75,0   | 2.953 | N140   | 2,17          | 33.5  | 643      | 2110  | 2,41         | 37.2  | 701      | 2300  |
|        |       |               |        |        |       | N150   | 2,08          | 32.1  | 603      | 1978  | 2,47         | 38.1  | 702      | 2303  |
|        |       |               |        |        |       | N540   | 2,26          | 34.9  | 645      | 2116  | 2,53         | 39.0  | 715      | 2346  |
| 10,4   | 160   | SPBT          | Sierra | 77,5   | 3.051 | N150   | 2,39          | 36.8  | 662      | 2171  | 2,66         | 41.0  | 731      | 2397  |
|        |       |               |        |        |       | N160   | 2,93          | 45.2  | 693      | 2272  | 3,19         | 49.3  | 774      | 2539  |
| 11,3   | 175   | Mag-Tip       | Speer  | 77,0   | 3.031 | N160   | 2,63          | 40.6  | 629      | 2065  | 2,95         | 45.4  | 701      | 2298  |
|        |       |               |        |        |       | N165   | 2,78          | 42.8  | 631      | 2072  | 3,17         | 48.9  | 711      | 2333  |

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

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 |       | Type/Name  | Mfg     | 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   | SP         | Hornady | 80,4   | 3.165 | N140   | 2,95          | 45.5  | 846      | 2776  | 3,28         | 50.6  | 934      | 3064  |
|        |       |            |         |        |       | N150   | 3,04          | 46.9  | 818      | 2684  | 3,32         | 51.2  | 934      | 3064  |
|        |       |            |         |        |       | N160   | 3,45          | 53.2  | 859      | 2818  | 3,62         | 55.9  | 902      | 2959  |
| 9,0    | 139   | BTSP       | Hornady | 83,5   | 3.287 | N150   | 2,85          | 44.0  | 803      | 2635  | 3,17         | 48.9  | 874      | 2867  |
|        |       |            |         |        |       | N550   | 3,08          | 47.5  | 818      | 2684  | 3,39         | 52.3  | 902      | 2959  |
|        |       |            |         |        |       | N160   | 3,33          | 51.4  | 819      | 2687  | 3,63         | 56.0  | 873      | 2864  |
| 10,4   | 160   | Naturalis  | Lapua   | 84,0   | 3.307 | N160   | 2,65          | 40.9  | 713      | 2339  | 3,16         | 48.8  | 780      | 2559  |
|        |       |            |         |        |       | N560   | 3,20          | 49.4  | 744      | 2441  | 3,45         | 53.2  | 816      | 2677  |
| 10,4   | 160   | Partition  | Nosler  | 84,0   | 3.307 | N560   | 3,31          | 51.1  | 767      | 2516  | 3,63         | 56.0  | 841      | 2759  |
|        |       |            |         |        |       | N165   | 3,39          | 52.3  | 744      | 2441  | 3,60         | 55.5  | 844      | 2769  |
| 10,4   | 160   | Accubond   | Nosler  | 84,0   | 3.307 | N160   | 2,94          | 45.4  | 770      | 2526  | 3,21         | 49.5  | 828      | 2717  |
|        |       |            |         |        |       | N560   | 3,21          | 49.5  | 768      | 2520  | 3,48         | 53.7  | 842      | 2762  |
|        |       |            |         |        |       | N165   | 2,85          | 44.0  | 792      | 2598  | 3,55         | 54.8  | 844      | 2769  |
| 11,3   | 175   | Grand Slam | Speer   | 82,5   | 3.248 | N160   | 2,83          | 43.7  | 707      | 2320  | 3,24         | 50.0  | 786      | 2579  |
|        |       |            |         |        |       | N165   | 3,18          | 49.1  | 731      | 2398  | 3,48         | 53.7  | 797      | 2615  |
|        |       |            |         |        |       | N560   | 3,26          | 50.3  | 752      | 2467  | 3,47         | 53.6  | 805      | 2641  |

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



## 7 mm Remington Magnum

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

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

| Bullet |       |                     |        |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|---------------------|--------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name           | Mfg    | 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   | A-Frame             | Swift  | 83,0   | 3.268 | N160   | 3,45          | 53.2  | 828      | 2717  | 4,03         | 62.2  | 935      | 3068  |
|        |       |                     |        |        |       | N165   | 3,88          | 59.9  | 863      | 2831  | 4,37         | 67.4  | 955      | 3133  |
|        |       |                     |        |        |       | N560   | 3,84          | 59.3  | 852      | 2795  | 4,36         | 67.3  | 966      | 3169  |
| 9,7    | 150   | Scenar <sup>L</sup> | Lapua  | 83,5   | 3.287 | N160   | 3,27          | 50.5  | 794      | 2605  | 3,87         | 59.7  | 893      | 2930  |
|        |       |                     |        |        |       | N560   | 3,86          | 59.6  | 847      | 2779  | 4,32         | 66.7  | 951      | 3120  |
|        |       |                     |        |        |       | N165   | 3,72          | 57.4  | 820      | 2690  | 4,28         | 66.1  | 925      | 3035  |
| 9,7    | 150   | Partition           | Nosler | 83,5   | 3.287 | N160   | 3,53          | 54.5  | 824      | 2703  | 3,94         | 60.8  | 912      | 2992  |
|        |       |                     |        |        |       | N560   | 3,89          | 60.0  | 851      | 2792  | 4,35         | 67.1  | 948      | 3110  |
|        |       |                     |        |        |       | N165   | 3,82          | 59.0  | 847      | 2779  | 4,32         | 66.7  | 931      | 3054  |
| 10,4   | 160   | Naturalis           | Lapua  | 81,8   | 3.220 | N160   | 3,15          | 48.6  | 753      | 2470  | 3,76         | 58.0  | 859      | 2818  |
|        |       |                     |        |        |       | N560   | 3,67          | 56.6  | 843      | 2766  | 4,03         | 62.2  | 943      | 3094  |
|        |       |                     |        |        |       | N165   | 3,65          | 56.3  | 786      | 2579  | 4,08         | 63.0  | 868      | 2848  |
| 10,4   | 160   | Grand Slam          | Speer  | 82,0   | 3.228 | N160   | 3,31          | 51.1  | 784      | 2572  | 3,99         | 61.6  | 880      | 2887  |
|        |       |                     |        |        |       | N560   | 3,91          | 60.3  | 823      | 2700  | 4,45         | 68.7  | 925      | 3035  |
|        |       |                     |        |        |       | N165   | 3,83          | 59.1  | 812      | 2664  | 4,41         | 68.1  | 909      | 2982  |
| 10,9   | 168   | HPBT                | Sierra | 83,5   | 3.287 | N160   | 3,26          | 50.3  | 767      | 2516  | 3,86         | 59.6  | 862      | 2828  |
|        |       |                     |        |        |       | N560   | 3,75          | 57.9  | 811      | 2661  | 4,26         | 65.7  | 903      | 2963  |
|        |       |                     |        |        |       | N165   | 3,61          | 55.7  | 788      | 2585  | 4,14         | 63.9  | 853      | 2799  |
| 11,3   | 175   | SBT                 | Sierra | 83,5   | 3.287 | N170   | 3,78          | 58.3  | 778      | 2552  | 4,52         | 69.8  | 887      | 2910  |
|        |       |                     |        |        |       | N160   | 3,09          | 47.7  | 737      | 2418  | 3,64         | 56.2  | 826      | 2710  |
|        |       |                     |        |        |       | N560   | 3,66          | 56.5  | 791      | 2595  | 4,18         | 64.5  | 885      | 2904  |
| 11,7   | 180   | Scenar <sup>L</sup> | Lapua  | 83,5   | 3.287 | N165   | 3,41          | 52.6  | 746      | 2448  | 4,06         | 62.7  | 854      | 2802  |
|        |       |                     |        |        |       | N170   | 3,73          | 57.6  | 761      | 2497  | 4,35         | 67.1  | 862      | 2828  |
|        |       |                     |        |        |       | N160   | 2,78          | 42.9  | 678      | 2224  | 3,24         | 50.0  | 765      | 2510  |
|        |       |                     |        |        |       | N560   | 3,10          | 47.8  | 728      | 2388  | 3,45         | 53.2  | 808      | 2651  |
|        |       |                     |        |        |       | N165   | 2,87          | 44.3  | 679      | 2228  | 3,48         | 53.7  | 783      | 2569  |
| N170   | 3,12  | 48.1                | 678    | 2224   | 3,79  | 58.5   | 806           | 2644  |          |       |              |       |          |       |

## 7 mm Weatherby Magnum

Test barrel: 660 mm, 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 loads may cause excessive chamber pressure and must not be used!**

| Bullet |       |           |         |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|---------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg     | 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   | HP        | Hornady | 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   | Spitzer   | Sierra  | 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   | Spitzer   | Sierra  | 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   | HPBT      | Sierra  | 81,5   | 3.209 | N160   | 4,00          | 61.7  | 832      | 2730  | 4,23         | 65.3  | 879      | 2884  |
|        |       |           |         |        |       | N165   | 4,31          | 66.5  | 840      | 2755  | 4,51         | 69.6  | 888      | 2913  |
|        |       |           |         |        |       | N560   | 4,17          | 64.3  | 845      | 2771  | 4,42         | 68.2  | 909      | 2982  |

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

## 7 mm RUM

Test barrel: 660 mm (24"), 1 in 9"  
Primers: Large Rifle Magnum  
Cases: Remington, trim-to length 72.14 mm (2.840")

| Bullet |       |               |        |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|---------------|--------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name     | Mfg    | 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   | Ballistic Tip | Nosler | 88,5   | 3.484 | N160   | 5,39          | 83.2  | 1015     | 3330  | 5,83         | 90.0  | 1107     | 3632  |
|        |       |               |        |        |       | N560   | 5,76          | 88.9  | 1020     | 3346  | 6,15         | 94.9  | 1123     | 3684  |
|        |       |               |        |        |       | N165   | 5,59          | 86.3  | 1046     | 3432  | 6,06         | 93.5  | 1143     | 3750  |
| 10,4   | 160   | Naturalis     | Lapua  | 91,0   | 3.583 | N560   | 3,30          | 50.9  | 751      | 2464  | 4,54         | 70.1  | 904      | 2966  |
|        |       |               |        |        |       | N170   | 3,64          | 56.2  | 758      | 2487  | 4,72         | 72.8  | 890      | 2920  |
|        |       |               |        |        |       | N570   | 3,55          | 54.8  | 792      | 2598  | 4,95         | 76.4  | 934      | 3064  |
| 10,9   | 168   | Match King    | Sierra | 91,5   | 3.602 | N560   | 5,07          | 78.2  | 897      | 2943  | 5,51         | 85.0  | 978      | 3209  |
|        |       |               |        |        |       | N170   | 5,61          | 86.6  | 918      | 3012  | 5,96         | 92.0  | 997      | 3271  |
|        |       |               |        |        |       | N570   | 5,59          | 86.3  | 912      | 2992  | 6,07         | 93.7  | 1003     | 3291  |
| 11,3   | 175   | A-Frame       | Swift  | 91,5   | 3,602 | N560   | 4,82          | 74.4  | 853      | 2799  | 5,27         | 81.3  | 935      | 3068  |
|        |       |               |        |        |       | N170   | 5,26          | 81.2  | 880      | 2887  | 5,51         | 85.0  | 914      | 2999  |
|        |       |               |        |        |       | N570   | 5,31          | 81.9  | 873      | 2864  | 5,82         | 89.8  | 955      | 3133  |

## .30 Carbine

Test barrel: 460 mm (18"), 1 in 10" twist  
Primers: Small Rifle  
Cases: Federal, trim-to length 32,60 mm (1.283")

| Bullet |       |             |       |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-------------|-------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name   | Mfg   | 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   | Plinker     | Speer | 42,5   | 1.673 | N110   | 0,88          | 13.6  | 610      | 2001  | 0,97         | 15.0  | 669      | 2196  |
| 7,1    | 110   | Spire Point | Speer | 42,5   | 1.673 | N110   | 0,79          | 12.1  | 545      | 1786  | 0,91         | 14.0  | 605      | 1983  |

## .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 |       | Type/Name | Mfg   | 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   | HP        | Lapua | 64,5   | 2.539 | N120   | 1,48          | 22.8  | 692      | 2271  | 1,73         | 26.8  | 781      | 2562  |
|        |       |           |       |        |       | N130   | 1,70          | 26.3  | 710      | 2329  | 1,95         | 30.1  | 800      | 2623  |
|        |       |           |       |        |       | N133   | 1,86          | 28.7  | 730      | 2395  | 2,19         | 33.8  | 833      | 2732  |
| 8,5    | 130   | FSP       | Speer | 64,7   | 2.547 | N120   | 1,41          | 21.7  | 617      | 2024  | 1,67         | 25.8  | 705      | 2314  |
|        |       |           |       |        |       | N130   | 1,59          | 24.5  | 641      | 2103  | 1,84         | 28.4  | 728      | 2389  |
|        |       |           |       |        |       | N133   | 1,71          | 26.4  | 653      | 2143  | 1,97         | 30.4  | 741      | 2432  |
|        |       |           |       |        |       | N135   | 1,80          | 27.7  | 649      | 2129  | 2,08         | 32.0  | 737      | 2419  |
|        |       |           |       |        |       | N140   | 1,95          | 29.8  | 668      | 2195  | 2,28         | 34.9  | 770      | 2526  |
| 9,7    | 150   | FSP       | Speer | 64,5   | 2.539 | N120   | 1,23          | 19.1  | 519      | 1701  | 1,46         | 22.5  | 593      | 1946  |
|        |       |           |       |        |       | N130   | 1,43          | 22.1  | 558      | 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   | FSP       | Speer | 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  |
|        |       |           |       |        |       | N145   | 1,88          | 29.1  | 573      | 1873  | 2,13         | 32.7  | 659      | 2164  |

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

.300 Savage

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

| Bullet |       |           |        |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|--------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg    | 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   | HP        | Lapua  | 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   | TNT-HP    | Speer  | 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   | Mega      | Lapua  | 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   | SBT       | Sierra | 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   | Mega      | Lapua  | 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  |

.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 |       | Type/Name         | Mfg    | 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    | ALS <sup>1)</sup> | Lapua  | 67,0   | 2.638 | N110   | 1,78          | 27.5  | 1061     | 3481  | 2,24         | 34.5  | 1217     | 3993  |     |      |      |      |     |      |
| 6,5    | 100   | HPCE              | Lapua  | 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  |     |      |      |      |     |      |
| 7,1    | 110   | HP                | Sako   | 67,5   | 2.657 | N135   | 2,47          | 38.1  | 865      | 2837  | 2,99         | 46.1  | 992      | 3255  |     |      |      |      |     |      |
|        |       |                   |        |        |       | N120   | 2,32          | 35.8  | 844      | 2769  | 2,67         | 41.2  | 962      | 3157  |     |      |      |      |     |      |
|        |       |                   |        |        |       | N130   | 2,52          | 38.9  | 862      | 2826  | 2,96         | 45.7  | 988      | 3242  |     |      |      |      |     |      |
|        |       |                   |        |        |       | N133   | 2,73          | 42.1  | 874      | 2868  | 3,19         | 49.1  | 1009     | 3311  |     |      |      |      |     |      |
|        |       |                   |        |        |       | 8,0    | 123           | FMJ   | Lapua    | 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   | Ballistic Tip     | Nosler | 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  |     |      |      |      |     |      |
|        |       |                   |        |        |       | N135   | 2,58          | 39.7  | 782      | 2567  | 3,02         | 46.7  | 907      | 2975  |     |      |      |      |     |      |
| 8,5    | 130   | HP                | Lapua  | 68,0   | 2.677 | N140   | 2,75          | 42.4  | 786      | 2579  | 3,15         | 48.7  | 903      | 2963  |     |      |      |      |     |      |
|        |       |                   |        |        |       | 9,7    | 150           | Mega  | Lapua    | 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   | SPBT              | Sierra | 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  |     |      |      |      |     |      |

F = Full case C = Compressed load

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

.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 |       | Type/Name            | Mfg    | 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   | Lock Base            | Lapua  | 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   | HPBT                 | Sierra | 71,0   | 2.795 | 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  |
| 10,0   | 155   | Scenar               | Lapua  | 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  |
| 10,0   | 155   | Silver Jacket Scenar | Lapua  | 71,0   | 2.795 | N550   | 2,88          | 44.4   | 794      | 2605  | 3,25F        | 50.2F | 901      | 2956  |
|        |       |                      |        |        |       | N530   | 2,45          | 37.8   | 778      | 2552  | 2,69         | 41.5  | 867      | 2844  |
|        |       |                      |        |        |       | N135   | 2,49          | 38.4   | 783      | 2569  | 2,72         | 42.0  | 861      | 2825  |
|        |       |                      |        |        |       | N140   | 2,66          | 41.0   | 767      | 2516  | 2,95         | 45.5  | 855      | 2805  |
|        |       |                      |        |        |       | N540   | 2,64          | 40.7   | 760      | 2494  | 3,05         | 47.1  | 870      | 2854  |
| 10,0   | 155   | HPBT                 | Sierra | 71,0   | 2.795 | N150   | 2,71          | 41.8   | 782      | 2566  | 3,05         | 47.1  | 867      | 2844  |
|        |       |                      |        |        |       | 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  |
| 10,7   | 165   | SPBT                 | Speer  | 71,0   | 2.795 | N550   | 2,76          | 42.5   | 756      | 2479  | 3,22C        | 49.7C | 880      | 2888  |
|        |       |                      |        |        |       | 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  |
| 10,7   | 165   | TSX                  | Barnes | 71,0   | 2.795 | N550   | 2,86          | 44.1   | 760      | 2495  | 3,19         | 49.3  | 850      | 2789  |
|        |       |                      |        |        |       | 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  |
|        |       |                      |        |        |       | 10,9   | 167           | Scenar | Lapua    | 71,0  | 2.795        | N135  | 2,38     | 36.7  |
| 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   | 2,90  |        |               |        |          |       |              | 44.8  | 836      | 2744  |
| N550   | 2,88  | 44.4                 | 763    | 2503   | 3,17F |        |               |        |          |       |              | 48.9F | 836      | 2743  |
| 10,9   | 167   | Silver Jacket Scenar | Lapua  | 71,0   | 2.795 | N135   | 2,49          | 38.4   | 783      | 2569  | 2,72         | 42.0  | 865      | 2838  |
|        |       |                      |        |        |       | N140   | 2,61          | 40.2   | 743      | 2437  | 2,80         | 43.2  | 828      | 2717  |
|        |       |                      |        |        |       | N540   | 2,62          | 40.5   | 732      | 2401  | 3,00         | 46.3  | 837      | 2746  |
|        |       |                      |        |        |       | N150   | 2,64          | 40.7   | 737      | 2418  | 2,97         | 45.8  | 828      | 2717  |
|        |       |                      |        |        |       | N550   | 2,87          | 44.3   | 769      | 2523  | 3,22F        | 49.7F | 870      | 2854  |
| 10,9   | 168   | HPBT                 | Sierra | 71,0   | 2.795 | N135   | 2,47          | 38.1   | 747      | 2451  | 2,73         | 42.1  | 822      | 2697  |
|        |       |                      |        |        |       | N140   | 2,35          | 36.2   | 685      | 2247  | 2,78         | 42.8  | 780      | 2558  |
|        |       |                      |        |        |       | N540   | 2,44          | 37.7   | 691      | 2266  | 2,89         | 44.5  | 809      | 2654  |
|        |       |                      |        |        |       | N150   | 2,50          | 38.6   | 707      | 2321  | 2,88         | 44.5  | 804      | 2636  |
|        |       |                      |        |        |       | N550   | 2,70          | 41.6   | 725      | 2379  | 3,06         | 47.2  | 832      | 2729  |
| 10,9   | 168   | TSX                  | Barnes | 71,0   | 2.795 | N140   | 2,59          | 40.0   | 739      | 2425  | 2,86         | 44.1  | 812      | 2664  |
|        |       |                      |        |        |       | N150   | 2,63          | 40.6   | 740      | 2428  | 2,91         | 44.9  | 814      | 2671  |
|        |       |                      |        |        |       | N540   | 2,68          | 41.4   | 746      | 2448  | 2,94         | 45.4  | 838      | 2749  |



(cont.)

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 |       | Type/Name               | Mfg               | 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   | LockBase                | Lapua             | 71,0   | 2.795 | N135   | 2,42          | 37.4  | 710      | 2328  | 2,78  | 42.9         | 806   | 2645     |  |
|        |       |                         |                   |        |       | N140   | 2,56          | 39.5  | 715      | 2345  | 2,95  | 45.5         | 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   | Naturalis LR            | Lapua             | 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     |  |
| 11,3   | 175   | Scenar <sup>L</sup>     | Lapua             | 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     |  |
| 11,3   | 175   | HPBT/VLD                | Sierra/<br>Berger | 71,0   | 2.795 | N150   | 2,54          | 39.2  | 741      | 2431  | 2,73  | 42.1         | 804   | 2638     |  |
|        |       |                         |                   |        |       | N140   | 2,29          | 35.3  | 664      | 2177  | 2,68  | 41.4         | 762   | 2501     |  |
|        |       |                         |                   |        |       | N540   | 2,44          | 37.7  | 687      | 2253  | 2,79  | 43.1         | 788   | 2586     |  |
|        |       |                         |                   |        |       | N150   | 2,39          | 36.8  | 681      | 2236  | 2,82  | 43.5         | 784   | 2573     |  |
|        |       |                         |                   |        |       | N550   | 2,57          | 39.6  | 698      | 2290  | 2,97  | 45.8         | 802   | 2631     |  |
| 11,7   | 180   | SP                      | Hornady           | 71,0   | 2.795 | N135   | 2,33          | 36.0  | 661      | 2169  | 2,71  | 41.8         | 765   | 2510     |  |
|        |       |                         |                   |        |       | N140   | 2,47          | 38.1  | 669      | 2196  | 2,86  | 44.1         | 781   | 2561     |  |
|        |       |                         |                   |        |       | N150   | 2,48          | 38.3  | 677      | 2220  | 3,00  | 46.3         | 793   | 2601     |  |
| 11,7   | 180   | XFB                     | Barnes            | 71,0   | 2.795 | N540   | 2,09          | 32.2  | 591      | 1938  | 2,55  | 39.3         | 715   | 2346     |  |
|        |       |                         |                   |        |       | N550   | 2,30          | 35.5  | 623      | 2043  | 2,75  | 42.4         | 734   | 2408     |  |
| 11,7   | 180   | Naturalis               | Lapua             | 68,1   | 2.681 | N140   | 2,60          | 40.1  | 707      | 2320  | 2,84  | 43.8         | 772   | 2533     |  |
|        |       |                         |                   |        |       | N540   | 2,63          | 40.6  | 703      | 2306  | 2,90  | 44.7         | 769   | 2523     |  |
|        |       |                         |                   |        |       | N150   | 2,75          | 42.4  | 727      | 2385  | 2,95  | 45.5         | 778   | 2552     |  |
|        |       |                         |                   |        |       | N550   | 2,84          | 43.8  | 716      | 2349  | 3,13  | 48.3         | 791   | 2595     |  |
| 12,0   | 185   | Mega                    | Lapua             | 67,5   | 2.657 | N135   | 2,39          | 36.9  | 673      | 2208  | 2,57  | 39.7         | 731   | 2398     |  |
|        |       |                         |                   |        |       | N140   | 2,53          | 39.0  | 675      | 2215  | 2,82  | 43.5         | 756   | 2480     |  |
|        |       |                         |                   |        |       | N540   | 2,63          | 40.6  | 707      | 2320  | 2,92  | 45.1         | 801   | 2628     |  |
|        |       |                         |                   |        |       | N150   | 2,65          | 40.9  | 688      | 2257  | 2,93  | 45.2         | 756   | 2480     |  |
| 12,0   | 185   | FMJBT                   | Lapua             | 71,0   | 2.795 | N550   | 2,76          | 42.6  | 685      | 2247  | 3,07  | 47.4         | 768   | 2520     |  |
|        |       |                         |                   |        |       | N135   | 2,33          | 36.0  | 667      | 2188  | 2,66  | 41.0         | 761   | 2495     |  |
|        |       |                         |                   |        |       | N140   | 2,44          | 37.6  | 675      | 2215  | 2,83  | 43.7         | 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     |  |
| 12,0   | 185   | Scenar                  | Lapua             | 71,0   | 2.795 | N550   | 2,73          | 42.1  | 731      | 2398  | 3,03F | 46.8F        | 822   | 2697     |  |
|        |       |                         |                   |        |       | 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  | 3,04  | 46.9         | 795   | 2608     |  |
| 12,0   | 185   | Silver Jacket<br>Scenar | Lapua             | 71,0   | 2.795 | N140   | 2,46          | 38.0  | 689      | 2259  | 2,77  | 42.7         | 776   | 2546     |  |
|        |       |                         |                   |        |       | N540   | 2,64          | 40.7  | 729      | 2392  | 2,88  | 44.4         | 865   | 2838     |  |
|        |       |                         |                   |        |       | N150   | 2,47          | 38.1  | 696      | 2283  | 2,80  | 43.2         | 782   | 2566     |  |
|        |       |                         |                   |        |       | N550   | 2,72          | 41.9  | 711      | 2331  | 3,06  | 47.2         | 811   | 2661     |  |
| 12,3   | 190   | HPBT                    | Sierra            | 71,0   | 2.795 | N140   | 2,42          | 37.3  | 677      | 2222  | 2,78  | 42.9         | 764   | 2508     |  |
|        |       |                         |                   |        |       | N540   | 2,44          | 37.6  | 672      | 2204  | 2,83  | 43.7         | 786   | 2579     |  |
|        |       |                         |                   |        |       | N150   | 2,49          | 38.4  | 676      | 2218  | 2,82  | 43.6         | 767   | 2516     |  |
|        |       |                         |                   |        |       | N550   | 2,63          | 40.6  | 695      | 2279  | 3,06  | 47.2         | 800   | 2624     |  |
| 13,0   | 200   | SP                      | Speer             | 71,0   | 2.795 | N140   | 2,28          | 35.2  | 609      | 1999  | 2,67  | 41.2         | 712   | 2335     |  |
|        |       |                         |                   |        |       | N150   | 2,24          | 34.5  | 604      | 1982  | 2,74  | 42.2         | 715   | 2344     |  |

F = Full case      C = Compressed load

 = Accuracy load

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

## 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 |       | Type/Name | Mfg    | 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   | HPCE      | Lapua  | 68,0   | 2.677 | N120   | 2,59          | 40.0  | 933      | 3061  | 2,88         | 44.4  | 1020     | 3346  |
|        |       |           |        |        |       | N130   | 2,80          | 43.2  | 956      | 3136  | 3,03         | 46.8  | 1036     | 3399  |
|        |       |           |        |        |       | N133   | 2,98          | 46.0  | 960      | 3150  | 3,20F        | 49.4F | 1019     | 3343  |
| 8,0    | 123   | FMJ       | Lapua  | 68,5   | 2.697 | N130   | 2,81          | 43.3  | 883      | 2896  | 3,19         | 49.1  | 967      | 3171  |
|        |       |           |        |        |       | N133   | 3,07          | 47.4  | 900      | 2954  | 3,41         | 52.6  | 978      | 3209  |
|        |       |           |        |        |       | N135   | 3,19          | 49.2  | 901      | 2956  | 3,50         | 54.0  | 984      | 3229  |
| 9,7    | 150   | Mega      | Lapua  | 70,9   | 2.791 | N133   | 2,43          | 37.5  | 727      | 2384  | 2,83         | 43.6  | 826      | 2709  |
|        |       |           |        |        |       | N135   | 2,70          | 41.7  | 761      | 2497  | 3,05         | 47.1  | 851      | 2790  |
|        |       |           |        |        |       | N140   | 2,86          | 44.1  | 774      | 2540  | 3,19         | 49.2  | 862      | 2829  |
| 9,7    | 150   | FMJBT     | Lapua  | 73,0   | 2.874 | N133   | 2,71          | 41.8  | 811      | 2661  | 2,92         | 45.1  | 871      | 2858  |
|        |       |           |        |        |       | N135   | 2,90          | 44.8  | 825      | 2707  | 3,12         | 48.1  | 889      | 2917  |
|        |       |           |        |        |       | N140   | 3,09          | 47.7  | 847      | 2779  | 3,35         | 51.7  | 916      | 3005  |
| 10,0   | 155   | Scenar    | Lapua  | 75,5   | 2.972 | N135   | 2,74          | 42.3  | 786      | 2579  | 3,02         | 46.7  | 865      | 2839  |
|        |       |           |        |        |       | N140   | 2,90          | 44.8  | 800      | 2625  | 3,19         | 49.3  | 884      | 2900  |
|        |       |           |        |        |       | N150   | 2,99          | 46.2  | 803      | 2635  | 3,15         | 48.6  | 886      | 2906  |
| 10,1   | 156   | SPBT      | Sako   | 70,5   | 2.776 | N135   | 2,89          | 44.6  | 789      | 2589  | 3,18         | 49.0  | 866      | 2840  |
|        |       |           |        |        |       | N140   | 3,01          | 46.5  | 796      | 2612  | 3,19         | 49.2  | 845      | 2772  |
|        |       |           |        |        |       | N150   | 3,16          | 48.7  | 809      | 2655  | 3,33         | 51.4  | 857      | 2812  |
| 10,9   | 167   | Scenar    | Lapua  | 75,0   | 2.953 | N140   | 3,00          | 46.3  | 784      | 2573  | 3,10         | 47.8  | 830      | 2723  |
|        |       |           |        |        |       | N540   | 2,94          | 45.3  | 774      | 2541  | 3,12         | 48.1  | 812      | 2664  |
|        |       |           |        |        |       | N150   | 3,12          | 48.1  | 790      | 2590  | 3,27         | 50.5  | 834      | 2736  |
| 10,9   | 168   | HPBT      | Sierra | 75,6   | 2.976 | N550   | 3,21          | 49.5  | 797      | 2616  | 3,40         | 52.5  | 840      | 2756  |
|        |       |           |        |        |       | 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  |
| 11,0   | 170   | Naturalis | Lapua  | 72,0   | 2.835 | 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  |
|        |       |           |        |        |       | N140   | 2,78          | 42.9  | 755      | 2477  | 3,04         | 46.9  | 823      | 2700  |
| 11,0   | 170   | FMJBT     | Lapua  | 73,0   | 2.874 | 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  |
|        |       |           |        |        |       | N140   | 2,82          | 43.5  | 773      | 2536  | 3,04         | 46.9  | 834      | 2736  |
| 11,7   | 180   | Naturalis | Lapua  | 72,5   | 2.854 | 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  |
| 12,0   | 185   | Scenar    | Lapua  | 75,0   | 2.953 | N140   | 2,80          | 43.2  | 708      | 2323  | 3,07         | 47.4  | 781      | 2562  |
|        |       |           |        |        |       | N540   | 2,85          | 44.0  | 714      | 2343  | 3,10         | 47.8  | 789      | 2589  |
|        |       |           |        |        |       | N150   | 2,81          | 43.4  | 708      | 2323  | 3,10         | 47.8  | 782      | 2566  |
| 12,0   | 185   | FMJBT     | Lapua  | 76,8   | 3.024 | N550   | 3,10          | 47.8  | 721      | 2365  | 3,40         | 52.5  | 813      | 2667  |
|        |       |           |        |        |       | N135   | 2,74          | 42.2  | 727      | 2384  | 2,98         | 46.0  | 795      | 2609  |
|        |       |           |        |        |       | N140   | 2,87          | 44.3  | 741      | 2429  | 3,03         | 46.8  | 787      | 2581  |
| 12,0   | 185   | Mega      | Lapua  | 70,0   | 2.756 | 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  |
| 12,0   | 185   | FMJBT     | Lapua  | 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  |
| 12,0   | 185   | Mega      | Lapua  | 70,0   | 2.756 | N560   | 3,14          | 48.5  | 754      | 2474  | 3,38         | 52.2  | 830      | 2723  |
|        |       |           |        |        |       | 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  |
| 13,0   | 200   | FMJBT     | Lapua  | 76,0   | 2.992 | 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  |
|        |       |           |        |        |       | N140   | 2,36          | 36.4  | 635      | 2083  | 2,59         | 40.0  | 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  |

F = Full case

**Accuracy load**

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

(cont.)

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 |       | Type/Name | Mfg    | 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   | HPBT      | Sierra | 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   | HPBT      | Sierra | 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  |
|        |       |           |        |        |       |        |               |       |          |       |              |       |          |       |

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 |       | Type/Name | Mfg   | 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   | Scenar    | Lapua | 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  |
| 10,8   | 167   | Scenar    | Lapua | 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   | Scenar    | Lapua | 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 |       | Type/Name | Mfg     | 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    | ALS¹      | Lapua   | 79,0   | 3.110 | N110   | 2,02          | 31.1  | 1075     | 3527  | 2,49         | 38.4  | 1217     | 3994  |
| 6,5    | 100   | HP        | Lapua   | 79,8   | 3.142 | N130   | 2,58          | 39.8  | 869      | 2851  | 3,15         | 48.6  | 998      | 3274  |
|        |       |           |         |        |       | N133   | 3,07          | 47.4  | 911      | 2989  | 3,49         | 53.9  | 1016     | 3333  |
|        |       |           |         |        |       | N135   | 3,25          | 50.1  | 927      | 3041  | 3,66         | 56.5  | 1033     | 3389  |
|        |       |           |         |        |       | N140   | 3,50          | 54.0  | 926      | 3038  | 3,96         | 61.1  | 1044     | 3425  |
|        |       |           |         |        |       | N540   | 3,59          | 55.4  | 939      | 3081  | 4,08         | 63.0  | 1058     | 3471  |
| 7,1    | 110   | RN        | Hornady | 74,0   | 2.913 | N133   | 3,15          | 48.6  | 873      | 2864  | 3,48         | 53.7  | 983      | 3225  |
|        |       |           |         |        |       | N135   | 3,14          | 48.5  | 864      | 2835  | 3,47         | 53.5  | 964      | 3163  |
|        |       |           |         |        |       | N140   | 3,38          | 52.2  | 881      | 2890  | 3,74         | 57.7  | 977      | 3205  |
|        |       |           |         |        |       | N150   | 3,57          | 55.1  | 905      | 2969  | 3,94         | 60.8  | 1002     | 3287  |
|        |       |           |         |        |       | N130   | 2,61          | 40.3  | 838      | 2749  | 3,01         | 46.4  | 934      | 3064  |
| 8,0    | 123   | FMJ       | Lapua   | 79,8   | 3.142 | 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  |

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

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

.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 |       | Type/Name     | Mfg    | 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   | Ballistic Tip | Nosler | 84,0   | 3.307 | N135   | 3,10          | 47.8  | 865      | 2838  | 3,40         | 52.5  | 935      | 3068  |
|        |       |               |        |        |       | N140   | 3,31          | 51.1  | 878      | 2881  | 3,64         | 56.2  | 958      | 3143  |
|        |       |               |        |        |       | N540   | 3,49          | 53.9  | 880      | 2887  | 3,91         | 60.3  | 994      | 3261  |
|        |       |               |        |        |       | N150   | 3,34          | 51.5  | 882      | 2894  | 3,81         | 58.8  | 966      | 3169  |
| 8,5    | 130   | HP            | Lapua  | 84,0   | 3.307 | N550   | 3,70          | 57.1  | 895      | 2936  | 3,91         | 60.3  | 950      | 3117  |
|        |       |               |        |        |       | N135   | 3,08          | 47.5  | 843      | 2766  | 3,50         | 54.0  | 952      | 3123  |
|        |       |               |        |        |       | N140   | 3,29          | 50.8  | 862      | 2828  | 3,79         | 58.4  | 979      | 3213  |
|        |       |               |        |        |       | N540   | 3,40          | 52.5  | 867      | 2844  | 3,87         | 59.7  | 994      | 3261  |
| 9,7    | 150   | Lock Base     | Lapua  | 84,0   | 3.307 | N150   | 3,50          | 54.0  | 871      | 2858  | 3,89         | 60.0  | 976      | 3202  |
|        |       |               |        |        |       | 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  |
| 9,7    | 150   | Mega          | Lapua  | 76,9   | 3.028 | 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  |
|        |       |               |        |        |       | 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  |
| 9,7    | 150   | HPBT          | Sierra | 84,0   | 3.307 | 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  |
|        |       |               |        |        |       | N140   | 3,08          | 47.5  | 798      | 2618  | 3,42         | 52.8  | 871      | 2858  |
| 10,0   | 155   | Scenar        | Lapua  | 84,0   | 3.307 | 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  |
|        |       |               |        |        |       | N140   | 2,78          | 42.9  | 755      | 2477  | 3,23         | 49.8  | 850      | 2789  |
| 10,1   | 156   | SPBT          | Sako   | 80,5   | 3.169 | N150   | 2,79          | 43.0  | 767      | 2516  | 3,30         | 50.9  | 863      | 2831  |
|        |       |               |        |        |       | N540   | 3,05          | 47.1  | 774      | 2539  | 3,45         | 53.3  | 886      | 2907  |
|        |       |               |        |        |       | N550   | 3,19          | 49.2  | 811      | 2661  | 3,48         | 53.7  | 899      | 2949  |
|        |       |               |        |        |       | N160   | 3,45          | 53.2  | 817      | 2680  | 3,77         | 58.2  | 902      | 2959  |
| 10,9   | 167   | Scenar        | Lapua  | 84,0   | 3.307 | N135   | 2,97          | 45.8  | 776      | 2546  | 3,29         | 50.8  | 851      | 2792  |
|        |       |               |        |        |       | N140   | 3,10          | 47.8  | 775      | 2543  | 3,42         | 52.8  | 859      | 2818  |
|        |       |               |        |        |       | N150   | 3,18          | 49.1  | 781      | 2562  | 3,53         | 54.5  | 863      | 2831  |
|        |       |               |        |        |       | N135   | 2,75          | 42.4  | 746      | 2449  | 3,02         | 46.6  | 808      | 2651  |
| 10,9   | 168   | TSX           | Barnes | 81,7   | 3.217 | N140   | 2,95          | 45.5  | 737      | 2418  | 3,25         | 50.1  | 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  |
| 11,0   | 170   | LockBase      | Lapua  | 84,0   | 3.307 | N160   | 3,60          | 55.5  | 749      | 2457  | 4,00         | 61.7  | 842      | 2762  |
|        |       |               |        |        |       | 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  |
| 11,0   | 170   | Naturalis LR  | Lapua  | 82,0   | 3.228 | 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  |
| 11,7   | 180   | TSX           | Barnes | 81,7   | 3.217 | N160   | 3,65          | 56.3  | 765      | 2510  | 4,05         | 62.5  | 853      | 2799  |
|        |       |               |        |        |       | 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  |
| 11,7   | 180   | TSX           | Barnes | 84,0   | 3.307 | 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  |
|        |       |               |        |        |       | N150   | 2,66          | 41.1  | 667      | 2188  | 3,14         | 48.5  | 777      | 2549  |
| 11,7   | 180   | TSX           | Barnes | 84,0   | 3.307 | N550   | 3,07          | 47.4  | 714      | 2343  | 3,38         | 52.2  | 809      | 2654  |
|        |       |               |        |        |       | N160   | 3,26          | 50.3  | 708      | 2323  | 3,68         | 56.8  | 814      | 2671  |

| .30-06 Springfield |       |           |         |        |       | (cont.) | Test barrel: 620 mm (24½"), 1 in 10" twist<br>Primers: Large Rifle<br>Cases: Lapua, trim-to length 63,10 mm (2.484") |       |          |       |              |       |          |       |
|--------------------|-------|-----------|---------|--------|-------|---------|--|-------|----------|-------|--------------|-------|----------|-------|
| Bullet             |       |           |         |        |       | Powder  | Starting load  |       |          |       | Maximum load |       |          |       |
| Weight             |       | Type/Name | Mfg     | 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   | Naturalis | Lapua   | 80,4   | 3.165 | N140    | 2,77   | 42.7  | 693      | 2274  | 3,13         | 48.3  | 784      | 2572  |
|                    |       |           |         |        |       | N150    | 2,75   | 42.4  | 717      | 2352  | 3,13         | 48.3  | 789      | 2589  |
|                    |       |           |         |        |       | N550    | 3,20   | 49.4  | 753      | 2470  | 3,50         | 54.0  | 830      | 2723  |
|                    |       |           |         |        |       | N160    | 3,40   | 52.5  | 765      | 2510  | 3,62         | 55.9  | 819      | 2687  |
| 12,0               | 185   | Mega      | Lapua   | 79,5   | 3.130 | N560    | 3,45   | 53.2  | 733      | 2405  | 3,87         | 59.7  | 829      | 2720  |
|                    |       |           |         |        |       | 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   | 48.1  | 728      | 2388  | 3,46         | 53.4  | 812      | 2664  |
| 12,0               | 185   | Scenar    | Lapua   | 84,0   | 3.307 | 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  |
|                    |       |           |         |        |       | N540    | 2,86   | 44.1  | 688      | 2257  | 3,16         | 48.8  | 771      | 2530  |
|                    |       |           |         |        |       | N150    | 2,88   | 44.4  | 696      | 2283  | 3,26         | 50.3  | 778      | 2552  |
| 12,3               | 190   | HPBT      | Sierra  | 84,0   | 3.307 | 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  |
|                    |       |           |         |        |       | N150    | 2,90   | 44.7  | 695      | 2280  | 3,20         | 49.4  | 767      | 2516  |
| 13,0               | 200   | Mega      | Lapua   | 79,5   | 3.130 | N550    | 3,07   | 47.4  | 708      | 2323  | 3,49         | 53.9  | 812      | 2664  |
|                    |       |           |         |        |       | 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  |
|                    |       |           |         |        |       | N150    | 2,75   | 42.4  | 692      | 2270  | 3,10         | 47.8  | 747      | 2451  |
| 13,0               | 200   | Partition | Nosler  | 84,0   | 3.307 | N550    | 3,12   | 48.1  | 730      | 2395  | 3,28         | 50.6  | 767      | 2516  |
|                    |       |           |         |        |       | N160    | 3,38   | 52.2  | 739      | 2425  | 3,48         | 53.7  | 763      | 2503  |
|                    |       |           |         |        |       | N560    | 3,37   | 52.0  | 704      | 2310  | 3,80         | 58.6  | 795      | 2608  |
|                    |       |           |         |        |       | N150    | 2,79   | 43.0  | 669      | 2195  | 3,08         | 47.5  | 724      | 2375  |
| 14,3               | 220   | RN        | Hornady | 84,0   | 3.307 | N160    | 3,38   | 52.2  | 704      | 2310  | 3,73         | 57.6  | 765      | 2510  |
|                    |       |           |         |        |       | 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  |

= Accuracy load

| .300 H&H Magnum |  |  |  |  |  | Test barrel: 610 mm (24”), 1 in 10” twist<br>Primers: Large Rifle Magnum<br>Cases: Winchester, trim-to length 72,20 mm (2.842”) |  |  |  |  |  |  |  |
|-----------------|--|--|--|--|--|---|--|--|--|--|--|--|--|
|-----------------|--|--|--|--|--|---|--|--|--|--|--|--|--|

| Bullet |       |           |        |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|--------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg    | 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   | Scenar    | Lapua  | 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  |
|        |       |           |        |        |       | N160   | 3,95          | 60.9  | 820      | 2690  | 4,21         | 64.9  | 872      | 2862  |
| 12,0   | 185   | Scenar    | Lapua  | 91,4   | 3.598 | N560   | 4,31          | 66.5  | 851      | 2792  | 4,59         | 70.9  | 908      | 2978  |
|        |       |           |        |        |       | N165   | 4,35          | 67.1  | 843      | 2766  | 4,62         | 71.4  | 895      | 2937  |
|        |       |           |        |        |       | N160   | 3,87          | 59.7  | 792      | 2598  | 4,04         | 62.4  | 829      | 2719  |
|        |       |           |        |        |       | N560   | 4,21          | 65.0  | 821      | 2694  | 4,42         | 68.1  | 864      | 2834  |
| 13,0   | 200   | HPBT      | Sierra | 91,4   | 3.598 | N165   | 4,24          | 65.4  | 813      | 2667  | 4,45         | 68.6  | 853      | 2799  |

| .300 WSM |  |  |  |  |  | Test barrel: 620 mm (24½”), 1 in 10” twist<br>Primers: Large Rifle Magnum<br>Cases: Winchester, trim-to length 53,10 mm (2.091”) |  |  |  |  |  |  |  |
|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|
|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|

| Bullet |       |           |       |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg   | 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   | HPCE      | Lapua | 67,0   | 2.638 | N150   | 3,85          | 59.4  | 1026     | 3366  | 4,21         | 65.0  | 1107     | 3632  |
|        |       |           |       |        |       | N540   | 3,91          | 60.3  | 1042     | 3419  | 4,29         | 66.2  | 1146     | 3760  |
|        |       |           |       |        |       | N550   | 4,14          | 63.9  | 1027     | 3369  | 4,55         | 70.2  | 1079     | 3540  |

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

| .300 WSM |       |           |       |        |       | (cont.) | Test barrel: 620 mm (24½"), 1 in 10" twist<br>Primers: Large Rifle Magnum<br>Cases: Winchester, trim-to length 53,10 mm (2.091") |       |          |       |              |       |          |       |
|----------|-------|-----------|-------|--------|-------|---------|--|-------|----------|-------|--------------|-------|----------|-------|
| Bullet   |       |           |       |        |       | Powder  | Starting load  |       |          |       | Maximum load |       |          |       |
| Weight   |       | Type/Name | Mfg   | 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   | FMJ       | Lapua | 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   | Mega      | Lapua | 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  |
| 9,7      | 150   | Lock Base | Lapua | 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  |
| 10,7     | 165   | Scirocco  | Swift | 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  |
|          |       |           |       |        |       | N560    | 4,23   | 65.3  | 858      | 2815  | 4,63         | 71.5  | 959      | 3146  |
|          |       |           |       |        |       | N165    | 4,32   | 66.7  | 868      | 2848  | 4,74         | 73.1  | 962      | 3156  |
|          |       |           |       |        |       | 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  |
|          |       |           |       |        |       | 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  |
|          |       |           |       |        |       | 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  |
|          |       |           |       |        |       | N160    | 3,83   | 59.1  | 799      | 2621  | 4,22         | 65.1  | 882      | 2894  |
|          |       |           |       |        |       | N560    | 4,11   | 63.4  | 814      | 2671  | 4,50         | 69.4  | 906      | 2972  |
|          |       |           |       |        |       | N165    | 4,18   | 64.5  | 823      | 2700  | 4,62         | 71.3  | 911      | 2989  |
|          |       |           |       |        |       | N160    | 3,56   | 54.9  | 733      | 2405  | 4,00         | 61.7  | 815      | 2674  |
|          |       |           |       |        |       | N560    | 3,80   | 58.6  | 743      | 2438  | 4,30         | 66.4  | 838      | 2749  |
|          |       |           |       |        |       | N165    | 3,90   | 60.2  | 758      | 2487  | 4,45         | 68.7  | 834      | 2736  |
|          |       |           |       |        |       | N160    | 3,67   | 56.6  | 749      | 2457  | 4,15         | 64.0  | 837      | 2746  |
|          |       |           |       |        |       | N560    | 3,98   | 61.4  | 772      | 2533  | 4,44         | 68.5  | 864      | 2835  |
|          |       |           |       |        |       | N165    | 4,10   | 63.3  | 777      | 2549  | 4,56         | 70.4  | 866      | 2841  |



| <div>.300 Winchester Magnum</div> <div>(cont.)</div>  |       |                      |        |                    |       | Test barrel: 620 mm (24½"), 1 in 10" twist<br>Primers: Large Rifle Magnum<br>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  |       | Type/Name            | Mfg    | 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   | Ballistic Tip        | Nosler | 84,8               | 3.339 | N160  | 4,79          | 73.9  | 913      | 2994  | 5,01         | 77.3  | 986      | 3234  |
|   |       |                      |        |                    |       | N165  | 5,20          | 80.2  | 940      | 3084  | 5,35C        | 82.6C | 997      | 3271  |
| 10,0  | 154   | Scenar               | Lapua  | 84,0               | 3.307 | N160  | 4,54          | 70.1  | 862      | 2828  | 4,94         | 76.2  | 961      | 3153  |
|   |       |                      |        |                    |       | N165  | 5,04          | 77.8  | 885      | 2904  | 5,25C        | 81.0C | 938      | 3077  |
|   |       |                      |        |                    |       | N560  | 4,81          | 74.2  | 879      | 2884  | 5,29         | 81.6  | 983      | 3225  |
|   |       |                      |        |                    |       | N160  | 4,70          | 72.4  | 880      | 2887  | 5,01         | 77.3  | 950      | 3117  |
| 10,9  | 167   | Scenar               | Lapua  | 84,8               | 3.339 | N560  | 4,70          | 72.5  | 846      | 2776  | 5,06         | 78.1  | 939      | 3081  |
|   |       |                      |        |                    |       | N165  | 5,02          | 77.5  | 892      | 2927  | 5,39C        | 83.2C | 967      | 3171  |
| 10,9  | 167   | Silver Jacket Scenar | Lapua  | 84,8               | 3.339 | N160  | 4,39          | 67.7  | 830      | 2723  | 4,83         | 74.5  | 919      | 3015  |
|   |       |                      |        |                    |       | N560  | 4,77          | 73.6  | 844      | 2769  | 5,15         | 79.5  | 943      | 3094  |
|   |       |                      |        |                    |       | N165  | 4,73          | 73.0  | 846      | 2776  | 5,23         | 80.7  | 936      | 3071  |
|   |       |                      |        |                    |       | N160  | 4,43          | 68.4  | 849      | 2785  | 4,82         | 74.4  | 936      | 3071  |
| 11,0  | 170   | Lock Base            | Lapua  | 84,8               | 3.339 | N560  | 4,80          | 74.1  | 851      | 2792  | 5,09         | 78.5  | 952      | 3123  |
|   |       |                      |        |                    |       | N165  | 4,82          | 74.4  | 866      | 2841  | 5,15         | 79.5  | 951      | 3120  |
| 11,0  | 170   | Naturalis            | Lapua  | 84,8               | 3.339 | N160  | 3,70          | 57.1  | 771      | 2530  | 4,13         | 63.7  | 861      | 2825  |
|   |       |                      |        |                    |       | N560  | 4,26          | 65.7  | 818      | 2684  | 4,78         | 73.8  | 923      | 3028  |
|   |       |                      |        |                    |       | N165  | 4,00          | 61.7  | 789      | 2589  | 4,80         | 74.1  | 899      | 2949  |
|   |       |                      |        |                    |       | N160  | 4,38          | 67.6  | 812      | 2664  | 4,79         | 73.9  | 901      | 2956  |
| 11,3  | 175   | Scenar <sup>L</sup>  | Lapua  | 84,0               | 3,307 | N560  | 4,60          | 71.0  | 831      | 2726  | 5,06         | 78.1  | 929      | 3048  |
|   |       |                      |        |                    |       | N165  | 4,72          | 72.8  | 831      | 2726  | 5,15         | 79.5  | 928      | 3045  |
|   |       |                      |        |                    |       | N160  | 4,52          | 69.8  | 843      | 2765  | 4,94         | 76.1  | 916      | 3004  |
|   |       |                      |        |                    |       | N165  | 4,86          | 75.0  | 852      | 2795  | 5,26         | 81.1  | 925      | 3033  |
| 11,7  | 180   | Partition            | Nosler | 84,8               | 3.339 | N160  | 4,05          | 62.5  | 836      | 2743  | 4,53         | 69.9  | 878      | 2881  |
|   |       |                      |        |                    |       | N560  | 4,80          | 74.1  | 873      | 2864  | 5,01         | 77.3  | 913      | 2995  |
| 11,7  | 180   | Naturalis            | Lapua  | 85,7 <sup>1)</sup> | 3.374 | N165  | 4,45          | 68.7  | 839      | 2753  | 4,93         | 76.1  | 887      | 2910  |
|   |       |                      |        |                    |       | N160  | 3,40          | 52.5  | 720      | 2362  | 4,58         | 70.7  | 859      | 2818  |
|   |       |                      |        |                    |       | N165  | 3,90          | 60.2  | 753      | 2470  | 5,17         | 79.8  | 886      | 2907  |
|   |       |                      |        |                    |       | N560  | 4,51          | 69.6  | 802      | 2631  | 5,02         | 77.5  | 901      | 2956  |
| 12,0  | 185   | Mega                 | Lapua  | 82,5               | 3.248 | N160  | 4,26          | 65.7  | 805      | 2641  | 4,70         | 72.5  | 894      | 2933  |
|   |       |                      |        |                    |       | N560  | 4,60          | 71.0  | 816      | 2677  | 5,01         | 77.3  | 917      | 3009  |
|   |       |                      |        |                    |       | N165  | 4,72          | 72.8  | 825      | 2707  | 5,10         | 78.7  | 915      | 3002  |
|   |       |                      |        |                    |       | N160  | 4,22          | 65.1  | 795      | 2608  | 4,74         | 73.1  | 880      | 2887  |
| 12,0  | 185   | Silver Jacket Scenar | Lapua  | 84,8               | 3.339 | N560  | 4,62          | 71.3  | 814      | 2671  | 5,00         | 77.2  | 905      | 2969  |
|   |       |                      |        |                    |       | N165  | 4,64          | 71.6  | 819      | 2687  | 5,01         | 77.3  | 895      | 2936  |
|   |       |                      |        |                    |       | N560  | 4,34          | 66.9  | 823      | 2701  | 4,88         | 75.3  | 898      | 2947  |
|   |       |                      |        |                    |       | N165  | 4,49          | 69.2  | 816      | 2676  | 5,01         | 77.3  | 882      | 2893  |
| 12,3  | 190   | HPBT                 | Sierra | 84,8               | 3.339 | N170  | 4,40          | 67.8  | 788      | 2586  | 5,06         | 78.0  | 861      | 2826  |
|   |       |                      |        |                    |       | N560  | 4,00          | 61.7  | 753      | 2470  | 4,55         | 70.2  | 834      | 2736  |
|   |       |                      |        |                    |       | N165  | 4,10          | 63.3  | 748      | 2454  | 4,65         | 71.7  | 823      | 2700  |
|   |       |                      |        |                    |       | N170  | 4,31          | 66.5  | 740      | 2428  | 4,95         | 76.4  | 824      | 2703  |
| 13,0  | 200   | Mega                 | Lapua  | 84,5               | 3.327 | N560  | 3,98          | 61.4  | 745      | 2444  | 4,40         | 67.9  | 819      | 2687  |
|   |       |                      |        |                    |       | N165  | 3,65          | 56.3  | 703      | 2306  | 4,29         | 66.2  | 800      | 2625  |
|   |       |                      |        |                    |       | N170  | 4,23          | 65.3  | 728      | 2388  | 4,70         | 72.5  | 810      | 2657  |
|   |       |                      |        |                    |       | N170  | 4,05          | 62.4  | 743      | 2438  | 4,85         | 74.8  | 828      | 2717  |
| 13,0  | 200   | Naturalis            | Lapua  | 84,0               | 3.307 | N560  | 3,95          | 60.9  | 770      | 2526  | 4,60         | 70.9  | 852      | 2795  |
|   |       |                      |        |                    |       | N160  | 4,02          | 62.0  | 760      | 2495  | 4,56         | 70.3  | 835      | 2741  |
|   |       |                      |        |                    |       | N165  | 4,15          | 64.0  | 768      | 2518  | 4,79         | 73.8  | 846      | 2774  |
|   |       |                      |        |                    |       | N570  | 4,84          | 74.7  | 797      | 2615  | 5,31         | 81.9  | 891      | 2923  |
| 14,3  | 220   | Scenar <sup>L</sup>  | Lapua  | 84,5               | 3.327 | N560  | 4,34          | 67.0  | 751      | 2464  | 4,74         | 73.1  | 830      | 2723  |
|   |       |                      |        |                    |       | N165  | 4,29          | 66.2  | 723      | 2372  | 4,88         | 75.3  | 816      | 2677  |
|   |       |                      |        |                    |       | N170  | 4,63          | 71.5  | 734      | 2408  | 5,20         | 80.2  | 813      | 2667  |
|   |       |                      |        |                    |       | N570  | 5,04          | 77.8  | 782      | 2566  | 5,30         | 81.8  | 839      | 2753  |
| 1) <sup>1)</sup> The cartridge overall length exceeds the CIP maximum.<br>C = Compressed load                 |       |                      |        |                    |       |   |               |       |          |       |              |       |          |       |

| <div>.300 Weatherby Magnum</div>  |       |               |         |        |       | Test barrel: 660 mm (26"), 1 in 10" twist<br>Primers: Large Rifle Magnum<br>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  |       | Type/Name     | Mfg     | 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   | Ballistic Tip | Nosler  | 90,0   | 3.543 | N160   | 5,19          | 80.2  | 1046     | 3430  | 5,52         | 85.2  | 1104     | 3623  |
|   | 150   | Ballistic Tip | Nosler  | 90,1   | 3.547 | N160   | 4,88          | 75.2  | 945      | 3102  | 5,22         | 80.6  | 1003     | 3291  |
| 10,7  | 165   | SPBT          | Speer   | 90,3   | 3.555 | N165   | 5,27          | 81.3  | 949      | 3113  | 5,59         | 86.3  | 1019     | 3343  |
|   |       |               |         |        |       | 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   | SP            | Hornady | 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   | Naturalis     | Lapua   | 88,5   | 3.484 | N560   | 4,16          | 64.2  | 816      | 2677  | 4,44         | 68.5  | 842      | 2762  |
|   |       |               |         |        |       | N165   | 3,80          | 58.6  | 760      | 2493  | 4,29         | 66.2  | 800      | 2625  |
|   |       |               |         |        |       | N170   | 4,50          | 69.4  | 800      | 2625  | 4,82         | 74.4  | 840      | 2756  |
| 13,0  | 200   | HPBT          | Sierra  | 90,3   | 3.555 | N560   | 4,47          | 69.0  | 821      | 2694  | 4,81         | 74.2  | 872      | 2862  |
|   |       |               |         |        |       | N165   | 4,39          | 67.7  | 795      | 2609  | 4,87         | 75.1  | 858      | 2814  |
|   |       |               |         |        |       | N170   | 4,44          | 68.5  | 781      | 2562  | 5,11         | 78.9  | 859      | 2817  |

| <div>.300 Lapua Magnum</div>  |       |           |        |        |       | Test barrel: 690 mm (27"), 1 in 9½ twist<br>Primers: Large Rifle Magnum<br>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  |       | Type/Name | Mfg    | 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   | Scenar    | Lapua  | 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   | Lock Base | Lapua  | 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   | Scenar    | Lapua  | 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   | HPBT      | Sierra | 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  |
|   |       |           |        |        |       | 24N41   | 5,10          | 78.7  | 804      | 2638  | 5,67         | 87.4  | 875      | 2871  |
| 14,3  | 220   | HPBT      | Sierra | 93,0   | 3.661 | 20N29   | 6,06          | 93.5  | 856      | 2808  | 6,45         | 99.6  | 908      | 2980  |

| <div>.300 Remington Ultra Magnum</div>  |       |           |       |        |       | Test barrel: 660 mm (26"), 1 in 10" twist<br>Primers: Large Rifle Magnum<br>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  |       | Type/Name | Mfg   | 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   | Scenar    | Lapua | 89,5   | 3.524 | N160   | 5,29          | 81.6  | 957      | 3140  | 5,80         | 89.5  | 1044     | 3425  |
|   |       |           |       |        |       | N560   | 5,60          | 86.4  | 865      | 2838  | 6,09         | 94.0  | 1067     | 3501  |
|   |       |           |       |        |       | N165   | 5,60          | 86.4  | 952      | 3123  | 6,19         | 95.5  | 1052     | 3451  |

(cont.)

.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 |       | Type/Name | Mfg    | C.O.L. |        | Type          | Weight |       | Velocity    | Weight       |       | Velocity |       |
| [g]    | [grs] |           |        | [mm]   | [in.]  |               | [g]    | [grs] | [m/s] [fps] | [g]          | [grs] | [m/s]    | [fps] |
| 10,7   | 165   | Partition | Nosler | 89,5   | 3.524  | N160          | 4,97   | 76.7  | 896 2940    | 5,64         | 87.0  | 980      | 3214  |
|        |       |           |        |        |        | N560          | 5,39   | 83.2  | 902 2959    | 6,13         | 94.5  | 1027     | 3371  |
|        |       |           |        |        |        | N165          | 5,57   | 85.9  | 919 3015    | 6,12         | 94.4  | 1009     | 3311  |
|        |       |           |        |        |        | N560          | 5,29   | 81.6  | 925 3035    | 5,95         | 91.8  | 1029     | 3376  |
| 10,85  | 167   | Scenar    | Lapua  | 90,0   | 3.543  | N165          | 5,05   | 77.9  | 882 2894    | 6,10         | 94.1  | 1007     | 3304  |
|        |       |           |        |        |        | N170          | 5,37   | 82.9  | 895 2936    | 6,48         | 100.0 | 1011     | 3317  |
|        |       |           |        |        |        | N560          | 4,73   | 73.0  | 899 2949    | 5,74         | 88.6  | 1006     | 3301  |
|        |       |           |        |        |        | N165          | 4,56   | 70.4  | 851 2792    | 5,73         | 88.4  | 976      | 3202  |
| 11,0   | 170   | Lock Base | Lapua  | 90,0   | 3.543  | N170          | 5,02   | 77.5  | 865 2838    | 6,36         | 98.1  | 992      | 3255  |
|        |       |           |        |        |        | N165          | 4,52   | 69.7  | 833 2733    | 5,40         | 83.3  | 939      | 3079  |
|        |       |           |        |        |        | N560          | 4,65   | 71.7  | 854 2802    | 5,60         | 86.3  | 956      | 3137  |
|        |       |           |        |        |        | N170          | 4,90   | 75.6  | 840 2756    | 6,12         | 94.4  | 952      | 3124  |
| 12,0   | 185   | Mega      | Lapua  | 88,5   | 3.484  | N560          | 5,18   | 79.9  | 874 2867    | 5,83         | 90.0  | 969      | 3179  |
|        |       |           |        |        |        | N165          | 4,75   | 73.3  | 826 2710    | 5,82         | 89.8  | 937      | 3074  |
|        |       |           |        |        |        | N170          | 5,22   | 80.6  | 837 2746    | 6,31         | 97.4  | 953      | 3127  |
|        |       |           |        |        |        | N560          | 5,46   | 84.2  | 888 2913    | 5,93         | 91.5  | 979      | 3213  |
| 12,0   | 185   | Scenar    | Lapua  | 91,4   | 3.598  | N165          | 5,18   | 79.9  | 865 2838    | 6,09         | 94.0  | 960      | 3148  |
|        |       |           |        |        |        | N170          | 5,98   | 92.3  | 875 2871    | 6,40         | 98.7  | 966      | 3170  |
|        |       |           |        |        |        | N570          | 5,90   | 91.0  | 908 2979    | 6,54         | 100.9 | 1023     | 3356  |
|        |       |           |        |        |        | N560          | 5,24   | 80.9  | 892 2927    | 5,85         | 90.3  | 959      | 3146  |
| 13,0   | 200   | Mega      | Lapua  | 89,3   | 3.516  | N165          | 4,95   | 76.4  | 831 2726    | 5,70         | 88.0  | 922      | 3025  |
|        |       |           |        |        |        | N570          | 5,70   | 88.0  | 877 2877    | 6,37         | 98.3  | 958      | 3143  |
|        |       |           |        |        |        | N560          | 4,87   | 75.1  | 842 2762    | 5,57         | 85.9  | 933      | 3061  |
|        |       |           |        |        |        | N165          | 4,75   | 73.3  | 826 2710    | 5,62         | 86.7  | 923      | 3028  |
| 13,0   | 200   | Naturalis | Lapua  | 89,2   | 3.512  | N170          | 5,16   | 79.6  | 833 2733    | 5,82         | 89.8  | 912      | 2992  |
|        |       |           |        |        |        | N570          | 5,44   | 83.9  | 860 2822    | 6,01         | 92.7  | 961      | 3153  |
|        |       |           |        |        |        | 24N41         | 5,60   | 86.4  | 829 2720    | 6,11         | 94.3  | 914      | 2999  |

.30-.378 Weatherby Magnum

Test barrel:

670 mm (26½"), twist 10"

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 |       | Type/Name | Mfg    | 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   | Scenar    | Lapua  | 93,0   | 3.661  | N160          | 6,10   | 94.1  | 1004 3294   | 6,41         | 98.9  | 1062     | 3484  |
|        |       |           |        |        |        | N165          | 6,68   | 103.1 | 1017 3337   | 6,94         | 107.1 | 1075     | 3527  |
|        |       |           |        |        |        | N170          | 7,23   | 111.6 | 1008 3307   | 7,54         | 116.3 | 1069     | 3507  |
|        |       |           |        |        |        | N160          | 5,63   | 86.9  | 933 3061    | 5,91         | 91.2  | 973      | 3192  |
| 11,0   | 170   | Lock Base | Lapua  | 93,0   | 3.661  | 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  |
|        |       |           |        |        |        | N160          | 5,61   | 86.6  | 913 2995    | 5,95         | 91.8  | 963      | 3159  |
| 12,0   | 185   | Scenar    | Lapua  | 93,0   | 3.661  | N560          | 5,96   | 92.0  | 922 3025    | 6,26         | 96.6  | 981      | 3219  |
|        |       |           |        |        |        | N170          | 6,69   | 103.2 | 946 3104    | 7,12         | 109.9 | 1009     | 3310  |
|        |       |           |        |        |        | 24N41         | 7,16   | 110.5 | 959 3146    | 7,58         | 117.0 | 1023     | 3356  |
|        |       |           |        |        |        | 20N29         | 7,94   | 122.5 | 971 3186    | 8,18         | 126.2 | 1003     | 3291  |
| 13,0   | 200   | HPBT      | Sierra | 93,0   | 3.661  | 24N41         | 4,80   | 74.1  | 691 2267    | 6,96         | 107.4 | 949      | 3114  |
|        |       |           |        |        |        | 20N29         | 7,52   | 116.0 | 918 3012    | 7,88         | 121.6 | 980      | 3215  |
|        |       |           |        |        |        | 20N29         | 7,14   | 110.2 | 874 2868    | 7,64         | 117.9 | 938      | 3077  |

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

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 |       | Type/Name | Mfg   | 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    | ALS       | Lapua | 55,7   | 2.193 | N110   | 1,56          | 24.1  | 925      | 3035  | 1,78         | 27.5  | 997      | 3233  |
| 6,5    | 100   | HP        | Lapua | 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  |
| 8,0    | 123   | FMJ       | Lapua | 55,7   | 2.193 | N120   | 1,60          | 24.7  | 663      | 2175  | 1,77         | 27.3  | 728      | 2361  |
| 8,1    | 125   | Mega      | Lapua | 52,4   | 2.063 | N120   | 1,55          | 23.9  | 658      | 2157  | 1,68         | 26.0  | 712      | 2309  |
|        |       |           |       |        |       | N130   | 1,68          | 25.8  | 677      | 2219  | 1,79         | 27.6  | 728      | 2359  |

.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     |           | Type/Name         | Mfg    | C.O.L. |       | Type   | Weight        |       | Velocity |       | Weight       |       | Velocity |       |     |      |
| [g]        | [grs]     |                   |        | [mm]   | [in.] |        | [g]           | [grs] | [m/s]    | [fps] | [g]          | [grs] | [m/s]    | [fps] |     |      |
| 3,7<br>8,0 | 57<br>123 | ALS <sup>1)</sup> | Lapua  | 73,3   | 2.886 | N110   | 1,68          | 25.9  | 981      | 3219  | 2,21         | 34.1  | 1178     | 3865  |     |      |
|            |           |                   |        |        |       | N120   | 2,18          | 33.6  | 819      | 2687  | 2,37         | 36.6  | 873      | 2864  |     |      |
|            |           | 9,7               | 150    | Mega   | Lapua | 70,5   | 2.776         | 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 |
| 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       | 174       | HPBT              | Sierra | 78,0   | 3.071 | N135   | 2,29          | 35.3  | 711      | 2333  | 2,49         | 38.4  | 761      | 2497  |     |      |
|            |           |                   |        |        |       | N140   | 2,49          | 38.4  | 725      | 2379  | 2,70         | 41.7  | 782      | 2566  |     |      |
|            |           |                   |        |        |       | N540   | 2,57          | 39.7  | 728      | 2388  | 2,78         | 42.9  | 791      | 2595  |     |      |
|            |           |                   |        |        |       | N135   | 2,15          | 33.2  | 664      | 2178  | 2,36         | 36.4  | 714      | 2343  |     |      |
| 11,7       | 180       | Spitzer           | Sierra | 78,0   | 3.071 | 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  |     |      |

<sup>1)</sup> 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 |       | Type/Name | Mfg     | 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   | SP        | Hornady | 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   | Spitzer   | Speer   | 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  |
| 11,0   | 170   | SP        | Speer   | 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   | Naturalis | Lapua   | 80,5   | 3.189 | N135   | 2,56          | 39.5  | 717      | 2352  | 2,88         | 44.4  | 776      | 2546  |
|        |       |           |         |        |       | N140   | 2,93          | 45.2  | 733      | 2405  | 3,21         | 49.5  | 780      | 2559  |
|        |       |           |         |        |       | N540   | 2,98          | 46.0  | 716      | 2349  | 3,17         | 48.9  | 816      | 2677  |
|        |       |           |         |        |       | N150   | 2,93          | 45.2  | 731      | 2398  | 3,22F        | 49.7F | 802      | 2631  |
| 13,0   | 200   | Spitzer   | Speer   | 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   | Partition | Nosler  | 81,0   | 3.189 | N160   | 3,27          | 50.5  | 681      | 2234  | 3,64         | 56.2  | 785      | 2575  |



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 |       | Type/Name | Mfg   | 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   | Spitzer   | Speer | 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  |
|        |       |           |       |        |        | N135          | 2,56   | 39.5  | 693 2348    | 2,73         | 42.1  | 740      | 2428  |
| 11,7   | 180   | Naturalis | Lapua | 81,0   | 3.189  | N140          | 2,71   | 41.8  | 698 2290    | 2,94         | 45.4  | 756      | 2480  |
|        |       |           |       |        |        | N540          | 2,86   | 44.1  | 710 2329    | 3,02         | 46.6  | 763      | 2503  |
|        |       |           |       |        |        | N150          | 2,83   | 43.7  | 712 2336    | 3,08         | 47.5  | 769      | 2523  |
|        |       |           |       |        |        |               |        |       |             |              |       |          |       |

.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 |       | Type/Name    | Mfg       | 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   | SP           | Hornady   | 85,0 <sup>1)</sup> | 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   | SP           | Hornady   | 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  |
|        |       |              |           |                    |        | 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  |
| 15,0   | 231   | Naturalis LR | Lapua     | 84,3               | 3.319  | N560          | 4,50   | 69.4  | 769 2523    | 4,85F        | 74.8F | 832      | 2730  |
|        |       |              |           |                    |        | 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  |
|        |       |              |           |                    |        | N160          | 4,25   | 65.6  | 758 2488    | 4,58         | 70.7  | 810      | 2659  |
| 16,2   | 250   | Grand Slam   | Speer     | 83,8               | 3.299  | N560          | 4,39   | 67.7  | 774 2540    | 4,78         | 73.7  | 831      | 2728  |
|        |       |              |           |                    |        | N165          | 4,63   | 71.4  | 779 2555    | 5,02         | 77.4  | 835      | 2738  |
|        |       |              |           |                    |        | 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  |
| 16,2   | 250   | SBT          | Sierra    | 84,8               | 3.339  | N560          | 4,72   | 72.9  | 787 2581    | 5,03         | 77.5  | 843      | 2765  |
|        |       |              |           |                    |        | N165          | 4,63   | 71.5  | 731 2398    | 5,01         | 77.3  | 785      | 2576  |
|        |       |              |           |                    |        | N160          | 3,55   | 54.8  | 634 2080    | 4,15         | 64.0  | 717      | 2352  |
|        |       |              |           |                    |        | N560          | 3,76   | 58.0  | 651 2136    | 4,30         | 66.3  | 731      | 2398  |
| 16,2   | 250   | Scenar       | Lapua     | 84,0               | 3.307  | N165          | 3,79   | 58.5  | 651 2136    | 4,35         | 67.1  | 725      | 2379  |
|        |       |              |           |                    |        | 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  |
|        |       |              |           |                    |        | N160          | 3,58   | 55.2  | 626 2054    | 4,10         | 63.3  | 692      | 2270  |
| 17,8   | 275   | SP           | Speer     | 85,0 <sup>1)</sup> | 3.346  | N560          | 3,92   | 60.5  | 658 2159    | 4,55         | 70.2  | 731      | 2398  |
|        |       |              |           |                    |        | N165          | 3,92   | 60.5  | 637 2090    | 4,46         | 68.8  | 711      | 2333  |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |
| 17,8   | 275   | A-Frame      | Swift     | 86,5 <sup>1)</sup> | 3.406  |               |        |       |             |              |       |          |       |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |
| 19,4   | 300   | HPBT         | Sierra    | 84,8               | 3.339  |               |        |       |             |              |       |          |       |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |
| 19,4   | 300   | RNSP         | Woodleigh | 83,5               | 3.287  |               |        |       |             |              |       |          |       |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |
|        |       |              |           |                    |        |               |        |       |             |              |       |          |       |

F = Case full  
<sup>1)</sup> 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 |       | Type/Name    | Mfg     | 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   | SP           | Hornady | 91,0   | 3.583 | N160   | 5,81          | 89.6  | 926      | 3038  | 6,22         | 96.0  | 993      | 3259  |
| 14,6   | 225   | SP           | Hornady | 91,0   | 3.583 | N165   | 6,24          | 96.3  | 935      | 3068  | 6,66         | 102.8 | 1005     | 3297  |
|        |       |              |         |        |       | N160   | 5,07          | 78.3  | 830      | 2723  | 5,64         | 87.0  | 900      | 2953  |
|        |       |              |         |        |       | N560   | 5,35          | 82.6  | 865      | 2838  | 5,86         | 90.5  | 934      | 3065  |
|        |       |              |         |        |       | N165   | 5,40          | 83.2  | 839      | 2753  | 6,01         | 92.8  | 915      | 3000  |
|        |       |              |         |        |       | N170   | 5,75          | 88.8  | 847      | 2779  | 6,33         | 97.6  | 917      | 3009  |
| 15,0   | 231   | Naturalis LR | Lapua   | 90,5   | 3.563 | N160   | 4,73          | 73.0  | 793      | 2602  | 5,35         | 82.6  | 876      | 2874  |
| 16,2   | 250   | Lock Base    | Lapua   | 91,5   | 3.602 | N560   | 5,19          | 80.1  | 817      | 2680  | 5,75         | 88.7  | 913      | 2995  |
|        |       |              |         |        |       | N165   | 5,00          | 77.2  | 797      | 2615  | 5,80         | 89.5  | 897      | 2943  |
|        |       |              |         |        |       | N560   | 5,04          | 77.8  | 781      | 2562  | 5,71         | 88.1  | 895      | 2936  |
|        |       |              |         |        |       | N165   | 4,89          | 75.5  | 781      | 2562  | 5,67         | 87.5  | 871      | 2858  |
|        |       |              |         |        |       | N170   | 5,36          | 82.7  | 789      | 2589  | 6,23         | 96.1  | 892      | 2927  |
| 16,2   | 250   | Scenar       | Lapua   | 93,5   | 3.681 | N570   | 5,60          | 86.4  | 830      | 2723  | 6,22         | 96.0  | 920      | 3018  |
| 18,5   | 285   | TSX          | Barnes  | 93,0   | 3.661 | N560   | 4,94          | 76.2  | 778      | 2552  | 5,50         | 84.9  | 884      | 2900  |
|        |       |              |         |        |       | N165   | 4,95          | 76.4  | 782      | 2566  | 5,61         | 86.6  | 864      | 2835  |
|        |       |              |         |        |       | 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  |
|        |       |              |         |        |       | N560   | 4,12          | 63.6  | 684      | 2244  | 4,78         | 73.8  | 772      | 2533  |
| 18,5   | 285   | HPBT         | Hornady | 93,5   | 3.681 | N170   | 4,30          | 66.4  | 654      | 2146  | 5,20         | 80.2  | 768      | 2520  |
|        |       |              |         |        |       | N570   | 4,70          | 72.5  | 728      | 2388  | 5,31         | 81.9  | 806      | 2644  |
|        |       |              |         |        |       | N560   | 4,93          | 76.1  | 759      | 2490  | 5,48         | 84.6  | 837      | 2746  |
| 19,4   | 300   | Scenar       | Lapua   | 93,5   | 3.681 | N165   | 4,81          | 74.2  | 733      | 2405  | 5,49         | 84.7  | 812      | 2664  |
|        |       |              |         |        |       | 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  |
|        |       |              |         |        |       | 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  |
| 19,4   | 300   | HPBT         | Sierra  | 91,5   | 3.602 | N170   | 4,90          | 75.6  | 712      | 2336  | 5,74         | 88.6  | 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  |
|        |       |              |         |        |       | 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  |
| 19,4   | 300   | HPBT         | Sierra  | 91,5   | 3.602 | 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 |       | Type/Name    | Mfg       | 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   | Naturalis LR | Lapua     | 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  |
| 16,2   | 250   | AccuBond     | Nosler    | 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  |
| 17,5   | 270   | Naturalis    | Lapua     | 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  |
| 18,5   | 285   | Mega         | Lapua     | 82,2   | 3.236 | N150   | 3,50          | 54.0  | 684      | 2244  | 3,82         | 58.9  | 745      | 2444  |
|        |       |              |           |        |       | 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  |
| 18,5   | 286   | TSX          | Barnes    | 82,5   | 3.248 | 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  |
|        |       |              |           |        |       | N150   | 2,83          | 43.7  | 559      | 1834  | 3,32         | 51.2  | 654      | 2146  |
| 20,7   | 320   | RNSP         | Woodleigh | 82,0   | 3.228 | N540   | 3,12          | 48.1  | 607      | 1991  | 3,47         | 53.6  | 679      | 2228  |
|        |       |              |           |        |       | N550   | 2,88          | 44.4  | 534      | 1752  | 3,94         | 60.8  | 697      | 2287  |
|        |       |              |           |        |       | 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  |

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 |       | Type/Name | Mfg       | 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   | Naturalis | Lapua     | 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   | A-Frame   | Swift     | 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   | RNSP      | Woodleigh | 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 |       | Type/Name    | Mfg       | 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   | JFP          | S&B       | 88,9               | 3.500 | N120   | 2,98          | 46.0  | 744      | 2441  | 3,33         | 51.4  | 810      | 2656  |
| 14,3   | 220   | Naturalis LR | Lapua     | 94,4               | 3.717 | N130   | 3,42          | 52.8  | 791      | 2595  | 3,66         | 56.5  | 837      | 2746  |
|        |       |              |           |                    |       | 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   | SP           | Norma     | 92,1               | 3.626 | N140   | 3,72          | 57.4  | 718      | 2356  | 4,29         | 66.2  | 810      | 2656  |
| 16,6   | 256   | SP           | Sako      | 92,2               | 3.630 | N140   | 3,50          | 54.0  | 654      | 2146  | 4,00         | 61.8  | 751      | 2463  |
| 17,5   | 270   | Naturalis    | Lapua     | 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  |
|        |       |              |           |                    |       | N540   | 3,48          | 53.7  | 655      | 2149  | 3,83         | 59.1  | 723      | 2372  |
|        |       |              |           |                    |       | N135   | 2,80          | 43.2  | 576      | 1890  | 3,43         | 52.9  | 665      | 2182  |
| 18,5   | 285   | Mega         | Lapua     | 92,2               | 3.630 | 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  |
|        |       |              |           |                    |       | N140   | 3,42          | 52.7  | 637      | 2088  | 3,72         | 57.4  | 695      | 2281  |
|        |       |              |           |                    |       | N135   | 2,70          | 41.7  | 547      | 1795  | 2,94         | 45.4  | 593      | 1946  |
| 19,0   | 293   | TUG          | RWS       | 95,5 <sup>1)</sup> | 3.760 | N140   | 2,90          | 44.7  | 562      | 1844  | 3,21         | 49.5  | 613      | 2011  |
| 19,4   | 300   | A-Frame      | Swift     | 92,2               | 3.630 | N540   | 3,04          | 46.9  | 575      | 1886  | 3,40         | 52.5  | 636      | 2087  |
| 20,7   | 320   | RNSP         | Woodleigh | 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  |
|        |       |              |           |                    |       |        |               |       |          |       |              |       |          |       |

<sup>1)</sup> 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 |       | Type/Name  | Mfg       | 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   | Spitzer    | Speer     | 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   | SBT        | Sierra    | 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   | XFB        | Barnes    | 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   | SP         | Speer     | 91,0   | 3.583 | N140   | 4,00          | 61.7  | 718      | 2356  | 4,57         | 70.5  | 805      | 2641  |
|        |       |            |           |        |       | N540   | 4,32          | 66.7  | 767      | 2516  | 4,71         | 72.7  | 825      | 2707  |
|        |       |            |           |        |       | N150   | 4,36          | 67.3  | 769      | 2523  | 4,87         | 75.1  | 830      | 2723  |
| 17,5   | 270   | RNSP       | Woodleigh | 91,0   | 3.583 | N135   | 3,85          | 59.4  | 707      | 2320  | 4,27         | 65.9  | 771      | 2530  |
|        |       |            |           |        |       | N540   | 4,45          | 68.7  | 766      | 2513  | 4,85         | 74.8  | 827      | 2713  |
|        |       |            |           |        |       | N150   | 4,20          | 64.8  | 735      | 2411  | 4,70         | 72.5  | 799      | 2621  |
| 18,5   | 285   | Grand Slam | Speer     | 91,0   | 3.583 | N140   | 3,90          | 60.2  | 665      | 2182  | 4,41         | 68.0  | 784      | 2572  |
|        |       |            |           |        |       | N540   | 4,22          | 65.1  | 732      | 2402  | 4,60         | 71.0  | 790      | 2592  |
|        |       |            |           |        |       | N150   | 4,21          | 65.0  | 733      | 2405  | 4,69         | 72.4  | 792      | 2598  |
| 19,4   | 300   | A-Frame    | Swift     | 91,0   | 3.583 | N140   | 3,75          | 57.9  | 657      | 2156  | 4,27         | 65.9  | 736      | 2415  |
|        |       |            |           |        |       | N540   | 4,02          | 62.0  | 692      | 2270  | 4,34         | 67.0  | 743      | 2438  |
|        |       |            |           |        |       | N150   | 3,70          | 57.1  | 650      | 2133  | 4,24         | 65.4  | 726      | 2382  |

.416 Rigby

Test barrel: 620 mm (24½”), 1 in 14” twist  
Primers: Large Rifle Magnum  
Cases: Norma, trim-to length 73,40 mm (2.890”)

| Bullet |       |           |           |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-----------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg       | 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   | A-Frame   | Swift     | 92,0   | 3.622 | N160   | 5,45          | 84.1  | 679      | 2228  | 5,95         | 91.8  | 736      | 2415  |
|        |       |           |           |        |       | N560   | 5,73          | 88.4  | 685      | 2247  | 6,02         | 92.9  | 728      | 2388  |
|        |       |           |           |        |       | N165   | 5,55          | 85.6  | 682      | 2238  | 6,25         | 96.4  | 747      | 2451  |
|        |       |           |           |        |       | N160   | 4,70          | 72.5  | 599      | 1965  | 5,40         | 83.3  | 660      | 2165  |
| 25,9   | 400   | XFB       | Barnes    | 94,5   | 3.720 | N560   | 5,10          | 78.7  | 622      | 2041  | 5,43         | 83.8  | 661      | 2169  |
|        |       |           |           |        |       | N165   | 5,83          | 90.0  | 631      | 2070  | 5,97         | 92.1  | 662      | 2172  |
|        |       |           |           |        |       | N160   | 4,85          | 74.8  | 611      | 2005  | 5,36         | 82.7  | 672      | 2205  |
|        |       |           |           |        |       | N560   | 5,00          | 77.2  | 616      | 2021  | 5,54         | 85.5  | 660      | 2165  |
| 25,9   | 400   | A-Frame   | Swift     | 92,0   | 3.622 | N165   | 5,45          | 84.1  | 651      | 2136  | 5,91         | 91.2  | 698      | 2290  |
|        |       |           |           |        |       | N160   | 5,43          | 83.8  | 637      | 2090  | 5,80         | 89.5  | 695      | 2280  |
|        |       |           |           |        |       | N560   | 5,86          | 90.4  | 655      | 2149  | 6,28         | 96.9  | 711      | 2333  |
|        |       |           |           |        |       | N165   | 5,93          | 91.5  | 660      | 2165  | 6,42         | 99.1  | 720      | 2362  |
| 26,6   | 410   | RNSP      | Woodleigh | 92,5   | 3.642 | N160   | 5,20          | 80.2  | 614      | 2014  | 5,67         | 87.5  | 663      | 2175  |
|        |       |           |           |        |       | N560   | 5,70          | 88.0  | 633      | 2077  | 6,14         | 94.7  | 680      | 2231  |
|        |       |           |           |        |       | N165   | 5,83          | 90.0  | 631      | 2070  | 6,17         | 95.2  | 682      | 2238  |
|        |       |           |           |        |       |        |               |       |          |       |              |       |          |       |

.444 Marlin

Test barrel: 560 mm (22”), 1 in 38” twist  
Primers: Large Rifle  
Cases: Remington, trim-to length 56,30 mm (2.216”)

| Bullet |       |           |         |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|---------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg     | 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   | HP/XTP    | Hornady | 64,4   | 2.535 | N110   | 2,66          | 41.0  | 720      | 2362  | 3,05         | 47.1  | 797      | 2613  |
|        |       |           |         |        |       | N120   | 3,28          | 50.6  | 782      | 2565  | 3,75         | 57.8  | 869      | 2851  |
| 15,6   | 240   | JTC-SIL   | Hornady | 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   | FP        | Hornady | 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 |       | Type/Name | Mfg     | 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   | FN HP     | Sierra  | 64,7   | 2,547 | N120   | 2,95          | 45.5  | 579      | 1900  | 3,25         | 50.2  | 651      | 2136  |
|        |       |           |         |        |       | N130   | 3,38          | 52.2  | 609      | 1998  | 3,70         | 57.1  | 686      | 2251  |
|        |       |           |         |        |       | N530   | 3,65          | 56.3  | 596      | 1955  | 3,90         | 60.2  | 652      | 2139  |
| 19,4   | 300   | TSX FN    | Barnes  | 64,7   | 2,547 | N120   | 2,45          | 37.8  | 502      | 1647  | 2,91         | 44.9  | 594      | 1949  |
|        |       |           |         |        |       | N530   | 3,02          | 46.6  | 460      | 1509  | 3,40         | 52.5  | 569      | 1867  |
| 19,4   | 300   | XFN       | Barnes  | 64,8   | 2.551 | N130   | 3,10          | 47.8  | 547      | 1795  | 3,37         | 52.0  | 602      | 1975  |
| 22,7   | 350   | RN        | Hornady | 64,7   | 2.547 | N130   | 3,11          | 48.0  | 522      | 1713  | 3,46         | 53.4  | 614      | 2014  |
|        |       |           |         |        |       | N133   | 3,26          | 50.3  | 507      | 1663  | 3,72         | 57.4  | 621      | 2037  |
|        |       |           |         |        |       | N530   | 3,45          | 53.2  | 509      | 1670  | 3,82         | 58.9  | 606      | 1988  |
| 25,9   | 400   | FN        | Speer   | 64,7   | 2.547 | N130   | 2,90          | 44.7  | 489      | 1604  | 3,22         | 49.7  | 559      | 1834  |
|        |       |           |         |        |       | N133   | 3,06          | 47.2  | 485      | 1591  | 3,40         | 52.5  | 574      | 1883  |
|        |       |           |         |        |       | N530   | 3,20          | 49.4  | 478      | 1568  | 3,52         | 54.3  | 568      | 1864  |

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

(cont.)  
.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 |       | Type/Name        | Mfg     | C.O.L. |       | Type   | Weight        |       | Velocity |       | Weight       |       | Velocity |       |
| [g]    | [grs] |                  |         | [mm]   | [in.] |        | [g]           | [grs] | [m/s]    | [fps] | [g]          | [grs] | [m/s]    | [fps] |
| 33,1   | 510   | LFN w/ gas check | Gunhill | 64,7   | 2.547 | N120*) | 1,70          | 26.2  | 360      | 1181  | 1,90         | 29.3  | 408      | 1339  |
|        |       |                  |         |        |       | N130*) | 2,00          | 30.9  | 389      | 1276  | 2,30         | 35.5  | 495      | 1624  |

\*) Cowboy Action Shooting load

.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 |       | Type/Name | Mfg     | 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   | RN        | Hornady | 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  |
|        |       |           |         |        |       | N130   | 4,30          | 66.3  | 674      | 2211  | 4,55         | 70.2  | 710      | 2329  |
| 25,9   | 400   | A-Frame   | Swift   | 82,0   | 3.228 | 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  |
|        |       |           |         |        |       | 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  |
| 25,9   | 400   | XFB       | Barnes  | 83,0   | 3.268 | N135   | 4,30          | 66.3  | 625      | 2051  | 4,42F        | 68.2F | 644      | 2113  |
|        |       |           |         |        |       | 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 |       | Type/Name | Mfg     | 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   | FMJBT     | Speer   | 137,5  | 5.413 | N170   | 13,03         | 201.1 | 801      | 2629  | 14,76        | 227.8 | 894      | 2932  |
|        |       |           |         |        |       | 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   | Solid     | Barnes  | 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   | A-MAX     | Hornady | 137,5  | 5.413 | N170   | 12,31         | 190.0 | 759      | 2490  | 13,99        | 215.8 | 842      | 2763  |
|        |       |           |         |        |       | 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  |
| 48,6   | 750   | Bullex-N  | Lapua   | 138,0  | 5.433 | 24N41  | 13,83         | 213.4 | 798      | 2618  | 14,93        | 230.4 | 865      | 2838  |
|        |       |           |         |        |       | 20N29  | 15,57         | 240.3 | 826      | 2710  | 16,58        | 255.9 | 895      | 2936  |
| 48,6   | 750   | Solid     | Barnes  | 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  |
| 51,8   | 800   | Bullex-N  | Lapua   | 137,5  | 5.413 | 24N41  | 12,93         | 199.5 | 756      | 2480  | 14,23        | 219.6 | 826      | 2710  |
|        |       |           |         |        |       | 20N29  | 14,95         | 230.7 | 796      | 2612  | 15,79        | 243.7 | 857      | 2812  |
| 51,8   | 800   | Solid     | Barnes  | 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   | Solid     | Barnes  | 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  |



# Handgun Reloading Data

## Disclaimer

All of this reloading information has been provided by Nammo Lapua Oy. The data given here were obtained in laboratory conditions following strictly the CIP (Commission Internationale 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 12 AND 13 OF THIS GUIDE.

## 7 mm TCU

Test barrel: 360 mm (14"), 1 in 10" twist  
Primers: Small Rifle  
Cases: Necked-up LAPUA .223 Rem., trim-to length 44,50 mm (1.752")

| Bullet |       |           |         |            | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|---------|------------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg     | 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   | HP        | Hornady | 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   | SSSP      | Hornady | 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   | Spitzer   | Speer   | 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   | SBT       | Sierra  | 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  |
| 10,4   | 160   | SBT       | Sierra  | 66,0 2.598 | N135   | 1,44          | 22.2  | 538      | 1765  | 1,60         | 24.7  | 597      | 1959  |
|        |       |           |         |            | 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.

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

## 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 |       | Type/Name     | Mfg     | 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   | HP            | Hornady | 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   | SSSP          | Hornady | 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   | Ballistic Tip | Nosler  | 60,3 2.374 | N120   | 1,45          | 22.4  | 595      | 1954  | 1,58         | 24.4  | 640      | 2100  |
|        |       |               |         |            | N130   | 1,62          | 25.0  | 612      | 2006  | 1,73         | 26.7  | 661      | 2169  |
|        |       |               |         |            | N133   | 1,71          | 26.3  | 623      | 2044  | 1,84         | 28.4  | 671      | 2201  |
| 9,7    | 150   | Ballistic Tip | Nosler  | 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  |
| 10,4   | 160   | HPBT          | Sierra  | 59,7 2.350 | N135   | 1,75          | 27.0  | 606      | 1988  | 1,87         | 28.9  | 650      | 2133  |
|        |       |               |         |            | N120   | 1,30          | 20.1  | 539      | 1770  | 1,42         | 21.9  | 580      | 1903  |
|        |       |               |         |            | N130   | 1,42          | 21.9  | 559      | 1834  | 1,55         | 23.9  | 602      | 1975  |
|        |       |               |         |            | N133   | 1,56          | 24.1  | 575      | 1886  | 1,69         | 26.1  | 619      | 2031  |
|        |       |               |         |            | 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 |       | Type/Name     | Mfg    | 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   | Ballistic Tip | Nosler | 75,0 2.953 | N130   | 1,58          | 24.4  | 613      | 2013  | 1,67         | 25.8  | 642      | 2106  |
|        |       |               |        |            | N133   | 1,65          | 25.5  | 614      | 2013  | 1,74         | 26.8  | 644      | 2113  |
|        |       |               |        |            | N135   | 1,78          | 27.5  | 629      | 2065  | 1,86         | 28.7  | 658      | 2159  |
| 10,9   | 168   | HPBT          | Sierra | 75,0 2.953 | N130   | 1,54          | 23.7  | 583      | 1913  | 1,63         | 25.2  | 611      | 2005  |
|        |       |               |        |            | N133   | 1,62          | 25.1  | 587      | 1927  | 1,71         | 26.4  | 617      | 2024  |
|        |       |               |        |            | N135   | 1,76          | 27.1  | 605      | 1984  | 1,83         | 28.2  | 631      | 2070  |
|        |       |               |        |            | N140   | 1,83          | 28.2  | 607      | 1991  | 1,91         | 29.5  | 636      | 2087  |

## 7,62 x 25 Tokarev

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

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

| Bullet |       |           |        |            | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|--------|------------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg    | 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    | HP 2)     | Speer  | 32,0 1.260 | N320   | 0,29          | 4.4   | 391      | 1284  | 0,36         | 5.5   | 480      | 1574  |
|        |       |           |        |            | N340   | 0,39          | 5.9   | 434      | 1425  | 0,46         | 7.1   | 522      | 1713  |
| 4,6    | 71    | FMJ 2)    | Sierra | 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    | FMJ 1)    | Lapua  | 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  |

1) Bullet cal. 7,84 mm (0,309")

2) Bullet cal. 7,92 mm (0,312")

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

(cont.)

7,62 x 25 Tokarev

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

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

| Bullet |       |                   |        |            | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-------------------|--------|------------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name         | Mfg    | 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    | JHC <sup>2)</sup> | Sierra | 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    | FMJ <sup>1)</sup> | Lapua  | 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  |

<sup>1)</sup> Bullet cal. 7,84 mm (0,309”)

<sup>2)</sup> Bullet cal. 7,92 mm (0,312”)

.32 S&W Long N.P.

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

| Bullet |       |           |       |            | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-------|------------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg   | 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    | LWC       | Lapua | 24,6 0.969 | N310   | 0,09          | 1.4   | 231      | 758   | 0,11         | 1.7   | 258      | 846   |
| 6,4    | 98    | LWC       | Lapua | 24,6 0.969 | N310   | 0,07          | 1.1   | 186      | 610   | 0,08         | 1.2   | 208      | 682   |
|        |       | LRN       | Lapua | 32,3 1.272 | N310   | 0,12          | 1.9   | 256      | 840   | 0,14         | 2.2   | 277      | 909   |

.32 S&W Long Wadcutter

Test barrel: 150 mm (6”), 1 in 18¾” twist  
Primers: Small Pistol  
Cases: Lapua, trim-to length 23,20 mm (0.913”)

| Bullet |       |           |       |            | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-------|------------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg   | 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    | LWC       | Lapua | 24,6 0.969 | N310   | 0,11          | 1.7   | 246      | 807   | 0,13         | 2.0   | 286      | 938   |
| 6,4    | 98    | LWC       | Lapua | 24,6 0.969 | N310   | 0,09          | 1.4   | 233      | 764   | 0,12         | 1.9   | 257      | 843   |

9 mm Luger

Test barrel: 100 mm (4”), 1 in 10” twist  
Primers: Small Pistol  
Cases: Lapua, trim-to length 19,00 mm (0.748”)

| Bullet |       |           |         |            | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|---------|------------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg     | 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    | HP-XTP    | Hornady | 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  |
| 6,5    | 100   | HP        | Speer   | 27,5 1.083 | 3N37   | 0,42          | 6.4   | 437      | 1434  | 0,47         | 7.2   | 461      | 1512  |
|        |       |           |         |            | 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  |
|        |       |           |         |            |        |               |       |          |       |              |       |          |       |
|        |       |           |         |            |        |               |       |          |       |              |       |          |       |

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

(cont.)

9 mm Luger

Test barrel: 100 mm (4”), 1 in 10” twist  
Primers: Small Pistol  
Cases: Lapua, trim-to length 19,00 mm (0.748”)

| Bullet |       |           |           |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-----------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg       | 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   | HP-XTP    | Hornady   | 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  |
|        |       |           |           |        |       | 3N37   | 0,39          | 6.0   | 370      | 1214  | 0,44         | 6.7   | 398      | 1305  |
|        |       |           |           |        |       | N350   | 0,38          | 5.9   | 373      | 1225  | 0,42         | 6.4   | 396      | 1299  |
| 7,5    | 115   | FMJ-RN    | Lapua     | 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   | RN        | Rainier   | 29,0   | 1.142 | N320   | 0,25          | 3.9   | 326      | 1068  | 0,28         | 4.4   | 347      | 1139  |
|        |       |           |           |        |       | N330   | 0,30          | 4.7   | 342      | 1123  | 0,33         | 5.1   | 361      | 1185  |
|        |       |           |           |        |       | N340   | 0,32          | 5.0   | 353      | 1157  | 0,35         | 5.4   | 374      | 1228  |
|        |       |           |           |        |       | N350   | 0,37          | 5.7   | 364      | 1195  | 0,41         | 6.4   | 391      | 1282  |
|        |       |           |           |        |       | 3N37   | 0,39          | 6.1   | 364      | 1195  | 0,42         | 6.5   | 383      | 1256  |
| 7,8    | 120   | CEPP      | Lapua     | 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   | LSWC      | Intercast | 29,0   | 1.142 | N320   | 0,24          | 3.8   | 327      | 1073  | 0,27         | 4.1   | 343      | 1125  |
|        |       |           |           |        |       | N330   | 0,28          | 4.4   | 345      | 1131  | 0,31         | 4.8   | 358      | 1175  |
|        |       |           |           |        |       | N340   | 0,30          | 4.7   | 346      | 1136  | 0,33         | 5.1   | 369      | 1211  |
|        |       |           |           |        |       | 3N37   | 0,35          | 5.4   | 352      | 1156  | 0,38         | 5.9   | 371      | 1218  |
|        |       |           |           |        |       | N350   | 0,32          | 5.0   | 346      | 1134  | 0,35         | 5.4   | 363      | 1191  |
| 8,0    | 124   | FMJ/FP    | Hornady   | 29,0   | 1.142 | N320   | 0,25          | 3.9   | 310      | 1017  | 0,28         | 4.3   | 334      | 1096  |
|        |       |           |           |        |       | N330   | 0,31          | 4.8   | 338      | 1108  | 0,34         | 5.2   | 359      | 1178  |
|        |       |           |           |        |       | N340   | 0,34          | 5.3   | 347      | 1139  | 0,37         | 5.7   | 370      | 1214  |
|        |       |           |           |        |       | 3N37   | 0,39          | 6.1   | 357      | 1172  | 0,42         | 6.5   | 377      | 1236  |
|        |       |           |           |        |       | N350   | 0,35          | 5.4   | 349      | 1144  | 0,39         | 6.0   | 370      | 1214  |
| 8,0    | 124   | RN        | Rainier   | 29,0   | 1.142 | N320   | 0,24          | 3.8   | 305      | 1000  | 0,27         | 4.1   | 326      | 1069  |
|        |       |           |           |        |       | N330   | 0,27          | 4.2   | 324      | 1063  | 0,30         | 4.7   | 344      | 1129  |
|        |       |           |           |        |       | N340   | 0,30          | 4.7   | 328      | 1077  | 0,33         | 5.1   | 351      | 1152  |
|        |       |           |           |        |       | N350   | 0,34          | 5.2   | 340      | 1115  | 0,38         | 5.9   | 364      | 1196  |
|        |       |           |           |        |       | 3N37   | 0,35          | 5.4   | 346      | 1136  | 0,39         | 6.0   | 365      | 1199  |
| 8,0    | 124   | FMJ-RN    | Lapua     | 29,0   | 1.142 | N320   | 0,22          | 3.4   | 290      | 951   | 0,26         | 4.0   | 326      | 1070  |
|        |       |           |           |        |       | N330   | 0,28          | 4.3   | 315      | 1033  | 0,32         | 4.9   | 359      | 1178  |
|        |       |           |           |        |       | N340   | 0,29          | 4.5   | 331      | 1086  | 0,33         | 5.1   | 360      | 1181  |
|        |       |           |           |        |       | N350   | 0,32          | 4.9   | 341      | 1119  | 0,37         | 5.7   | 377      | 1237  |
|        |       |           |           |        |       | 3N37   | 0,34          | 5.2   | 336      | 1102  | 0,40         | 6.2   | 379      | 1243  |
| 8,0    | 124   | Megashock | Lapua     | 28,7   | 1.130 | N320   | 0,23          | 3.5   | 273      | 896   | 0,27         | 4.2   | 321      | 1053  |
|        |       |           |           |        |       | N330   | 0,27          | 4.2   | 299      | 981   | 0,32         | 4.9   | 344      | 1129  |
|        |       |           |           |        |       | N340   | 0,28          | 4.3   | 299      | 981   | 0,32         | 4.9   | 344      | 1129  |
|        |       |           |           |        |       | N350   | 0,33          | 5.1   | 321      | 1053  | 0,37         | 5.7   | 362      | 1188  |
|        |       |           |           |        |       | 3N37   | 0,34          | 5.2   | 334      | 1096  | 0,39         | 6.0   | 375      | 1230  |
| 8,4    | 130   | FMJ       | Sierra    | 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  |



(cont.)

9 mm Luger

Test barrel: 100 mm (4"), 1 in 10" twist  
Primers: Small Pistol  
Cases: LAPUA, trim-to legnth 19,00 mm (0.748")

| Bullet |       |           |           |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-----------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg       | 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   | LRN       | Intercast | 29,0   | 1.142 | N330   | 0,22          | 3.5   | 285      | 935   | 0,25         | 3.8   | 305      | 1000  |
|        |       |           |           |        |       | N340   | 0,25          | 3.9   | 299      | 982   | 0,28         | 4.3   | 318      | 1044  |
|        |       |           |           |        |       | N350   | 0,27          | 4.2   | 296      | 972   | 0,30         | 4.7   | 319      | 1047  |
|        |       |           |           |        |       | 3N37   | 0,29          | 4.5   | 299      | 982   | 0,32         | 5.0   | 322      | 1055  |
| 9,5    | 147   | HP/XTP    | Hornady   | 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  |
|        |       |           |           |        |       | 3N37   | 0,30          | 4.7   | 298      | 979   | 0,33         | 5.1   | 321      | 1052  |
|        |       |           |           |        |       | N350   | 0,29          | 4.5   | 302      | 991   | 0,32         | 5.0   | 326      | 1070  |
|        |       |           |           |        |       | 3N38   | 0,41          | 6.3   | 357      | 1171  | 0,45         | 6.9   | 368      | 1207  |
|        |       |           |           |        |       | N105   | 0,40          | 6.1   | 317      | 1039  | 0,41         | 6.4   | 338      | 1108  |
|        |       |           |           |        |       | N330   | 0,22          | 3.5   | 272      | 893   | 0,25         | 3.8   | 287      | 942   |
| 9,5    | 147   | RN        | Rainier   | 29,0   | 1.142 | N340   | 0,24          | 3.8   | 272      | 892   | 0,27         | 4.1   | 293      | 960   |
|        |       |           |           |        |       | N350   | 0,27          | 4.2   | 285      | 935   | 0,30         | 4.7   | 309      | 1014  |
|        |       |           |           |        |       | 3N37   | 0,29          | 4.5   | 286      | 937   | 0,32         | 4.9   | 307      | 1008  |
|        |       |           |           |        |       | N330   | 0,23          | 3.5   | 264      | 867   | 0,24         | 3.8   | 283      | 929   |
| 9,7    | 150   | CEPP      | Lapua     | 28,7   | 1.130 | 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   |
|        |       |           |           |        |       |        |               |       |          |       |              |       |          |       |

9 x 21

Test barrel: 140 mm (5½"), 1 in 10" twist  
Primers: Small Pistol  
Cases: Tanfoglio, trim-to length 21,00 mm (0.826")

| Bullet |       |           |         |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|---------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg     | 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   | HP        | Speer   | 29,0   | 1.142 | N340   | 0,39          | 5.9   | 416      | 1363  | 0,43         | 6.6   | 444      | 1455  |
|        |       |           |         |        |       | 3N37   | 0,43          | 6.7   | 427      | 1400  | 0,48         | 7.4   | 453      | 1485  |
|        |       |           |         |        |       | N350   | 0,46          | 7.0   | 433      | 1420  | 0,50         | 7.6   | 459      | 1505  |
| 7,5    | 115   | FMJ       | Sierra  | 29,5   | 1.161 | N340   | 0,35          | 5.3   | 381      | 1248  | 0,38         | 5.9   | 401      | 1314  |
|        |       |           |         |        |       | 3N37   | 0,39          | 5.9   | 375      | 1229  | 0,43         | 6.6   | 402      | 1319  |
|        |       |           |         |        |       | N350   | 0,39          | 5.9   | 388      | 1274  | 0,43         | 6.6   | 410      | 1346  |
|        |       |           |         |        |       | N105   | 0,53          | 8.1   | 410      | 1344  | 0,57         | 8.7   | 438      | 1435  |
| 7,5    | 115   | FMJHP     | Fiocchi | 29,5   | 1.161 | N340   | 0,35          | 5.3   | 313      | 1027  | 0,40         | 6.2   | 409      | 1342  |
|        |       |           |         |        |       | 3N37   | 0,40          | 6.2   | 324      | 1063  | 0,46         | 7.1   | 372      | 1220  |
|        |       |           |         |        |       | 3N38   | 0,49          | 7.6   | 383      | 1257  | 0,61         | 9.4   | 452      | 1483  |
|        |       |           |         |        |       | N340   | 0,31          | 4.7   | 348      | 1142  | 0,34         | 5.2   | 364      | 1194  |
| 8,0    | 123   | FMJ       | Lapua   | 29,5   | 1.161 | 3N37   | 0,35          | 5.3   | 354      | 1160  | 0,39         | 5.9   | 372      | 1222  |
|        |       |           |         |        |       | N350   | 0,35          | 5.3   | 348      | 1143  | 0,38         | 5.9   | 370      | 1213  |
|        |       |           |         |        |       | N105   | 0,45          | 6.9   | 372      | 1220  | 0,48         | 7.4   | 397      | 1301  |
|        |       |           |         |        |       | N340   | 0,32          | 4.9   | 330      | 1083  | 0,37         | 5.7   | 398      | 1306  |
| 8,0    | 123   | FMJTC     | Fiocchi | 29,5   | 1.161 | 3N37   | 0,38          | 5.9   | 345      | 1132  | 0,43         | 6.6   | 384      | 1260  |
|        |       |           |         |        |       | 3N38   | 0,46          | 7.1   | 353      | 1158  | 0,53         | 8.2   | 406      | 1332  |
|        |       |           |         |        |       | 3N37   | 0,32          | 4.9   | 310      | 1016  | 0,34         | 5.3   | 329      | 1079  |
|        |       |           |         |        |       | N350   | 0,30          | 4.6   | 324      | 1064  | 0,32         | 5.0   | 338      | 1110  |
| 9,5    | 147   | HP-XTP    | Hornady | 29,5   | 1.161 | N105   | 0,38          | 5.8   | 326      | 1071  | 0,41         | 6.3   | 347      | 1139  |
|        |       |           |         |        |       |        |               |       |          |       |              |       |          |       |

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

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

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

.357 SIG

Test barrel: 130 mm (5"), 1 in 16" twist  
Primers: Small Pistol  
Cases: Starline, trim-to length 21,80 mm (0.858")

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

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

.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 |       | Type/Name | Mfg       | 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   | HP-XTP    | Hornady   | 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  |
|        |       |           |           |        |       | 3N37   | 0,42          | 6.5   | 385      | 1263  | 0,47         | 7.2   | 411      | 1347  |
|        |       |           |           |        |       | N350   | 0,36          | 5.6   | 357      | 1171  | 0,41         | 6.3   | 386      | 1266  |
| 7,5    | 115   | FMJ       | Lapua     | 31,5   | 1.240 | N330   | 0,34          | 5.2   | 350      | 1148  | 0,39         | 6.1   | 394      | 1294  |
| 7,5    | 115   | FMJ       | Sierra    | 32,4   | 1.276 | N350   | 0,51          | 7.9   | 414      | 1358  | 0,55         | 8.5   | 439      | 1439  |
|        |       |           |           |        |       | 3N37   | 0,48          | 7.4   | 395      | 1296  | 0,51         | 7.9   | 419      | 1375  |
| 7,5    | 115   | RN        | Rainier   | 31,5   | 1.240 | N320   | 0,31          | 4.8   | 357      | 1171  | 0,34         | 5.2   | 376      | 1232  |
|        |       |           |           |        |       | N340   | 0,39          | 6.0   | 382      | 1253  | 0,42         | 6.5   | 404      | 1325  |
|        |       |           |           |        |       | N350   | 0,43          | 6.6   | 388      | 1273  | 0,48         | 7.3   | 413      | 1355  |
|        |       |           |           |        |       | 3N37   | 0,44          | 6.8   | 390      | 1280  | 0,48         | 7.3   | 411      | 1348  |
| 8,0    | 123   | FMJ       | Lapua     | 31,5   | 1.240 | N330   | 0,32          | 4.9   | 362      | 1188  | 0,37         | 5.8   | 382      | 1254  |
| 8,0    | 124   | FMJ-FP    | Hornady   | 32,0   | 1.260 | N320   | 0,30          | 4.6   | 330      | 1083  | 0,33         | 5.0   | 348      | 1142  |
|        |       |           |           |        |       | N330   | 0,36          | 5.6   | 363      | 1191  | 0,42         | 6.4   | 409      | 1340  |
|        |       |           |           |        |       | N340   | 0,39          | 6.0   | 368      | 1207  | 0,43         | 6.6   | 391      | 1281  |
|        |       |           |           |        |       | 3N37   | 0,46          | 7.1   | 374      | 1227  | 0,48         | 7.4   | 388      | 1271  |
|        |       |           |           |        |       | N350   | 0,41          | 6.3   | 366      | 1201  | 0,45         | 6.9   | 389      | 1275  |
|        |       |           |           |        |       | N105   | 0,64          | 9.9   | 429      | 1407  | 0,67         | 10.4  | 458      | 1501  |
| 8,0    | 124   | LSWC      | Intercast | 32,0   | 1.260 | N320   | 0,26          | 4.0   | 334      | 1096  | 0,29         | 4.5   | 352      | 1153  |
|        |       |           |           |        |       | N340   | 0,35          | 5.4   | 367      | 1204  | 0,38         | 5.9   | 386      | 1266  |
|        |       |           |           |        |       | N350   | 0,39          | 6.0   | 371      | 1217  | 0,43         | 6.6   | 393      | 1289  |
|        |       |           |           |        |       | 3N37   | 0,41          | 6.3   | 377      | 1237  | 0,45         | 6.9   | 397      | 1302  |
| 8,4    | 130   | FMJ       | Sierra    | 32,0   | 1.260 | N320   | 0,27          | 4.2   | 317      | 1040  | 0,30         | 4.6   | 336      | 1101  |
|        |       |           |           |        |       | N330   | 0,32          | 4.9   | 323      | 1060  | 0,37         | 5.6   | 359      | 1178  |
|        |       |           |           |        |       | N340   | 0,36          | 5.6   | 349      | 1145  | 0,39         | 5.9   | 367      | 1202  |
|        |       |           |           |        |       | 3N37   | 0,41          | 6.3   | 360      | 1181  | 0,44         | 6.8   | 380      | 1245  |
|        |       |           |           |        |       | N105   | 0,60          | 9.3   | 402      | 1319  | 0,63         | 9.6   | 423      | 1388  |
| 8,4    | 130   | RN        | Rainier   | 32,0   | 1.260 | N320   | 0,29          | 4.5   | 312      | 1024  | 0,31         | 4.8   | 331      | 1086  |
|        |       |           |           |        |       | N340   | 0,35          | 5.4   | 344      | 1129  | 0,38         | 5.8   | 360      | 1179  |
|        |       |           |           |        |       | N350   | 0,38          | 5.9   | 347      | 1138  | 0,42         | 6.4   | 368      | 1206  |
|        |       |           |           |        |       | 3N37   | 0,41          | 6.3   | 355      | 1165  | 0,44         | 6.8   | 374      | 1225  |
| 9,4    | 145   | LRN       | Intercast | 32,0   | 1.260 | N340   | 0,28          | 4.3   | 315      | 1033  | 0,31         | 4.7   | 333      | 1091  |
|        |       |           |           |        |       | 3N37   | 0,36          | 5.6   | 329      | 1079  | 0,39         | 5.9   | 349      | 1143  |
|        |       |           |           |        |       | N350   | 0,33          | 5.1   | 319      | 1047  | 0,36         | 5.6   | 339      | 1111  |
|        |       |           |           |        |       | N340   | 0,33          | 5.1   | 315      | 1033  | 0,36         | 5.5   | 335      | 1097  |
| 9,5    | 147   | HP/XTP    | Hornady   | 32,0   | 1.260 | 3N37   | 0,38          | 5.9   | 334      | 1096  | 0,41         | 6.3   | 353      | 1158  |
|        |       |           |           |        |       | N350   | 0,37          | 5.7   | 327      | 1073  | 0,40         | 6.1   | 346      | 1134  |
|        |       |           |           |        |       | N105   | 0,51          | 7.9   | 360      | 1181  | 0,53         | 8.2   | 377      | 1237  |
|        |       |           |           |        |       | N340   | 0,32          | 4.9   | 321      | 1053  | 0,35         | 5.3   | 335      | 1097  |
| 9,5    | 147   | RN        | Rainier   | 32,0   | 1.260 | N350   | 0,34          | 5.2   | 307      | 1007  | 0,37         | 5.7   | 326      | 1070  |
|        |       |           |           |        |       | 3N37   | 0,36          | 5.6   | 316      | 1037  | 0,39         | 5.9   | 333      | 1091  |

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

.38 Super Lapua

Test barrel: 140 mm (5½”), 1 in 16” twist  
Primers: Small Pistol  
Cases: LAPUA, trim-to length 22,70 mm (0.893”)

| Bullet |       |           |        |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|--------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg    | 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   | FMJ       | Lapua  | 31,5   | 1.240 | N330   | 0,34          | 5.2   | 350      | 1148  | 0,41         | 6.3   | 407      | 1335  |
|        |       |           |        |        |       | N340   | 0,40          | 6.2   | 373      | 1224  | 0,44         | 6.8   | 406      | 1330  |
|        |       |           |        |        |       | 3N37   | 0,47          | 7.3   | 379      | 1243  | 0,52         | 8.0   | 415      | 1361  |
|        |       |           |        |        |       | 3N38   | 0,60          | 9.3   | 413      | 1355  | 0,68         | 10.4  | 454      | 1489  |
| 8,0    | 123   | FMJ       | Lapua  | 32,0   | 1.260 | N330   | 0,32          | 4.9   | 362      | 1188  | 0,39         | 6.0   | 388      | 1273  |
|        |       |           |        |        |       | N340   | 0,39          | 6.0   | 357      | 1171  | 0,43         | 6.7   | 387      | 1270  |
|        |       |           |        |        |       | 3N37   | 0,47          | 7.3   | 372      | 1220  | 0,52         | 8.0   | 402      | 1319  |
|        |       |           |        |        |       | 3N38   | 0,57          | 8.8   | 394      | 1293  | 0,62         | 9.6   | 434      | 1424  |
| 8,4    | 130   | FMJ       | Sierra | 32,0   | 1.260 | N330   | 0,32          | 4.9   | 232      | 761   | 0,38         | 5.9   | 368      | 1207  |
|        |       |           |        |        |       | N340   | 0,38          | 5.9   | 347      | 1138  | 0,41         | 6.4   | 376      | 1234  |
|        |       |           |        |        |       | 3N37   | 0,46          | 7.1   | 360      | 1181  | 0,50         | 7.7   | 392      | 1285  |
|        |       |           |        |        |       | 3N38   | 0,53          | 8.2   | 373      | 1224  | 0,58         | 8.9   | 411      | 1350  |

.38 Special

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

| Bullet |       |           |           |        |       | Powder             | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-----------|--------|-------|--------------------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg       | 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   | HP/XTP    | Hornady   | 36,5   | 1.437 | N320               | 0,35          | 5.4   | 342      | 1120  | 0,40         | 6.1   | 388      | 1272  |
|        |       |           |           |        |       | N340               | 0,40          | 6.2   | 345      | 1130  | 0,45         | 6.9   | 386      | 1267  |
|        |       |           |           |        |       | 3N37               | 0,48          | 7.3   | 353      | 1156  | 0,53         | 8.2   | 399      | 1308  |
|        |       |           |           |        |       | N350               | 0,43          | 6.6   | 355      | 1165  | 0,50         | 7.7   | 398      | 1305  |
| 8,0    | 124   | LSWC      | Intercast | 36,5   | 1.437 | N320               | 0,29          | 4.5   | 310      | 1015  | 0,34         | 5.2   | 353      | 1159  |
|        |       |           |           |        |       | N340               | 0,37          | 5.7   | 324      | 1063  | 0,42         | 6.4   | 367      | 1203  |
|        |       |           |           |        |       | 3N37               | 0,41          | 6.3   | 329      | 1079  | 0,46         | 7.0   | 367      | 1205  |
|        |       |           |           |        |       | N350               | 0,39          | 5.9   | 336      | 1101  | 0,44         | 6.8   | 370      | 1215  |
| 8,1    | 125   | FP/XTP    | Hornady   | 36,5   | 1.437 | N320               | 0,32          | 4.9   | 299      | 981   | 0,37         | 5.6   | 342      | 1121  |
|        |       |           |           |        |       | N340               | 0,38          | 5.8   | 318      | 1042  | 0,43         | 6.7   | 359      | 1178  |
|        |       |           |           |        |       | 3N37               | 0,44          | 6.8   | 319      | 1045  | 0,49         | 7.5   | 367      | 1204  |
|        |       |           |           |        |       | N350               | 0,42          | 6.5   | 323      | 1058  | 0,49         | 7.5   | 373      | 1224  |
| 8,1    | 125   | FP        | Rainier   | 36,5   | 1.437 | N320               | 0,29          | 4.5   | 293      | 960   | 0,34         | 5.2   | 332      | 1089  |
|        |       |           |           |        |       | N340               | 0,34          | 5.2   | 306      | 1002  | 0,41         | 6.3   | 349      | 1146  |
|        |       |           |           |        |       | N350               | 0,38          | 5.9   | 304      | 997   | 0,45         | 6.9   | 354      | 1160  |
|        |       |           |           |        |       | 3N37               | 0,40          | 6.2   | 310      | 1017  | 0,47         | 7.2   | 362      | 1187  |
| 9,1    | 140   | HP        | Speer     | 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  |
|        |       |           |           |        |       | 3N37               | 0,41          | 6.2   | 282      | 925   | 0,46         | 7.1   | 341      | 1117  |
|        |       |           |           |        |       | N350               | 0,40          | 6.2   | 282      | 925   | 0,45         | 6.9   | 336      | 1102  |
| 9,4    | 145   | LSWC      | Intercast | 37,5   | 1.476 | N320               | 0,25          | 3.9   | 270      | 886   | 0,30         | 4.6   | 306      | 1004  |
|        |       |           |           |        |       | N340               | 0,33          | 5.1   | 295      | 966   | 0,38         | 5.8   | 341      | 1118  |
|        |       |           |           |        |       | 3N37               | 0,36          | 5.5   | 287      | 940   | 0,39         | 6.0   | 328      | 1077  |
|        |       |           |           |        |       | N350               | 0,35          | 5.4   | 296      | 969   | 0,42         | 6.4   | 346      | 1136  |
| 9,4    | 145   | LSWC      |           | 37,5   | 1.476 | N32C <sup>*)</sup> | 0,32          | 4.9   | 307      | 1007  | 0,37         | 5.7   | 314      | 1030  |
| 9,5    | 146   | JHP       | Speer     | 35,0   | 1.378 | N340               | 0,30          | 4.6   | 261      | 856   | 0,35         | 5.4   | 306      | 1004  |
|        |       |           |           |        |       | 3N37               | 0,35          | 5.4   | 263      | 863   | 0,40         | 6.1   | 310      | 1018  |
|        |       |           |           |        |       | N350               | 0,34          | 5.2   | 265      | 869   | 0,39         | 5.9   | 308      | 1010  |
| 9,6    | 148   | LWC       | Sako      | 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   |

## .38 Special

(cont.)

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

| Bullet |       |           |           |        |       | Powder             | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-----------|--------|-------|--------------------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg       | 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   | HP        | Speer     | 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   |
|        |       |           |           |        |       | 3N37               | 0,38          | 5.9   | 259      | 848   | 0,43         | 6.6   | 305      | 999   |
|        |       |           |           |        |       | N350               | 0,36          | 5.5   | 261      | 855   | 0,41         | 6.3   | 309      | 1013  |
| 10,2   | 158   | FNCM      | Gunhill   | 36,7   | 1.445 | N32C <sup>*)</sup> | 0,27          | 4.2   | 261      | 856   | 0,36         | 5.6   | 306      | 1004  |
| 10,3   | 158   | LSWC/HP   |           | 36,5   | 1.437 | N320 <sup>*)</sup> | 0,21          | 3.3   | 230      | 755   | 0,25         | 3.8   | 256      | 840   |
|        |       |           |           |        |       | N330 <sup>*)</sup> | 0,23          | 3.6   | 240      | 787   | 0,27         | 4.1   | 269      | 883   |
| 10,2   | 158   | FP        | Rainier   | 37,5   | 1.476 | N320               | 0,26          | 3.9   | 237      | 776   | 0,31         | 4.8   | 283      | 927   |
|        |       |           |           |        |       | N340               | 0,32          | 4.9   | 247      | 809   | 0,37         | 5.7   | 295      | 967   |
|        |       |           |           |        |       | N350               | 0,36          | 5.5   | 261      | 856   | 0,41         | 6.3   | 306      | 1004  |
|        |       |           |           |        |       | 3N37               | 0,37          | 5.6   | 260      | 853   | 0,42         | 6.5   | 310      | 1015  |
| 10,4   | 160   | LFN       | Intercast | 37,5   | 1.476 | N340               | 0,33          | 5.1   | 297      | 974   | 0,38         | 5.8   | 338      | 1107  |
|        |       |           |           |        |       | 3N37               | 0,35          | 5.3   | 277      | 909   | 0,40         | 6.2   | 324      | 1064  |
|        |       |           |           |        |       | N350               | 0,35          | 5.4   | 294      | 963   | 0,40         | 6.1   | 328      | 1077  |

\*) Cowboy Action Shooting load

## .357 Magnum

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

| Bullet |       |           |           |                    |       | Powder | Starting load |        |           |                    | Maximum load |       |          |       |
|--------|-------|-----------|-----------|--------------------|-------|--------|---------------|--------|-----------|--------------------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg       | 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   | HP/XTP    | Hornady   | 40,0               | 1.575 | N310   | 0,43          | 6.6    | 413       | 1355               | 0,45         | 7.0   | 427      | 1402  |
|        |       |           |           |                    |       | N320   | 0,51          | 7.9    | 445       | 1460               | 0,54         | 8.3   | 462      | 1516  |
|        |       |           |           |                    |       | N340   | 0,60          | 9.3    | 475       | 1558               | 0,64         | 9.8   | 500      | 1639  |
|        |       |           |           |                    |       | 3N37   | 0,68          | 10.5   | 496       | 1627               | 0,73         | 11.3  | 518      | 1701  |
|        |       |           |           |                    |       | N350   | 0,69          | 10.6   | 497       | 1631               | 0,73         | 11.2  | 517      | 1697  |
| 8,0    | 124   | LSWC      | Intercast | 41,0 <sup>1)</sup> | 1.614 | N110   | 1,20          | 18.5   | 523       | 1716               | 1,35F        | 20.8F | 612      | 2006  |
|        |       |           |           |                    |       | N340   | 0,56          | 8.6    | 443       | 1453               | 0,60         | 9.2   | 462      | 1516  |
|        |       |           |           |                    |       | N350   | 0,59          | 9.1    | 446       | 1463               | 0,63         | 9.8   | 465      | 1524  |
|        |       |           |           |                    |       | N110   | 1,11          | 17.1   | 510       | 1673               | 1,18         | 18.3  | 541      | 1775  |
|        |       |           |           |                    |       | 8,1    | 125           | FP/XTP | Hornady   | 40,0               | 1.575        | N310  | 0,39     | 6.0   |
| 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  |
| 9,1    | 140   | HP        | Speer     | 40,0               | 1.575 | N340   | 0,53          | 8.2    | 404       | 1325               | 0,56         | 8.7   | 422      | 1385  |
|        |       |           |           |                    |       | 3N37   | 0,59          | 9.1    | 417       | 1368               | 0,63         | 9.8   | 439      | 1440  |
|        |       |           |           |                    |       | N350   | 0,58          | 8.9    | 416       | 1365               | 0,62         | 9.5   | 437      | 1433  |
|        |       |           |           |                    |       | N110   | 1,02          | 15.7   | 457       | 1499               | 1,11F        | 17.1F | 502      | 1647  |
|        |       |           |           |                    |       | 9,4    | 145           | LSWC   | Intercast | 41,0 <sup>1)</sup> | 1.614        | N320  | 0,41     | 6.3   |
| N340   | 0,47  | 7.3       | 398       | 1306               | 0,50  |        |               |        |           |                    |              | 7.7   | 415      | 1360  |
| 3N37   | 0,54  | 8.3       | 412       | 1352               | 0,58  |        |               |        |           |                    |              | 9.0   | 432      | 1418  |
| N350   | 0,51  | 7.9       | 404       | 1325               | 0,56  |        |               |        |           |                    |              | 8.7   | 427      | 1401  |
| N110   | 0,98  | 15.1      | 479       | 1572               | 1,04  |        |               |        |           |                    |              | 16.0  | 502      | 1649  |
| 10,2   | 158   | HP        | Speer     | 40,0               | 1.575 | N320   | 0,40          | 6.2    | 335       | 1099               | 0,43         | 6.6   | 354      | 1160  |
|        |       |           |           |                    |       | N340   | 0,47          | 7.3    | 361       | 1184               | 0,50         | 7.7   | 378      | 1239  |
|        |       |           |           |                    |       | 3N37   | 0,53          | 8.2    | 377       | 1237               | 0,57         | 8.8   | 398      | 1305  |
|        |       |           |           |                    |       | N350   | 0,54          | 8.3    | 385       | 1263               | 0,58         | 8.9   | 400      | 1314  |

F = Case full

<sup>1)</sup> 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

## .357 Magnum

(cont.)

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

| Bullet |       |           |           |                    |       | Powder             | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-----------|--------------------|-------|--------------------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg       | 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   | FP/XTP    | Hornady   | 40,0               | 1.575 | N105               | 0,76          | 11.7  | 427      | 1401  | 0,80         | 12.4  | 447      | 1466  |
| 10,2   | 158   | HP        | Speer     | 40,0               | 1.575 | N110               | 0,98          | 15.1  | 451      | 1480  | 1,03         | 15.9  | 478      | 1569  |
| 10,2   | 158   | FNCM      | Gunhill   | 40,2               | 1.583 | N32C <sup>*)</sup> | 0,29          | 4.5   | 265      | 869   | 0,37         | 5.7   | 309      | 1014  |
| 10,3   | 158   | LSWC/HP   |           | 40,0               | 1.575 | N330 <sup>*)</sup> | 0,25          | 3.9   | 241      | 791   | 0,32         | 5.0   | 304      | 997   |
|        |       |           |           |                    |       | N340 <sup>*)</sup> | 0,29          | 4.5   | 245      | 804   | 0,38         | 5.9   | 320      | 1050  |
| 10,4   | 160   | LFN       | Intercast | 40,0               | 1.575 | N340               | 0,45          | 6.9   | 376      | 1234  | 0,48         | 7.4   | 389      | 1276  |
|        |       |           |           |                    |       | 3N37               | 0,51          | 7.9   | 383      | 1257  | 0,54         | 8.4   | 403      | 1321  |
|        |       |           |           |                    |       | N350               | 0,48          | 7.4   | 383      | 1257  | 0,52         | 8.1   | 399      | 1309  |
|        |       |           |           |                    |       | N110               | 0,92          | 14.2  | 456      | 1496  | 0,97         | 15.0  | 478      | 1570  |
| 11,7   | 180   | TMJ       | Speer     | 42,6 <sup>1)</sup> | 1.677 | N340               | 0,45          | 6.9   | 321      | 1053  | 0,48         | 7.4   | 341      | 1118  |
|        |       |           |           |                    |       | 3N37               | 0,50          | 7.7   | 336      | 1102  | 0,54         | 8.3   | 358      | 1174  |
|        |       |           |           |                    |       | N350               | 0,47          | 7.3   | 325      | 1066  | 0,51         | 7.9   | 351      | 1150  |
|        |       |           |           |                    |       | N105               | 0,65          | 10.0  | 379      | 1243  | 0,71         | 10.9  | 401      | 1315  |
|        |       |           |           |                    |       | N110               | 0,82          | 12.7  | 382      | 1253  | 0,91F        | 14.0F | 425      | 1394  |
| 13,0   | 200   | TMJ       | Speer     | 43,1 <sup>1)</sup> | 1.697 | 3N37               | 0,46          | 7.1   | 297      | 974   | 0,50         | 7.7   | 317      | 1041  |
|        |       |           |           |                    |       | N350               | 0,45          | 6.9   | 288      | 945   | 0,49         | 7.7   | 314      | 1031  |
|        |       |           |           |                    |       | N105               | 0,60          | 9.3   | 337      | 1106  | 0,64         | 10.2  | 358      | 1174  |
|        |       |           |           |                    |       | N110               | 0,79          | 12.2  | 362      | 1188  | 0,83         | 12.8  | 382      | 1252  |

F = Case full

<sup>1)</sup> The cartridge overall length exceeds the CIP maximum.

\*) 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 |       | Type/Name  | Mfg       | 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   | FP/XTP     | Hornady   | 48,0               | 1.890 | 3N37   | 0,70          | 10.8  | 461      | 1512  | 0,74         | 11.3  | 478      | 1568  |
|        |       |            |           |                    |       | N350   | 0,64          | 9.9   | 443      | 1453  | 0,71         | 10.9  | 470      | 1541  |
|        |       |            |           |                    |       | N105   | 0,85          | 13.1  | 485      | 1591  | 0,92         | 14.3  | 513      | 1683  |
|        |       |            |           |                    |       | N110   | 1,21          | 18.7  | 557      | 1827  | 1,27         | 19.5  | 578      | 1898  |
| 10,2   | 158   | FP         | Rainier   | 48,0               | 1.890 | N350   | 0,71          | 11.0  | 440      | 1444  | 0,78         | 12.0  | 472      | 1548  |
|        |       |            |           |                    |       | 3N37   | 0,69          | 10.6  | 445      | 1460  | 0,75         | 11.5  | 473      | 1552  |
|        |       |            |           |                    |       | N105   | 0,86          | 13.3  | 490      | 1608  | 0,94         | 14.5  | 517      | 1695  |
|        |       |            |           |                    |       | N110   | 1,27          | 19.6  | 559      | 1834  | 1,32         | 20.3  | 581      | 1907  |
| 10,4   | 160   | LFN        | Intercast | 48,0               | 1.890 | 3N37   | 0,66          | 10.2  | 465      | 1526  | 0,72         | 11.1  | 482      | 1580  |
|        |       |            |           |                    |       | N350   | 0,66          | 10.2  | 459      | 1506  | 0,70         | 10.7  | 473      | 1553  |
|        |       |            |           |                    |       | N105   | 0,87          | 13.4  | 517      | 1696  | 0,95         | 14.6  | 541      | 1775  |
| 11,7   | 180   | Silhouette | Nosler    | 48,1               | 1.894 | N105   | 0,79          | 12.2  | 443      | 1453  | 0,85         | 13.1  | 468      | 1534  |
|        |       |            |           |                    |       | N110   | 1,07          | 16.5  | 500      | 1640  | 1,12         | 17.3  | 519      | 1704  |
|        |       |            |           |                    |       | N120   | 1,40          | 21.6  | 516      | 1693  | 1,46         | 22.5  | 537      | 1762  |
| 13,0   | 200   | TMJ        | Speer     | 50.8 <sup>1)</sup> | 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  |

<sup>1)</sup> 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



.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 |       | Type/Name | Mfg     | 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   | HP-XTP    | Hornady | 28,6   | 1.126 | N320   | 0,34          | 5.2   | 337      | 1106  | 0,35         | 5.5   | 346      | 1134  |
|        |       |           |         |        |       | N330   | 0,39          | 6.0   | 348      | 1142  | 0,40         | 6.2   | 357      | 1172  |
|        |       |           |         |        |       | N340   | 0,39          | 6.0   | 345      | 1132  | 0,41         | 6.3   | 357      | 1171  |
|        |       |           |         |        |       | 3N37   | 0,47          | 7.3   | 357      | 1171  | 0,49         | 7.6   | 369      | 1210  |
|        |       |           |         |        |       | N350   | 0,43          | 6.6   | 351      | 1152  | 0,45         | 7.0   | 362      | 1189  |
| 8,7    | 135   | HP        | Nosler  | 28,6   | 1.126 | N320   | 0,39          | 6.0   | 373      | 1224  | 0,40         | 6.2   | 384      | 1259  |
|        |       |           |         |        |       | N340   | 0,48          | 7.4   | 403      | 1322  | 0,50         | 7.8   | 416      | 1364  |
|        |       |           |         |        |       | 3N37   | 0,54          | 8.3   | 403      | 1322  | 0,56         | 8.6   | 417      | 1367  |
| 10,0   | 155   | FP        | Rainier | 28,6   | 1.126 | N320   | 0,34          | 5.2   | 331      | 1086  | 0,35         | 5.5   | 340      | 1114  |
|        |       |           |         |        |       | N330   | 0,39          | 6.0   | 344      | 1129  | 0,40         | 6.2   | 354      | 1160  |
|        |       |           |         |        |       | N340   | 0,41          | 6.3   | 352      | 1155  | 0,43         | 6.6   | 364      | 1195  |
|        |       |           |         |        |       | N350   | 0,46          | 7.1   | 357      | 1171  | 0,48         | 7.4   | 370      | 1213  |
|        |       |           |         |        |       | 3N37   | 0,49          | 7.6   | 359      | 1178  | 0,51         | 7.9   | 371      | 1216  |
| 10,7   | 165   | TC-FMJ    | PMC     | 28,6   | 1.126 | N320   | 0,32          | 4.9   | 303      | 994   | 0,34         | 5.2   | 316      | 1038  |
|        |       |           |         |        |       | N340   | 0,41          | 6.3   | 334      | 1096  | 0,43         | 6.6   | 347      | 1137  |
|        |       |           |         |        |       | 3N37   | 0,47          | 7.3   | 343      | 1125  | 0,49         | 7.5   | 355      | 1166  |
|        |       |           |         |        |       | 3N38   | 0,62          | 9.6   | 369      | 1211  | 0,64         | 9.8   | 382      | 1252  |
|        |       |           |         |        |       | N340   | 0,34          | 5.2   | 313      | 1027  | 0,36         | 5.6   | 324      | 1063  |
| 11,0   | 170   | HP        | Hornady | 28,6   | 1.126 | 3N37   | 0,39          | 6.0   | 322      | 1056  | 0,41         | 6.3   | 333      | 1093  |
|        |       |           |         |        |       | N350   | 0,38          | 5.9   | 322      | 1056  | 0,40         | 6.2   | 333      | 1091  |
|        |       |           |         |        |       | N340   | 0,35          | 5.4   | 305      | 1001  | 0,37         | 5.7   | 316      | 1037  |
| 11,7   | 180   | HP        | Speer   | 28,6   | 1.126 | 3N37   | 0,38          | 5.9   | 303      | 994   | 0,40         | 6.2   | 315      | 1035  |
|        |       |           |         |        |       | N350   | 0,38          | 5.9   | 319      | 1047  | 0,40         | 6.2   | 329      | 1078  |
|        |       |           |         |        |       | N320   | 0,23          | 3.5   | 269      | 883   | 0,26         | 4.1   | 295      | 968   |
| 11,7   | 180   | LTC       | Fiocchi | 28,6   | 1.126 | 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  |
|        |       |           |         |        |       | N340   | 0,30          | 4.6   | 267      | 876   | 0,32         | 4.9   | 277      | 910   |
| 13,0   | 200   | TMJ       | Speer   | 28,6   | 1.126 | 3N37   | 0,33          | 5.1   | 265      | 869   | 0,35         | 5.4   | 277      | 909   |
|        |       |           |         |        |       | N350   | 0,34          | 5.2   | 272      | 892   | 0,36         | 5.5   | 282      | 925   |
|        |       |           |         |        |       | 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: Remington, trim-to length 25,00 mm (0.988”)

| Bullet |       |           |         |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|---------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg     | 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   | HP-XTP    | Hornady | 31,9   | 1.256 | N340   | 0,40          | 6.2   | 355      | 1165  | 0,46         | 7.1   | 374      | 1225  |
|        |       |           |         |        |       | 3N37   | 0,43          | 6.6   | 359      | 1178  | 0,52         | 7.9   | 380      | 1247  |
|        |       |           |         |        |       | N350   | 0,42          | 6.4   | 359      | 1178  | 0,51         | 7.8   | 380      | 1247  |
| 10,0   | 155   | FP        | Rainier | 31,9   | 1.256 | N340   | 0,45          | 6.9   | 369      | 1211  | 0,50         | 7.6   | 386      | 1266  |
|        |       |           |         |        |       | N350   | 0,49          | 7.6   | 379      | 1243  | 0,55         | 8.5   | 400      | 1311  |
|        |       |           |         |        |       | 3N37   | 0,51          | 7.8   | 373      | 1224  | 0,56         | 8.6   | 392      | 1284  |
| 11,7   | 180   | HP        | Speer   | 31,9   | 1.256 | N340   | 0,37          | 5.6   | 312      | 1024  | 0,42         | 6.4   | 332      | 1089  |
|        |       |           |         |        |       | 3N37   | 0,40          | 6.1   | 333      | 1093  | 0,47         | 7.2   | 350      | 1147  |
|        |       |           |         |        |       | N350   | 0,34          | 5.2   | 328      | 1076  | 0,43         | 6.6   | 345      | 1130  |
|        |       |           |         |        |       | N105   | 0,56          | 8.6   | 372      | 1220  | 0,64         | 9.9   | 390      | 1280  |

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

10 mm AUTO (cont.)

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

| Bullet |       |           |         |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|---------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg     | 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   | FMJ/FP    | Hornady | 31,9   | 1.256 | N340   | 0,30          | 4.6   | 267      | 876   | 0,35         | 5.3   | 288      | 945   |
|        |       |           |         |        |       | 3N37   | 0,35          | 5.4   | 291      | 955   | 0,41         | 6.3   | 309      | 1014  |
|        |       |           |         |        |       | N350   | 0,31          | 4.7   | 284      | 932   | 0,38         | 5.8   | 302      | 989   |
|        |       |           |         |        |       | N105   | 0,47          | 7.3   | 325      | 1066  | 0,53         | 8.2   | 339      | 1111  |

.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 |       | Type/Name | Mfg     | 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   | JHC       | Sierra  | 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   | HP/XTP    | Hornady | 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 |       | Type/Name | Mfg     | 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   | HP-XTP    | Hornady | 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   | HP-XTP    | Hornady | 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   | FPJ-Match | Sierra  | 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   | JTC-Sil   | Hornady | 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   |
| 15,6   | 240   | SWC/HP    |         | 39,1   | 1.539 | N320 <sup>(1)</sup> | 0,30          | 4.7   | 214      | 702   | 0,38         | 5.9   | 260      | 853   |
|        |       |           |         |        |       | N330 <sup>(1)</sup> | 0,36          | 5.5   | 229      | 751   | 0,41         | 6.3   | 270      | 886   |
| 16,1   | 248   | LRNFP     | Gunhill | 37,2   | 1.465 | N32C <sup>(1)</sup> | 0,38          | 5.9   | 238      | 781   | 0,41         | 6.3   | 255      | 837   |
| 16,2   | 250   | FPJ       | Sierra  | 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   |

(cont.)

.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 |       | Type/Name | Mfg       | 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       | Intercast | 39,1   | 1.539 | N320               | 0,34          | 5.2   | 242      | 794   | 0,39         | 6.0   | 262      | 860   |
|        |       |           |           |        |       | N330               | 0,41          | 6.3   | 261      | 856   | 0,45         | 6.9   | 281      | 922   |
|        |       |           |           |        |       | N340               | 0,42          | 6.5   | 256      | 840   | 0,46         | 7.1   | 278      | 912   |
|        |       |           |           |        |       | N350               | 0,47          | 7.3   | 259      | 850   | 0,52         | 8.0   | 282      | 925   |
| 17,3   | 267   | LFN       |           | 39,1   | 1.539 | N320 <sup>*)</sup> | 0,25          | 3.8   | 193      | 633   | 0,34         | 5.3   | 242      | 794   |
|        |       |           |           |        |       | N330 <sup>*)</sup> | 0,32          | 4.9   | 216      | 709   | 0,38         | 5.9   | 254      | 833   |
|        |       |           |           |        |       | N340 <sup>*)</sup> | 0,43          | 6.6   | 261      | 856   | 0,47         | 7.3   | 282      | 925   |

<sup>\*)</sup> 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 |       | Type/Name | Mfg       | 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   | HP-XTP    | Hornady   | 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   | HP-XTP    | Hornady   | 40,7               | 1.602 | N320               | 0,65          | 10.0      | 381      | 1250  | 0,73         | 11.3  | 408      | 1339  |     |      |      |     |     |      |
|        |       |           |           |                    |       | N340               | 0,76          | 11.7      | 410      | 1345  | 0,84         | 13.0  | 437      | 1434  |     |      |      |     |     |      |
|        |       |           |           |                    |       | 3N37               | 0,89          | 13.7      | 433      | 1421  | 0,98         | 15.2  | 462      | 1515  |     |      |      |     |     |      |
|        |       |           |           |                    |       | N350               | 0,83          | 12.8      | 416      | 1365  | 0,95         | 14.6  | 453      | 1487  |     |      |      |     |     |      |
|        |       |           |           |                    |       | N105               | 1,09          | 16.8      | 459      | 1506  | 1,26         | 19.4  | 500      | 1642  |     |      |      |     |     |      |
| 14,3   | 220   | FPJ-Match | Sierra    | 40,7               | 1.602 | N110               | 1,58          | 24.4      | 494      | 1621  | 1,71         | 26.3  | 530      | 1740  |     |      |      |     |     |      |
|        |       |           |           |                    |       | 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   | JTC-Sil   | Hornady   | 40,7               | 1.602 | N320               | 0,58          | 8.9       | 331      | 1086  | 0,63         | 9.7   | 354      | 1161  |     |      |      |     |     |      |
|        |       |           |           |                    |       | N340               | 0,67          | 10.3      | 358      | 1175  | 0,75         | 11.5  | 380      | 1247  |     |      |      |     |     |      |
|        |       |           |           |                    |       | 3N37               | 0,78          | 12.0      | 372      | 1220  | 0,86         | 13.3  | 402      | 1318  |     |      |      |     |     |      |
|        |       |           |           |                    |       | N350               | 0,77          | 11.9      | 375      | 1230  | 0,83         | 12.8  | 399      | 1308  |     |      |      |     |     |      |
|        |       |           |           |                    |       | N105               | 0,95          | 14.7      | 404      | 1325  | 1,08         | 16.6  | 437      | 1434  |     |      |      |     |     |      |
| 16,1   | 248   | LRNFP     | Gunhill   | 40,5               | 1.594 | N110               | 1,32          | 20.4      | 435      | 1427  | 1,43         | 22.1  | 470      | 1541  |     |      |      |     |     |      |
|        |       |           |           |                    |       | N32C <sup>*)</sup> | 0,49          | 7.6       | 272      | 892   | 0,62         | 9.6   | 309      | 1014  |     |      |      |     |     |      |
|        |       |           |           |                    |       | 16,2               | 250           | FPJ-Match | Sierra   | 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  |     |      |      |     |     |      |
| 17,3   | 267   | LFN       | Intercast | 42,7 <sup>1)</sup> | 1.681 | N105               | 0,87          | 13.4      | 382      | 1253  | 1,08         | 16.7  | 429      | 1406  |     |      |      |     |     |      |
|        |       |           |           |                    |       | N340               | 0,68          | 10.5      | 357      | 1171  | 0,75         | 11.5  | 376      | 1232  |     |      |      |     |     |      |
|        |       |           |           |                    |       | 3N37               | 0,77          | 11.9      | 365      | 1198  | 0,85         | 13.2  | 391      | 1284  |     |      |      |     |     |      |
|        |       |           |           |                    |       | N350               | 0,74          | 11.4      | 360      | 1181  | 0,82         | 12.7  | 385      | 1262  |     |      |      |     |     |      |
|        |       |           |           |                    |       | N110               | 1,32          | 20.4      | 422      | 1385  | 1,41         | 21.8  | 450      | 1476  |     |      |      |     |     |      |
| 17,3   | 267   | LFN       |           | 40,0               | 1.575 | N340 <sup>*)</sup> | 0,38          | 5.9       | 224      | 735   | 0,49         | 7.5   | 288      | 945   |     |      |      |     |     |      |
| 17,3   | 267   | LSWC      |           | 40,5               | 1.681 | N32C <sup>*)</sup> | 0,50          | 7.7       | 271      | 889   | 0,60         | 9.3   | 301      | 988   |     |      |      |     |     |      |

<sup>1)</sup> The cartridge overall length exceeds the CIP maximum.

<sup>\*)</sup> Cowboy Action Shooting load

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

(cont.)

.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 |       | Type/Name | Mfg     | 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   | HP-XTP    | Hornady | 43,6 <sup>1)</sup> | 1.717 | N340   | 0,62          | 9.6   | 304      | 997   | 0,68         | 10.5  | 323      | 1061  |
|        |       |           |         |                    |       | 3N37   | 0,67          | 10.3  | 308      | 1010  | 0,74         | 11.4  | 336      | 1102  |
|        |       |           |         |                    |       | N350   | 0,68          | 10.5  | 315      | 1033  | 0,76         | 11.7  | 344      | 1128  |
|        |       |           |         |                    |       | 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   | JSP       | Sierra  | 43,6 <sup>1)</sup> | 1.717 | N340   | 0,61          | 9.4   | 296      | 971   | 0,66         | 10.2  | 319      | 1046  |
|        |       |           |         |                    |       | 3N37   | 0,65          | 10.0  | 305      | 1001  | 0,73         | 11.2  | 332      | 1089  |
|        |       |           |         |                    |       | N350   | 0,64          | 9.9   | 296      | 971   | 0,72         | 11.1  | 326      | 1071  |
|        |       |           |         |                    |       | 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  |

<sup>1)</sup> The cartridge overall length exceeds the CIP maximum.

.45 ACP

Test barrel:

150 mm (6"), 1 in 16" twist

Primers:

Large Pistol

Cases:

Remington, trim-to length 22,70 mm (0.893")

| Bullet |       |           |           |        |       | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-----------|--------|-------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg       | C.O.L. |       | Type   | Weight        |       | Velocity |       | Weight       |       | Velocity |       |
| [g]    | [grs] |           |           | [mm]   | [in.] |        | [g]           | [grs] | [m/s]    | [fps] | [g]          | [grs] | [m/s]    | [fps] |
| 10,0   | 154   | LSWC      | Intercast | 31,5   | 1.240 | N320   | 0,38          | 5.9   | 315      | 1033  | 0,41         | 6.4   | 341      | 1117  |
|        |       |           |           |        |       | N340   | 0,49          | 7.6   | 344      | 1129  | 0,53         | 8.2   | 369      | 1211  |
| 11,7   | 180   | LSWC      | Intercast | 31,6   | 1.244 | N320   | 0,35          | 5.4   | 296      | 971   | 0,39         | 6.0   | 321      | 1053  |
|        |       |           |           |        |       | N340   | 0,44          | 6.8   | 311      | 1020  | 0,48         | 7.4   | 337      | 1104  |
| 12,0   | 185   | HP        | Hornady   | 29,5   | 1.161 | N330   | 0,39          | 6.0   | 285      | 935   | 0,44         | 6.8   | 311      | 1020  |
| 12,0   | 185   | TMJ-SWC   | Speer     | 31,5   | 1.240 | N310   | 0,27          | 4.2   | 258      | 846   | 0,30         | 4.6   | 277      | 909   |
|        |       |           |           |        |       | N320   | 0,36          | 5.6   | 278      | 913   | 0,39         | 6.1   | 301      | 988   |
|        |       |           |           |        |       | N340   | 0,46          | 7.1   | 303      | 993   | 0,50         | 7.7   | 330      | 1082  |
| 12,0   | 185   | FN        | Rainier   | 30,5   | 1.201 | N320   | 0,37          | 5.8   | 291      | 955   | 0,41         | 6.3   | 316      | 1037  |
|        |       |           |           |        |       | N340   | 0,47          | 7.3   | 303      | 994   | 0,51         | 7.9   | 333      | 1093  |
|        |       |           |           |        |       | N350   | 0,57          | 8.8   | 325      | 1065  | 0,61         | 9.4   | 357      | 1170  |
| 12,0   | 185   | HP        | Nosler    | 28,7   | 1.130 | N310   | 0,28          | 4.3   | 249      | 817   | 0,33         | 5.1   | 286      | 938   |
|        |       |           |           |        |       | N320   | 0,34          | 5.2   | 249      | 817   | 0,38         | 5.9   | 280      | 919   |
|        |       |           |           |        |       | N340   | 0,45          | 6.9   | 290      | 951   | 0,51         | 7.9   | 328      | 1076  |
| 13,0   | 200   | FMJ-CT    | Hornady   | 31,0   | 1.220 | N330   | 0,37          | 5.7   | 263      | 863   | 0,41         | 6.3   | 291      | 955   |
|        |       |           |           |        |       | 3N37   | 0,42          | 6.5   | 227      | 745   | 0,48         | 7.4   | 279      | 915   |
| 13,0   | 200   | LSWC      | Intercast | 31,5   | 1.240 | N310   | 0,24          | 3.7   | 252      | 827   | 0,26         | 4.0   | 272      | 892   |
|        |       |           |           |        |       | N320   | 0,30          | 4.7   | 271      | 888   | 0,33         | 5.1   | 292      | 958   |
|        |       |           |           |        |       | N340   | 0,39          | 6.1   | 295      | 966   | 0,43         | 6.6   | 317      | 1039  |
| 13,0   | 200   | FMJ-CT    | Hornady   | 31,5   | 1.240 | N320   | 0,32          | 5.0   | 261      | 855   | 0,35         | 5.4   | 283      | 928   |
|        |       |           |           |        |       | N340   | 0,40          | 6.2   | 276      | 906   | 0,44         | 6.8   | 300      | 986   |
|        |       |           |           |        |       | N350   | 0,43          | 6.7   | 279      | 916   | 0,47         | 7.3   | 303      | 996   |
| 14,9   | 230   | FMJ-RN    | Hornady   | 32,0   | 1.260 | N310   | 0,24          | 3.7   | 219      | 719   | 0,27         | 4.2   | 235      | 771   |
|        |       |           |           |        |       | N320   | 0,32          | 4.9   | 239      | 784   | 0,34         | 5.2   | 259      | 850   |
|        |       |           |           |        |       | N330   | 0,33          | 5.1   | 228      | 748   | 0,36         | 5.6   | 256      | 840   |
|        |       |           |           |        |       | N340   | 0,38          | 5.9   | 253      | 830   | 0,41         | 6.4   | 278      | 912   |
|        |       |           |           |        |       | 3N37   | 0,37          | 5.7   | 205      | 673   | 0,43         | 6.6   | 253      | 830   |
|        |       |           |           |        |       | N350   | 0,43          | 6.7   | 257      | 845   | 0,47         | 7.2   | 280      | 920   |

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

.45 Colt

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

| Bullet |       |           |           |            | Powder             | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|-----------|------------|--------------------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg       | 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   | LSWC      | Intercast | 40,5 1.594 | N320               | 0,55          | 8.6   | 341      | 1119  | 0,60         | 9.2   | 367      | 1204  |
|        |       |           |           |            | N330               | 0,66          | 10.1  | 362      | 1188  | 0,71         | 10.9  | 389      | 1276  |
|        |       |           |           |            | N340               | 0,69          | 10.7  | 362      | 1188  | 0,74         | 11.5  | 391      | 1283  |
|        |       |           |           |            | N350               | 0,75          | 11.6  | 363      | 1191  | 0,83         | 12.8  | 399      | 1309  |
| 12,0   | 185   | HP/XTP    | Hornady   | 40,5 1.594 | N320               | 0,57          | 8.7   | 334      | 1096  | 0,62         | 9.6   | 360      | 1181  |
|        |       |           |           |            | N340               | 0,71          | 10.9  | 342      | 1122  | 0,76         | 11.8  | 377      | 1237  |
|        |       |           |           |            | N350               | 0,80          | 12.3  | 346      | 1135  | 0,86         | 13.2  | 382      | 1253  |
|        |       |           |           |            | N320               | 0,57          | 8.9   | 328      | 1076  | 0,62         | 9.6   | 358      | 1175  |
| 12,0   | 185   | FN        | Rainier   | 40,5 1.594 | N330               | 0,67          | 10.4  | 333      | 1093  | 0,73         | 11.2  | 367      | 1204  |
|        |       |           |           |            | N340               | 0,72          | 11.1  | 343      | 1125  | 0,78         | 12.1  | 383      | 1257  |
|        |       |           |           |            | N350               | 0,80          | 12.3  | 346      | 1135  | 0,88         | 13.6  | 389      | 1276  |
|        |       |           |           |            | N320               | 0,52          | 8.1   | 317      | 1040  | 0,58         | 8.9   | 342      | 1122  |
| 13,0   | 200   | FMJ-CT    | Hornady   | 40,5 1.594 | N320               | 0,56          | 8.7   | 326      | 1070  | 0,61         | 9.4   | 347      | 1138  |
|        |       |           |           |            | N340               | 0,70          | 10.9  | 341      | 1119  | 0,75         | 11.6  | 364      | 1194  |
|        |       |           |           |            | N320 <sup>*)</sup> | 0,44          | 6.8   | 259      | 850   | 0,56         | 8.7   | 318      | 1043  |
|        |       |           |           |            | N330 <sup>*)</sup> | 0,52          | 8.0   | 267      | 876   | 0,56         | 8.6   | 298      | 978   |
| 14,9   | 230   | FMJ-Match | Sierra    | 40,5 1.594 | N320               | 0,49          | 7.5   | 286      | 938   | 0,54         | 8.3   | 306      | 1004  |
|        |       |           |           |            | N340               | 0,63          | 9.7   | 301      | 988   | 0,68         | 10.4  | 330      | 1083  |
|        |       |           |           |            | N320               | 0,47          | 7.3   | 257      | 843   | 0,51         | 7.8   | 280      | 919   |
|        |       |           |           |            | N340               | 0,60          | 9.2   | 281      | 922   | 0,64         | 9.8   | 307      | 1007  |
| 16,2   | 250   | HP-XTP    | Hornady   | 40,5 1.594 | N350               | 0,69          | 10.7  | 297      | 974   | 0,72         | 11.2  | 321      | 1053  |
|        |       |           |           |            | N105               | 0,91          | 14.1  | 296      | 971   | 0,97         | 15.0  | 344      | 1129  |
|        |       |           |           |            | N320 <sup>*)</sup> | 0,36          | 5.6   | 229      | 751   | 0,45         | 6.9   | 279      | 915   |
|        |       |           |           |            | N330 <sup>*)</sup> | 0,41          | 6.3   | 238      | 781   | 0,49         | 7.5   | 293      | 961   |
| 16,3   | 251   | LRNFP     | Gunhill   | 40,3 1.587 | N32C <sup>*)</sup> | 0,54          | 8.3   | 271      | 889   | 0,62         | 9.6   | 305      | 1001  |

<sup>\*)</sup> Cowboy Action Shooting load

.45 Winchester Magnum

Test barrel: 300 mm (12”), 1 in 16” twist  
Primers: Large Pistol  
Cases: Winchester, trim-to length 30,30 mm (1.192”)

| Bullet |       |           |         |            | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|---------|------------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg     | 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   | HP/XTP    | Hornady | 38,5 1.516 | N350   | 0,81          | 12.5  | 451      | 1478  | 0,99         | 15.3  | 512      | 1678  |
|        |       |           |         |            | 3N37   | 0,91          | 14.0  | 507      | 1662  | 1,03         | 15.9  | 534      | 1750  |
|        |       |           |         |            | N105   | 1,13          | 17.4  | 523      | 1714  | 1,33         | 20.5  | 576      | 1888  |
|        |       |           |         |            | 3N37   | 0,91          | 14.0  | 487      | 1598  | 1,00         | 15.4  | 513      | 1683  |
| 13,0   | 200   | TMJ-SWC   | Speer   | 38,5 1.516 | N320   | 1,07          | 16.5  | 483      | 1583  | 1,23         | 19.0  | 532      | 1744  |
| 13,0   | 200   | FMJ-CT    | Hornady | 39,5 1.555 | N105   | 1,49          | 22.9  | 528      | 1731  | 1,64         | 25.2  | 575      | 1885  |
| 13,0   | 200   | TMJ-SWC   | Speer   | 38,5 1.516 | N110   | 1,49          | 22.9  | 528      | 1731  | 1,64         | 25.2  | 575      | 1885  |
| 14,9   | 230   | FMJ-RN    | Hornady | 39,5 1.555 | 3N37   | 0,82          | 12.7  | 410      | 1344  | 0,92         | 14.2  | 451      | 1478  |
| 16,2   | 250   | HP-XTP    | Hornady | 38,2 1.504 | N110   | 1,41          | 21.8  | 495      | 1622  | 1,55         | 23.9  | 532      | 1744  |
|        |       |           |         |            | 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  |

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

.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 |       | Type/Name | Mfg                   | 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   | HP/XTP    | Hornady <sup>1)</sup> | 41,7 1.642 | 3N37   | 1,14          | 17.6  | 531      | 1742  | 1,36         | 21.0  | 588      | 1929  |
|        |       |           |                       |            | N350   | 1,18          | 18.2  | 537      | 1762  | 1,39         | 21.4  | 593      | 1946  |
|        |       |           |                       |            | N105   | 1,72          | 26.5  | 606      | 1988  | 1,90         | 29.3  | 653      | 2142  |
|        |       |           |                       |            | 3N37   | 1,09          | 16.8  | 474      | 1555  | 1,27         | 19.6  | 523      | 1716  |
| 14,6   | 225   | HP        | Speer                 | 42,7 1.681 | 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  |
|        |       |           |                       |            | 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  |
| 16,2   | 250   | HP/XTP    | Hornady               | 42,8 1.685 | N110   | 1,82          | 28.1  | 523      | 1716  | 1,99         | 30.7  | 569      | 1867  |
|        |       |           |                       |            | 3N37   | 0,99          | 15.3  | 396      | 1299  | 1,10         | 17.0  | 433      | 1421  |
|        |       |           |                       |            | 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  |

<sup>1)</sup>The crimping is done is over the bullet ogive.

.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 |       | Type/Name | Mfg   | 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   | JHP       | IMI   | 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  |
|        |       |           |       |            | N105   | 1,15          | 17.7  | 357      | 1171  | 1,26         | 19.4  | 406      | 1332  |
| 21,1   | 325   | UCHP      | Speer | 40,0 1.575 | 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 |       | Type/Name | Mfg     | 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   | TMJ       | Speer   | 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  |
|        |       |           |         |            | 3N38   | 1,64          | 25.3  | 468      | 1535  | 2,00         | 30.9  | 537      | 1762  |
| 22,7   | 350   | HP/XTP    | Hornady | 50,4 1.984 | 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  |
|        |       |           |         |            | 3N38   | 1,63          | 25.2  | 441      | 1447  | 1,85         | 28.5  | 486      | 1594  |
| 25,9   | 400   | JSP       | Sierra  | 52,1 2.051 | 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 = Full case

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



# Vihtavuori Smokeless Loads for Cowboy Action Shooting

## About the Data

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

All the listed loads are intended to be used in modern fire-arms, 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.

## Warnings

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

## .38 Special

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

| Bullet |       |           |         |            | Powder | Starting load |       |          |       | Maximum load |       |          |       |
|--------|-------|-----------|---------|------------|--------|---------------|-------|----------|-------|--------------|-------|----------|-------|
| Weight |       | Type/Name | Mfg     | 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      | Gunhill | 37,5       | N32C   | 0,32          | 4.9   | 307      | 1007  | 0,37         | 5.7   | 314      | 1030  |
| 10,2   | 158   | FNCM      |         | 36,7       | N32C   | 0,27          | 4.2   | 261      | 856   | 0,36         | 5.6   | 306      | 1004  |
| 10,3   | 158   | LSWC/HP   |         | 36,5       | 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 |       | Type/Name | Mfg     | 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   | FNCM      | Gunhill | 40,2       | N32C   | 0,29          | 4.5   | 265      | 869   | 0,37         | 5.7   | 309      | 1014  |
| 10,3   | 158   | LSWC/HP   |         | 40,0       | 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 |       | Type/Name | Mfg     | 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    | Gunhill | 39,1       | 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   |
|        |       |           |         |            | N32C   | 0,38          | 5.9   | 238      | 781   | 0,41         | 6.3   | 255      | 837   |
| 16,1   | 248   | LRNFP     | Gunhill | 37,2       | N320   | 0,25          | 3.8   | 193      | 633   | 0,34         | 5.3   | 242      | 794   |
| 17,3   | 267   | LFN       |         | 39,1       | 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 |       | Type  | Mfg     | C.O.L.     | Type   | Weight        |       | Velocity |       | Weight       |       | Velocity |       |
| [g]    | [grs] |       |         | [mm] [in.] |        | [g]           | [grs] | [m/s]    | [fps] | [g]          | [grs] | [m/s]    | [fps] |
| 16,1   | 248   | LRNFP | Gunhill | 40,5       | N32C   | 0,49          | 7.6   | 272      | 892   | 0,62         | 9.6   | 309      | 1014  |
| 17,3   | 267   | LFN   |         | 40,0       | N340   | 0,38          | 5.9   | 224      | 735   | 0,49         | 7.5   | 288      | 945   |
| 17,3   | 267   | LSWC  |         | 40,5       | 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 |       | Type/Name | Mfg     | 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       |         | N320   | 0,36  | 5.6    | 229           | 751   | 0,45     | 6.9   | 279          | 915   |          |       |
|        |       |           |         | N330   | 0,41  | 6.3    | 238           | 781   | 0,49     | 7.5   | 293          | 961   |          |       |
| 16,3   | 251   | LRNFP     | Gunhill | 40,3   | 1.587 | N32C   | 0,54          | 8.3   | 271      | 889   | 0,62         | 9.6   | 305      | 1001  |

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## Personal Loads

[illegible]

## Personal Loads

[illegible]

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The Vihtavuori Powders and these booklets are available worldwide through our importers/distributors listed below. Most of these Vihtavuori partners carry also full line of Lapua reloading components. Please check the availability.

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