

Accurate[®] Smokeless Powder

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TABLE OF CONTENTS

Accurate Powder Specifications	Inside Front Cover
Introduction and Special Notes.....	3
Acknowledgments	5
Legend	5
Special Warnings About Internal Chamber/Bore Dimensions and Configurations	6
Accurate® Smokeless Powder Descriptions	8
Smokeless Propellant Storage	10
Handgun Data.....	14
Cowboy Action Shooting.....	22
Rifle Data.....	26
Bushing Data for Shotgun Propellants	45
Shotshell Data.....	47
A Quick Guide to Shotgun Primers and Wads	63

What's New in This Manual

- Data for MAGPRO for .300 Win Short Mag (WSM), .270 Win Short Mag (WSM), 7mm Win Short Mag (WSM), .243 Win, .25/06 Rem, .264 Win Mag, .270 Win, 7mm Rem Mag, 7mm Rem Ultra Mag, .30-06 Springfield, .300 Rem Ultra Mag, .338 Lapua Mag
- New calibers including .300 SAUM, 7mm WSM and .270 WSM.
- Updated powder descriptions

INTRODUCTION

This booklet is an introductory guide to the use of our **Accurate® Smokeless Propellants**, including the Scot™ series of shotshell propellants. The data for the metallic cartridges has been derived from our more comprehensive No. 2 loading guide. (It is available from your local dealer, or check the inside back cover of this booklet for ordering details.) The shotshell data is the latest we have available on the Scot series and is only available in this guide.

SAFETY

In reloading, the prime concern should be **SAFETY**. **Always** wear eye protection when reloading, even when working with “non-volatile” components. **Always** keep the reloading area clean. **Never** have more than one propellant within easy reach at any given time. Avoid having similar looking bullets of different weights on the bench at the same time. Read the safety notes in the center of the booklet before loading.

If you are new to reloading, we recommend that you obtain and read a book such as Dean Grennell’s “*ABC’s of Reloading*” or any other publication specifying the reloading procedures in detail. It will help provide the basics for getting started. Loading manuals from the bullet companies provide information about reloading for metallic cartridges. All loading tools (metallic and shotshell) come with instructional text.

Metallic Centrefire Calibers:

As with all editions of our loading data, as well as all other publications, one must be aware that the velocities and pressures generated for a *specific combination* of gun (i.e. chamber/barrel internal dimensions), and components, (i.e primer, case and bullet) *may differ significantly*, from what is listed in this guide. That’s the reason why a safety margin of 10% is built into the “START” load.

This is the golden rule of reloading: To always start at the suggested minimum “START” load. This also applies whenever a change is made to any one of the components of the combination, i.e., primer, case or bullet.

The only charge that can be guaranteed to be safe, is the minimum or “START” charge. The misconception that the maximum charge (or any charge beyond the minimum load) is also safe, is not true at all. The myriad of variables outside the control of the compiler of reloading data, does not allow for that exact a prediction.

This guide is a report of the velocities developed on a given day under a given set of lab conditions. **Variations as much as 10% have been recorded between different combinations.** Therefore, a variation in performance should be expected. In the case of metallic centerfire calibers, the minimum loads are listed. In certain cases where only one load is listed, such as reduced loads for special applications such as training, Cowboy action, galley loads etc, the listed charge can be used as is. In such cases the fact will be stipulated.

Please use caution when reloading with military cases as some batches of military cases

have reduced interior volume and may require reducing the charge even further to keep chamber pressure in line.

In the case of revolver calibers, some data was compiled using un-vented test barrels. Please expect a lower velocity in actual revolvers. This lower performance will depend on the conditions and parameters of each combination. This will depend on the cylinder gap, burn rate of the propellant, as well as the performance level.

WARNING concerning reduced loads: For this special type of application, it is often necessary to load ***below the 50% case capacity level***. This, combined with the fact that **fast handgun/shotshell propellants are recommended and used** to maintain the combustion efficiency, creates the **real possibility of “DOUBLE CHARGING.” THIS WILL HAVE DISASTROUS RESULTS**. Please verify and **check each and every loaded case** with a **marked plunger** before inserting/crimping the bullets. **Haste in this case is not worth the risk!!!!**

Shotshell Calibers:

The charge tables for shotshell cartridges are to be used as a guideline. Variations can occur, although to a lesser degree than with metallic centerfire calibers. Even when the exact same components are used, the difference *due to case condition, crimp, and primer* may cause variations beyond what is normally being accepted and/or assumed. **Shot shell calibers are especially sensitive to variations in primers and assembly procedures. The normal variation in primers even from one manufacturer will result in different ballistics.** The shot weights listed in this booklet are for lead shot; *steel shot may not be substituted*.

If you find indications of excessive pressure while using loads in this guide STOP TESTING, and verify all data and loading procedures. If things seem to be in order, check with our lab personnel before proceeding. The phone number to use is (931) 729 4207.

ACKNOWLEDGMENTS

The following companies/individuals have been helpful in the preparation of this loading guide:

Ballistic Products	CCI/Speer	Douglas Barrels
Bull-X Bullets	Clements Casting	Hornady Bullets
Eldorado Cartridge	Cooper Arms	Magnum Research
Lee Precision	Forster Products	Mayville Engineering (MEC)
Miller Arms	Freedom Arms	Nosler Bullets
Penny's Casting	Lyman Products	RCBS
Redding-SAECO	Precision Machine	Remington Arms Company
Starline	Sierra Bullets	White Rock Tool & Die
Thompson/Center Arms	H-S Precision	Mike Roeser
Wolfe Publishing Company	C. Sharps Arms	Bill Wiseman
Barnes Bullets		

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LEGEND

A-F	A-Frame	NOS	Nosler
BAR	Barnes	NR	No recommendation
BP	Ballistic Products	OAL	Overall length
BT	Ballistic Tip	OZ	Ounce
CB	Claybuster	PART	Partition
CLE	Clements	PC	Pattern control
DGW	Dixie Gun Works	PEN	Penny's Custom Bullets
DE	Double end wadcutter	PMC	PMC/Eldorado Cartridge
F/S	Feet per second	POST	Postell
FA	Freedom Arms	PSPCL	Pointed Soft Point Core-Lokt
FED	Federal	REM	Remington
FIO	Fiocchi	RN	Round Nose
FN	Flat Nose	RPM	Rock Pistol Manufacturing
FS	Failsafe	S	Solo
GD	Gold Dot	S&W	Smith and Wesson
GS	Grand Slam	SCHM	Schmitzer
H&R	Harrington and Richardson	SIR	Sirocco
HB	Hollow base wadcutter	SP	Spitzer
HDY	Hornady	SPBT	Soft Point Boat Tail
HPBT	Hollow Point Boat Tail	SPR	Speer
IMI	Israel Military Industries	SRA	Sierra
(L)	Lead	SWC	Semi-wadcutter
LY	Lyman	SWF	Swift
MAX	Maximum	T/C	Thompson/Center Arms
MIL	Military	ULA	Ultra Light Arms
MIN	Minimum	WIN	Winchester
N100	Nitro 100	X	X Hollow Point

SPECIAL WARNINGS!!!

Concerning the internal dimensions and configurations of centerfire metallic calibers, especially Semi-auto pistols. *This warning is not aimed at specific weapons, but any weapon with the conditions or dimensions as described below. Accurate Arms did not compile special data for any weapon.*

Chamber dimensions:

It is extremely important to note that due to aftermarket modifications and for certain factory produced semi-auto pistols, some pistols have chamber configurations that do not fully support the chambered cartridge case.

This modification is incorporated to aid in the reliable feeding of the round from the magazine. Although this practice is acceptable with some calibers such as the 45ACP which generate relatively low pressures, this kind of incomplete support can be a real problem with high performance calibers such as the 9mmx19P, 38Super, 40S&W and 10mm Auto calibers. Although it might also be acceptable for first fired conditions such as factory ammunition, or new unused cases, a potential hazardous condition can be created when cases are reloaded for the second or subsequent time. Whenever a deformed case results after firing (e.g., a bulged or “pregnant” shape from the base of the main body towards one third to half of the case body), it is a sure sign that the case is not fully supported. Although this bulged part is reformed during resizing, the case strength could be weakened. The problem occurs when this part of the weakened case again lines up with the modified part of the chamber. This will then cause the case to fail and the gasses to be ejected into the internal cavity of the weapon.

The loading data published by Accurate Arms was developed in our ballistic laboratory in accordance with SAAMI test methods and equipment and does not exceed Maximum Average Pressure recommended by SAAMI. This information is safe for use in firearms which provide complete support of the case. Failure to fully support the case with cartridges of such intensity may result in bulged cases, ruptured cases, separated case heads or other consequences which may result in destruction/damage to the firearm and/or injury or death to the shooter and/or bystanders. This can happen no matter whose propellant is used.

We recommend that if you own a firearm where the chamber does not fully support the chambered round and is producing the above mentioned symptoms, you contact the manufacturer to determine if the case is fully supported, or have

a competent gunsmith examine the firearm and determine the amount of support provided the case.

If your firearm does not provide complete support for the case, please take extreme care and refrain from reloading cases.

**Unconventional internal rifling/bore profiles
in conjunction with cast/lead bullets**

This concerns the combination of using cast/lead bullets with rifling configurations other than the standard “square” land and groove profile.

In order to properly engage the bullet, any barrel with an unconventional rifling profile needs to have an extremely tight bore diameter. When lead/cast bullets are used in conjunction with these types of barrels, it is extremely important to properly select the correct type, size (diameter) and hardness of the bullet. Any bullet material that might collect in the freebore/throat area will cause a delay in bullet displacement during firing, which will have disastrous results.

This is especially true in the case of typical high performance auto pistol calibers such as the 9mmx19P, 40S&W, 10mm Auto etc, and in the case of high performance 45ACP + P loads.

We recommend that the shooter/reloader always be aware of the level of leading that is occurring for their combination. Any excessive build up of material should prompt the cleaning of the bore. When plated cast bullets are used, make absolutely sure it is of the best quality possible with no possibility of separation of the plated material from the lead core.

Accurate Arms Company has felt it necessary to place these warnings because the continued safety and welfare of the shooting public compels us to do so.

Accurate® Smokeless Propellants

The **Accurate**® Smokeless Propellants listed below are in approximate burning order from fastest to slowest within each group. All propellants are manufactured with nitro-cotton as the main energetic ingredient. Double base propellants have NG or nitroglycerine as the second energetic ingredient.

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PISTOL PROPELLANTS

No. 2 An extremely fast burning, double base ball-type handgun powder specifically designed to have a relatively low loading density. A very clean burning powder that is well suited for low-performance and low loading density applications like Cowboy Action. It is certainly the most efficient and cost effective ball-type powder available for handgun loads.

No. 5 A fast burning, double base, ball-type handgun powder. This powder is extremely versatile and can be used in all handgun calibers. **No. 5** can be used over a wide performance range from low performance target and Cowboy Action applications to full power defense loads. The powder meters well and strikes a good balance between ballistics and cost efficiency.

No. 7 An intermediate burning, double base, ball-type handgun powder. This is a good choice for high performance handgun calibers, especially those designed and used on semi-auto pistols such as the .357 SIG, .400 Corbon, 10mm Auto etc. It is also suitable for the magnum revolver calibers as a cost effective alternative to the slower burning powders normally used for the magnum cartridges.

No. 9 A slow burning, double base, ball-type handgun powder. The powder is suitable for standard magnum handgun calibers such as .357 Magnum and the .44 Magnum as well as the extreme magnum calibers such as .454 Casull, .450 Extreme and .50 Action Express. A good all-around powder that will serve a wide range of high performance handgun applications.

4100 This is a slow burning, double base, ball-type handgun powder that was originally designed for the .410 shotgun. The powder is well suited for large capacity handgun cartridges like .44 Magnum, .454 Casull, .450 Extreme, .50 Action Express, etc. when maximum velocity is required (e.g., hunting, silhouette). The load data is limited so **No. 9** can be used as guideline and the charge increased by approximately 3%.

RIFLE PROPELLANTS

1680 An extremely fast burning, double base, ball-type rifle powder that is Accurate's fastest rifle powder. This powder suits some large capacity handgun cartridges like .50 Action Express, as well as low capacity rifle calibers such as the 7.62mmx39 and .22 Hornet. This powder is also well suited for light bullets in .222 Rem and .223 Rem and for intermediate type straight-walled calibers like the .449LW and .444 Marlin etc.

5744 An extremely fast burning, double base, extruded rifle powder. This unique powder can be used in both extreme magnum handgun and a wide range of rifle calibers. The powder is characterized by excellent ignitability and consistency over a very wide performance range. The ignitability coupled with the "bulkiness" makes this powder an excellent choice for use in reduced loads for many rifle calibers and in large capacity obsolete black powder calibers such as the .45-70Gov, .45-90/-110/-120 and the .50-90 through .50-120 Type calibers.

2015 A very fast burning, single base, extruded rifle powder. The powder was developed around the .223 Rem type calibers. Very popular in .22 and 6mm calibers especially the "PPC" and "BR" designated calibers. Works well in large bore calibers (e.g., .45-70 Gov, .458 Win Mag, and the old black powder .45 and .50 calibers) as it provides a well-balanced loading density which decreases powder position sensitivity.

2230 A very fast burning, double base, ball-type rifle powder. This versatile powder was designed around the .223 Rem caliber but can be used in many small and medium sized calibers including the .308 Win. It flows very well and is ideal for the shooter utilizing auto loading machines for Semi-auto rifles such as the AR15. Works well in large bore calibers (e.g., .45-70 Gov, .458 Win Mag, and the old black powder .45 and .50 calibers) as it provides a well-balanced loading density which decreases powder position sensitivity.

2460 A fast burning, double base, ball-type rifle powder that is a slower derivative of the **2230** powder. Is suitable for small and medium sized caliber applications but with slightly higher loading densities than **2230**. It provides an additional option to shooters in order to fine tune and optimize loads and combinations

with calibers ranging from the .223 Rem, .308 Win and for light bullets in .30-06 Springfield. Within threshold limit for M1/M14 systems.

2495 A medium fast burning, single base, extruded rifle powder that was developed around the .308 Win. and can be used over a very wide range of calibers. It's extremely popular for use in the .308 Win and .30-06 Service shooting disciplines. This versatile powder has good ignition characteristics, and when combined with the progressive burn rate, can be used over a wide performance range while maintaining good consistency.

2520 A medium fast burning, double base, ball-type rifle powder that was designed around the .308 Win. This powder is extremely popular with service shooters and is known as the "Camp Perry" powder. An excellent choice for use in the .308 Winchester and also the .30-06 Springfield. This versatile powder has excellent flow characteristics and is within the threshold limit for M1/M14 systems.

4064 A medium fast burning, single base, extruded rifle powder that is similar to IMR 4064 but with a short cut that provides for better flow. This versatile powder works well in calibers ranging from standard .30-06 Springfield to necked-down calibers such as .22-250, .220 Swift, 7x57 Mauser etc. Popular with service shooters, this powder still falls within the threshold limits for the M1 system, making it about the slowest extruded powder suitable for this application.

2700 A medium fast burning, double base, ball-type rifle powder that is ideally suited for medium capacity necked down calibers such as the .22-250 Remington, .220 Swift, .243 Winchester, .270 Winchester etc. This powder is suited for both medium- and over-bore calibers, making it very popular with varmint hunters. Will also flow well in auto-loaders and volumetric dispensing equipment.

4350 A medium slow burning, single base, extruded rifle powder that is very similar to IMR 4350. A very popular powder which can be used in a wide range of calibers from the standard .30-06 Springfield to "overbore" calibers such as 7mm Rem. Mag, .300 WSM and .300 Winchester Magnum etc. Excellent for the large capacity, large bore calibers like the .375 H & H providing a balance between ballistic performance and loading densities.

3100 A slow burning, single base, extruded rifle powder specifically designed for large capacity overbore magnum calibers such as the 7mm Rem Mag, .264 Win Mag, etc. It provides for high loading densities in these calibers and at full to slightly compressed loads in the medium sized overbore calibers (.243 Win and .270 Win). Will also work well in the new series of WSM and Remington SAUM calibers.

MAGPRO A slow burning, double base, ball-type rifle powder developed specifically for all the new Short Magnum calibers of both Winchester (WSM) and Remington (SAUM) except for .300 SAUM. This powder excels in the 7mm WSM as well as the .270 WSM and even derivatives of the wildcat 6.5 Short Action. Excellent in all overbore magnums such as the ULTRA magnums from Remington i.e. 7mm RUM, .338 RUM as well as the high performance .338 Lapua Magnum. Excellent flow in progressive auto-loaders and volumetric dispensing equipment. This is THE magnum rifle powder to have.

8700 An extremely slow burning, double base, ball-type rifle powder which is Accurate's slowest powder. It was originally developed for the .50 Browning (12.7mmx99 Nato). This powder delivers optimum performance in heavily necked down large capacity calibers such as the .257 Weatherby Magnum, .264 Win Mag and 7mm RUM. This powder is so slow that even at maximum and compressed loading densities, it is virtually impossible to cause any over pressure.

SHOTSHELL PROPELLANTS

NITRO 100 Accurate's fastest burning, double base, flake shotgun powder. Besides being a cost effective choice for all 12 gauge applications, **Nitro 100** is also an ideal powder for low pressure/low loading density handgun cartridges such as target and Cowboy Action shooting. It is a robust powder which is very clean burning in all the mentioned applications.

SOLO 1000 An extremely fast burning, single base, flake shotgun powder. **Solo 1000** was the pioneer in the clean burning revolution and is an excellent choice for trap, sporting clays and skeet shooting. An ultra clean burning powder best suited for 12 gauge shotgun loads but which is also suited for target handgun loads in .45 ACP and Cowboy Action.

SOLO 1250 A fast burning, single base, flake shotgun powder. Works well with heavier shot loads in 12 gauge and for all shotshell applications through 28 gauge. **Solo 1250** is slightly faster burning than IMR's PB powder. Can also be loaded in some handgun loads for target and cowboy action.

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DANGER!
SMOKELESS GUNPOWDER
EXTREMELY FLAMMABLE
KEEP AWAY FROM HEAT, SPARKS
OR OPEN FLAME
STORE IN A COOL DRY PLACE
KEEP OUT OF THE REACH
OF CHILDREN

PROPERTIES AND STORAGE OF SMOKELESS POWDER

Ammunition handloading has become increasingly popular in recent years. This leaflet discusses properties of smokeless powder and offers recommendations for its storage. This leaflet is intended to increase the knowledge of all concerned individuals and groups regarding smokeless powder. The statements and recommendations made are not intended to supersede local, state or Federal regulations. Proper authorities should be consulted on regulations for storage and use of smokeless powder in each specific community. A second leaflet entitled "SPORTING AMMUNITION PRIMERS: PROPERTIES, HANDLING, & STORAGE FOR HANDLOADING" supplements this leaflet on Smokeless Powders.

PROPERTIES OF SMOKELESS POWDER

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

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

Single-base smokeless powders derive their main source of energy from nitrocellulose. The energy released from double-base smokeless powders is derived from both nitrocellulose and nitroglycerin.

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

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

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

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

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

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In this respect smokeless powder differs from blasting agents or high explosives such as dynamite or blasting gelatin, although smokeless powder may contain chemical ingredients common to some of these products.

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

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

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

When ignited in an unconfined state, smokeless powder burns inefficiently with an orange colored flame. It produces a considerable amount of light brown noxious smelling smoke. It leaves a residue of ash and partially burned powder. **THE FLAME IS HOT ENOUGH TO CAUSE SEVERE BURNS.**

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

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

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

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

HOW TO CHECK SMOKELESS POWDER FOR DETERIORATION

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

Powder deterioration can be checked by opening the cap on the container and smelling the contents. Powder undergoing deterioration has an irritating acidic odor. (Don't confuse this with common solvent odors such as alcohol, ether and acetone.)

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

Never salvage powder from old cartridges and do not attempt to blend salvaged powder with new powder. Don't accumulate old powder stocks.

The best way to dispose of deteriorated smokeless powder is to burn it out in the open at an isolated location in small shallow piles (not over 1" deep). The quantity burned in any one pile should never exceed one pound. Use an ignition train of slow burning combustible material so that the person may retreat to a safe distance before powder is ignited.

CONSIDERATIONS FOR STORAGE OF SMOKELESS POWDER

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

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

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

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

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



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

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

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

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

RECOMMENDATIONS FOR STORAGE OF SMOKELESS POWDER

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

DO NOT STORE SMOKELESS POWDER IN THE SAME AREA WITH SOLVENTS, FLAMMABLE GASES OR HIGHLY COMBUSTIBLE MATERIALS.

STORE ONLY IN DEPARTMENT OF TRANSPORTATION APPROVED CONTAINERS.

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

DO NOT SMOKE IN AREAS WHERE POWDER IS STORED OR USED. Place appropriate "No Smoking" signs in these areas.

DO NOT SUBJECT THE STORAGE CABINETS TO CLOSE CONFINEMENT.

STORAGE CABINETS SHOULD BE CONSTRUCTED OF INSULATING MATERIALS AND WITH A WEAK WALL, SEAMS OR JOINTS TO PROVIDE AN EASY MEANS OF SELF-VENTING.

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

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

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

KNOW THE FOLLOWING RECOMMENDATIONS ON STORAGE AND HANDLING ISSUED BY THE NATIONAL FIRE PROTECTION ASSOCIATION, BATTERY MARCH PARK, QUINCY, MASS. 02269 AND REPRINTED WITH THEIR PERMISSION: CODE FOR THE MANUFACTURE, TRANSPORTATION STORAGE, AND USE OF EXPLOSIVE MATERIALS NFPA NO. 495-1992.

CHAPTER 10. SMALL ARMS AMMUNITION AND PRIMERS, SMOKELESS PROPELLANTS AND BLACK POWDER PROPELLANTS

10-3. SMOKELESS PROPELLANTS

10-3.1 Quantities of smokeless propellants not exceeding 25 lb (11.3 kg) in shipping containers approved by the U.S. Department of Transportation may be transported in a private vehicle.

10-3.2 Quantities of smokeless propellants exceeding of 25 lb (11.3 kg) but not exceeding 50 lb (22.7 kg), transported in a private vehicle, shall be transported in a portable magazine having wood walls of at least 1-inch (25.4 mm) nominal thickness.



- 10-3.3** Transportation of more than 50 lb (22.7 kg) of smokeless propellants in a private vehicle is prohibited.
- 10-3.4** Commercial shipments of smokeless propellants in quantities not exceeding 100 lb (45.4 kg) are classified for transportation purposes as flammable solids when packaged according to U.S. Department of Transportation Hazardous Materials Regulations (Title 49 *Code of Federal Regulations*, Part 173.197a), and shall be transported accordingly.
- 10-3.5** Commercial shipments of smokeless propellants exceeding 100 lb (45.4 kg) or not packaged in accordance with the regulations cited in 10-3.4 shall be transported according to U.S. Department of Transportation regulations for Class B propellant explosives.
- 10-3.6** Smokeless propellants shall be stored in shipping containers specified by the U.S. Department of Transportation Hazardous Materials Regulations.
- 10-3.7** Smokeless propellants intended for personal use in quantities not exceeding 20 lb (9.1 kg) may be stored in original containers in residences. Quantities exceeding 20 lb (9.1 kg) but not exceeding 50 lb (22.7 kg), may be stored in residences if kept in a wooden box or cabinet having walls of at least 1-inch (25.4 mm) nominal thickness.
- 10-3.8** Not more than 20 lb (9.1 kg) of smokeless propellants, in containers of 1 lb (0.45 kg) maximum capacity, shall be displayed in commercial establishments.
- 10-3.9** Commercial stocks of smokeless propellants shall be stored as follows:
- Quantities exceeding 20 lb (9.1 kg), but not exceeding 100 lb (45.4 kg), shall be stored in portable wooden boxes having walls of at least 1-in. (25.4 mm) thickness.
 - Quantities exceeding 100 lb (45.4 kg), but not exceeding 800 lb (363 kg), shall be stored in nonportable storage cabinets having walls of at least 1-in. (25.4 mm) thickness. Not more than 400 lb (181 kg) may be stored in any one cabinet, and cabinets shall be separated by a distance of at least 25 ft (7.63 m) or by a fire partition having a fire resistance of at least 1 hr.
 - Quantities exceeding 800 lb (363 kg), but not exceeding 5,000 lb (2268 kg), may be stored in a building if the following requirements are met:
 - The warehouse or storage room shall not be accessible to unauthorized personnel.
 - Smokeless propellant shall be stored in nonportable storage cabinets having wood walls at least 1-in. (25.4 mm) thick and having shelves with not more than a 3 ft separation between shelves.
 - No more than 400 lb (181 kg) shall be stored in any one cabinet.
 - Cabinets shall be located against walls of the storage room or warehouse with at least 40 ft (12.2 m) between cabinets.
 - Separation between cabinets may be reduced to 20 ft (6.1 m) if barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades shall extend at least 10 ft (3 m) outward, shall be firmly attached to the wall, and shall be constructed of ¼-in. (6.4 mm) boiler plate, 2-in. (51 mm) thick wood, brick, or concrete block.
 - Smokeless propellant shall be separated from materials classified by the U.S. Department of Transportation as flammable liquids, flammable solids, and oxidizing materials by a distance of 25 ft (7.63 m) or by a fire partition having a fire-resistance of at least 1 hour.
 - The building shall be protected by an automatic sprinkler system installed according to NFPA No. 13, *Standard for the Installation of Sprinkler Systems*.
 - Smokeless propellants not stored according to (a), (b), and (c) above shall be stored in a type 4 magazine constructed and located according to Chapter 6.

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HANDGUN DATA

FOR MORE COMPLETE LOADING INFORMATION, BUY ACCURATE'S RELOADING MANUAL, BOOK TWO. SEE INSIDE BACK COVER FOR DETAILS.

H A N D G U N	7mm T/CU					7mm IHMSA				
	Gun	DOUGLAS	Barrel length	14"		Gun	DOUGLAS	Barrel length	14"	
	Primer	CCI 400	Case	REM		Primer	CCI 200	Case	REM	
	Powder	Start Chg.	Velocity	Max. Chg.	Velocity	Powder	Start Chg.	Velocity	Max. Chg.	Velocity
	(L)145 RCBS OAL = 2.500"					HDY 139 SP OAL = 2.765"				
	5744	18.0	1721	20.0	1871	2230	32.9	2139	36.5	2325
	1680	20.3	1751	22.5	1903	2460	33.3	2160	37.0	2348
	2230	25.2	1892	28.0	2057	2520	33.8	2148	37.5	2335
	2460	25.7	1916	28.5	2083	NOS 150 BT OAL = 2.650"				
	2520	25.7	1871	28.5	2034	2230	32.0	2065	35.5	2245
	SRA 100 HP OAL = 2.430"					2460	32.4	2068	36.0	2248
	5744	20.7	2134	23.0	2320	2520	32.4	2030	36.0	2207
	1680	25.2	2240	28.0	2435	SRA 168 HPBT OAL = 2.650"				
	2015	25.2	1964	28.0	2135	2230	31.1	1932	34.5	2100
	2230	27.0	2065	30.0	2245	2460	31.5	1953	35.0	2123
	2460	27.0	2050	30.0	2228	2520	32.0	1961	35.5	2132
	2520	25.2	1867	28.0	2029	7mm BR REMINGTON				
	SRA 140 SBT OAL = 2.540"					Gun	DOUGLAS	Barrel length	15"	
	5744	18.5	1783	20.5	1938	Primer	REM 7½	Case	REM	
	1680	22.1	1849	24.5	2010	Powder	Start Chg.	Velocity	Max. Chg.	Velocity
	2015	24.3	1893	27.0	2058	HDY 120 SSP OAL = 2.225"				
	2230	25.7	1934	28.5	2102	2015	26.1	2175	29.0	2364
	2460	26.1	1940	29.0	2109	2230	27.9	2171	31.0	2360
	2520	24.8	1796	27.5	1952	2460	28.4	2184	31.5	2374
	HDY 162 HPBT OAL = 2.640"					2520	28.8	2205	32.0	2397
	5744	16.7	1555	18.5	1690	SRA 150 SBT OAL = 2.255"				
	1680	20.3	1707	22.5	1855	2015	24.8	1972	27.5	2144
	2015	23.4	1817	26.0	1975	2230	26.1	1953	29.0	2123
	2230	24.3	1807	27.0	1964	2460	26.6	1978	29.5	2150
	2460	24.8	1802	27.5	1959	2520	27.5	2004	30.5	2178
	2520	24.8	1731	27.5	1882	SRA 168 HPBT OAL = 2.310"				
	REM 175 PSP OAL = 2.495"					2015	23.4	1802	26.0	1959
	5744	16.2	1493	18.0	1623	2230	25.2	1825	28.0	1984
	1680	19.4	1499	21.5	1629	2460	25.7	1857	28.5	2018
	2015	23.4	1701	26.0	1849	2520	27.0	1911	30.0	2077
	2230	24.3	1644	27.0	1787					
	2460	24.3	1658	27.0	1802					
	2520	24.8	1629	27.5	1771					

TECH LINE: 931-729-4207

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

HANDGUN DATA					15	HANDGUN DATA				
.30 HERRETT						7.62 x 25mm TOKAREV (CZ-52 only) (CONT'D)				
Gun	DOUGLAS	Barrel length	14"			Powder	Start Chg.	Velocity	Max. Chg.	Velocity
Primer	REM 9½	Case	REM			SPR 110 RN	OAL = 1.300"			
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		No. 2	5.6	1331	6.2	1447
HDY 130 SSP	OAL = 2.295"					No. 5	7.2	1444	8.0	1570
2015	27.0	1986	30.0	2159		No. 7	8.6	1490	9.5	1620
2230	28.8	1955	32.0	2125		No. 9	10.5	1553	11.7	1688
2460	29.3	1956	32.5	2126						
HDY 150 SP	OAL = 2.385"					.30/30 WINCHESTER				
2015	24.8	1791	27.5	1947		Gun	T/C Contender	Barrel length	14"	
2230	27.0	1803	30.0	1960		Primer	CCI 200	Case	FED	
2460	27.5	1821	30.5	1979		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
SRA 165 SBT	OAL = 2.490"					HDY 110 RN	OAL = 2.440"			
2015	23.4	1706	26.0	1854		2015	32.0	2206	35.5	2398
2230	24.8	1652	27.5	1796		2230	32.4	2153	36.0	2340
2460	25.2	1685	28.0	1831		2495	33.3	2036	37.0	2213
						2460	33.3	2179	37.0	2369
						2520	34.2	2177	38.0	2366
						4064	35.1	2005	39.0	2179
						2700	36.0	2107	40.0	2290
						HDY 130 SSP	OAL = 2.625"			
						2015	28.8	1995	32.0	2168
						2230	30.6	1989	34.0	2162
						2495	29.7	1813	33.0	1971
						2460	31.5	1992	35.0	2165
						2520	33.3	2088	37.0	2270
						4064	34.2	2053	38.0	2231
						2700	34.2	1935	38.0	2103
						SPR 150 RN	OAL = 2.540"			
						2015	26.1	1775	29.0	1929
						2230	28.5	1840	31.7	2000
						2495	27.5	1680	30.5	1826
						2460	29.3	1854	32.5	2015
						2520	30.2	1882	33.5	2046
						4064	29.7	1697	33.0	1845
						2700	33.3	1875	37.0	2038
						.32 S & W LONG				
						Gun	DOUGLAS	Barrel length	6"	
						Primer	FED 100	Case	REM	
						<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
						(L)HDY 90 HBWC	OAL = 0.930"			
						No. 2	1.8	723	2.0	786
						SRA 90 JHP	OAL = 1.190"			
						No. 2	2.3	815	2.5	886
						7.62 x 25mm TOKAREV (CZ-52 only)				
Gun	DOUGLAS	Barrel length	9"							
Primer	CCI 500	Case	Starline							
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>						
SRA 85 RN	OAL = 1.316"									
No. 2	5.9	1509	6.5	1640						
No. 5	7.7	1625	8.5	1766						
No. 7	9.2	1631	10.2	1773						
No. 9	11.8	1814	13.1	1972						

HANDGUN

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
 *Subsonic loads; do not reduce loads. (C) Denotes a compressed load for maximum charge.

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HANDGUN DATA					16	HANDGUN DATA				
.32 H & R MAGNUM						.380 AUTO				
Gun	DOUGLAS	Barrel length	10"			Gun	OBERMEYER	Barrel length	3"	
Primer	CCI 500	Case	FED			Primer	CCI 500	Case	FED	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
(L) 100 SWC	OAL = 1.310"					(L) 100 RN	OAL = 0.950"			
No. 2	3.2	1067	3.6	1160		No. 2	3.2	868	3.6	943
No. 5	4.2	1160	4.7	1261		No. 5	4.1	848	4.5	922
HDY 85 JHP	OAL = 1.325"					HDY 90 XTP	OAL = 0.960"			
No. 2	3.6	1167	4.0	1269		No. 2	3.3	856	3.7	930
No. 5	4.8	1229	5.3	1336		No. 5	4.3	846	4.8	920
SPR 100 JHP	OAL = 1.335"					HDY 100 FMJ	OAL = 0.975"			
No. 2	3.3	1054	3.7	1146		No. 2	3.1	730	3.4	793
No. 5	4.5	1126	5.0	1224		No. 5	4.4	823	4.9	895
.32/20 WINCHESTER						9mm LUGER				
Gun	Ruger B'hawk	Barrel length	6½"			Gun	OBERMEYER	Barrel length	4"	
Primer	CCI 400	Case	REM			Primer	WIN SP	Case	FED	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
(L) 100 SWC	OAL = 1.585"					(L) 115 SWC	OAL = 1.110"			
No. 5	4.3	796	4.8	865		No. 2	4.4	1054	4.9	1146
No. 7	5.5	850	6.1	924		No. 5	5.7	1087	6.3	1182
5744	8.4	828	9.3	900		No. 7	7.8	1127	8.7	1225
SRA 90 JHC	OAL = 1.565"					(L) 145 RN	OAL = 1.140"			
No. 5	4.5	834	5.0	906		No. 2	3.3	822	3.7	893
No. 7	5.5	862	6.1	937		No. 5	4.6	905	5.1	984
5744	8.7	846	9.7	920		No. 7	6.5	968	7.2	1052
HDY 100 XTP	OAL = 1.565"					HDY 115 FMJ	OAL = 1.095"			
No. 5	4.2	776	4.7	844		No. 2	4.0	1005	4.4	1092
No. 7	5.2	816	5.8	887		No. 5	6.3	1097	7.0	1192
5744	8.6	856	9.5	930		No. 7	7.9	1100	8.8	1196
.32/20 CONTENDER ONLY						HDY 124 RN OAL = 1.095"				
Gun	DOUGLAS	Barrel length	14"			No. 2	3.7	972	4.1	1057
Primer	CCI 400	Case	REM			No. 5	5.8	1104	6.4	1200
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		No. 7	7.2	1073	8.0	1166
(L) 100 SWC	OAL = 1.585"					SPR 147 TMJ	OAL = 1.095"			
No. 5	5.4	1235	6.0	1342		No. 2	3.6	817	4.0	888
No. 7	6.3	1219	7.0	1325		No. 5	4.8	912	5.3	991
SRA 90 JHC	OAL = 1.565"					No. 7	6.5	963	7.2	1047
No. 5	5.6	1265	6.2	1375		NOTE: Some high performance handguns (such as the Glock and Sig/Sauer) may not cycle properly with the faster powders.				
No. 7	7.0	1344	7.8	1461		.38 SUPER AUTO + P				
HDY 100 XTP	OAL = 1.585"					Gun	WILSON	Barrel length	5"	
No. 5	5.4	1224	6.0	1330		Primer	CCI 500	Case	PMC	
No. 7	6.7	1256	7.4	1365		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
						(L) 115 SWC	OAL = 1.285"			
						No. 2	4.3	1042	4.8	1133
						No. 5	6.8	1166	7.6	1267
						No. 7	8.8	1214	9.8	1320
						No. 9	11.3	1264	12.5	1374

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

HANDGUN DATA					17	HANDGUN DATA				
.38 SUPER AUTO + P (CONT'D)					.357 MAGNUM					
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Gun</u>	<u>TEST BARREL</u>	<u>Barrel length</u>	<u>8"</u>		
(L) 160 RN	OAL = 1.250"				Primer	CCI 500	Case	HDY		
No. 2	4.1	943	4.5	1025	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
No. 5	5.4	964	6.0	1048	(L) 158 SWC	OAL = 1.580"				
No. 7	7.2	1026	8.0	1115	No. 2	5.2	1057	5.8	1149	
No. 9	8.6	1027	9.5	1116	No. 5	8.1	1246	9.0	1354	
HDY 115 FMJ	OAL = 1.240"				No. 7	9.9	1300	11.0	1413	
No. 2	5.1	1104	5.7	1200	No. 9	12.2	1379	13.5	1499	
No. 5	7.5	1215	8.3	1321	(L) 174 SWC	OAL = 1.660"				
No. 7	9.3	1233	10.3	1340	5744	13.1	1252	14.5	1361	
No. 9	11.7	1283	13.0	1395	(L) 180 FNGC	OAL = 1.575"				
IMI 124 FMJ	OAL = 1.245"				No. 2	5.2	1081	5.8	1175	
No. 2	4.9	1070	5.4	1163	No. 5	8.2	1282	9.1	1394	
No. 5	6.8	1132	7.6	1230	No. 7	9.4	1294	10.4	1406	
No. 7	8.6	1162	9.6	1263	No. 9	12.4	1414	13.8	1537	
No. 9	11.3	1238	12.5	1346	4100	12.9	1451	14.3	1577	
HDY 158 JHP	OAL = 1.250"				(L) 200 LNGC	OAL = 1.625"				
No. 2	3.9	892	4.3	970	No. 2	4.9	995	5.4	1081	
No. 5	5.6	944	6.2	1026	No. 5	7.7	1201	8.6	1305	
No. 7	7.2	979	8.0	1064	No. 7	8.9	1218	9.9	1324	
No. 9	8.7	1031	9.7	1121	No. 9	11.3	1294	12.5	1407	
					4100	11.7	1333	13.0	1449	
.38 SPECIAL					SPR 110 JHP	OAL = 1.575"				
<u>Gun</u>	<u>S&W MODEL 14</u>	<u>Barrel length</u>	<u>8³/₈"</u>		No. 2	7.6	1542	8.4	1676	
<u>Primer</u>	<u>CCI 500</u>	<u>Case</u>	<u>HDY</u>		No. 5	10.8	1693	12.0	1840	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	No. 7	12.6	1702	14.0	1850	
(L) 148 HBWC	OAL = 1.152"				No. 9	16.6	1846	18.4	2006	
N100	2.5	811	2.8	882	4100	19.6	1944	21.8	2113	
S1000	2.5	770	2.8	837	HDY 125 XTP	OAL = 1.570"				
No. 2	2.6	662	2.9	720	No. 2	7.2	1432	8.0	1557	
No. 5	3.6	742	4.0	807	No. 5	10.4	1590	11.5	1728	
(L) 158 SWC	OAL = 1.481"				No. 7	11.9	1596	13.2	1735	
N100	3.0	826	3.3	898	No. 9	15.3	1722	17.0	1872	
S1000	3.1	788	3.4	857	4100	17.3	1777	19.2	1932	
No. 2	3.6	799	4.0	868	HDY 158 XTP	OAL = 1.580"				
No. 5	5.3	865	5.9	940	No. 2	5.9	1159	6.6	1260	
HDY 110 XTP	OAL = 1.435"				No. 5	8.8	1337	9.8	1453	
N100	4.0	1061	4.4	1153	No. 7	10.3	1494	11.4	1624	
S1000	4.0	1006	4.4	1094	No. 9	13.5	1502	15.0	1633	
No. 2	5.0	996	5.6	1083	4100	14.2	1527	15.8	1660	
No. 5	6.6	1003	7.3	1090	5744	13.1	1259	14.5	1368	
SPR 125 JHP	OAL = 1.445"				HDY 180 XTP	OAL = 1.575"				
N100	3.7	949	4.1	1031	No. 2	5.4	1025	6.0	1114	
S1000	3.7	929	4.1	1010	No. 5	8.3	1220	9.2	1326	
No. 2	4.8	911	5.3	990	No. 7	9.3	1223	10.3	1329	
No. 5	6.1	791	6.8	860	No. 9	11.7	1322	13.0	1437	
HDY 158 XTP	OAL = 1.445"				4100	12.1	1352	13.4	1470	
N100	2.9	723	3.2	786	5744	11.7	1100	13.0	1196	
S1000	3.1	734	3.4	798						
No. 2	3.6	696	4.0	756						
No. 5	5.2	774	5.8	841						

HANDGUN

NOTE: Expect up to 250 feet per second lower velocity with vented 4" barrel.

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

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HANDGUN DATA					18	HANDGUN DATA				
.357 SIG					.38/40 WINCHESTER					
Gun	HS PRECISION	Barrel length	4"		Gun	ROCK	Barrel length	6½"		
Primer	FED 100	Case	FED		Primer	WLP	Case	WIN		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 115 SWC OAL = 1.140"					(L) 155 RN OAL = 1.585"					
No. 2	5.6	1149	6.2	1249	5744	14.9	932	16.5	1013	
No. 5	8.1	1213	9.0	1319	(L) 185 RN OAL = 1.580"					
No. 7	9.9	1236	11.0	1344	5744	13.1	828	14.5	900	
No. 9	12.2	1316	13.5	1430	SRA 150 JHC OAL = 1.575"					
(L) 147 RN OAL = 1.140"					5744 15.8 956 17.5 1039					
No. 2	4.2	965	4.7	1049	SRA 180 JHC OAL = 1.585"					
No. 5	6.8	1076	7.5	1170	5744	14.9	884	16.5	961	
No. 7	8.6	1121	9.6	1218	.40 S&W (WARNING: See page 6.)					
No. 9	9.5	1076	10.5	1170	Gun	HS PRECISION	Barrel length	4"		
SPR 88 JHP OAL = 1.130"					Primer	CCI 500	Case	HDY		
No. 2	7.1	1421	7.9	1545	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
No. 5	10.0	1487	11.1	1616	(L) 155 SWC OAL = 1.130"					
No. 7	11.8	1473	13.1	1601	No. 2	5.7	1027	6.3	1116	
No. 9	13.5	1421	15.0	1545	No. 5	6.8	1065	7.5	1158	
HDY 115 XTP OAL = 1.140"					No. 7	8.7	1054	9.7	1146	
No. 2	5.8	1174	6.4	1276	No. 9	10.8	1051	12.0	1142	
No. 5	8.5	1246	9.4	1354	(L) 175 SWC OAL = 1.115"					
No. 7	10.2	1274	11.3	1385	No. 2	4.8	897	5.3	975	
No. 9	12.2	1319	13.5	1434	No. 5	5.5	907	6.1	986	
HDY 124 XTP OAL = 1.140"					No. 7	7.6	933	8.4	1014	
No. 2	5.4	1115	6.0	1212	No. 9	9.2	918	10.2	998	
No. 5	8.3	1244	9.2	1325	NOS 135 JHP OAL = 1.125"					
No. 7	9.9	1214	11.0	1320	No. 2	6.8	1147	7.6	1247	
No. 9	11.7	1276	13.0	1387	No. 5	8.4	1257	9.3	1266	
HDY 147 XTP OAL = 1.140"					No. 7	10.1	1138	11.2	1237	
No. 2	4.8	976	5.3	1061	NOS 150 JHP OAL = 1.120"					
No. 5	7.1	1066	7.9	1159	No. 2	6.3	1063	7.0	1155	
No. 7	8.3	1067	9.2	1160	No. 5	7.5	1076	8.3	1170	
No. 9	9.5	1065	10.5	1158	No. 7	9.2	1045	10.2	1136	
.357 REMINGTON MAXIMUM					SRA 165 JHP OAL = 1.135"					
Gun	DOUGLAS	Barrel length	14"		N100	3.7	890	4.1	967	
Primer	CCI BR 4	Case	REM		No. 2	5.4	955	6.0	1038	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	No. 5	6.9	968	7.7	1052	
(L) 210 RNGC OAL = 1.965"					No. 7	8.5	983	9.4	1069	
5744	15.3	1397	17.0	1518	No. 9	10.8	996	12.0	1083	
NOS 158 JHP OAL = 1.905"					HDY 180 XTP OAL = 1.135"					
5744	18.9	1679	21.0	1825	No. 2	5.0	890	5.6	967	
SRA 170 SIL OAL = 1.900"					No. 5	5.9	888	6.6	965	
5744	18.5	1630	20.5	1772	No. 7	7.7	900	8.5	978	
SPR 200 TMJ OAL = 1.990"					No. 9	9.9	937	11.0	1019	
5744	16.2	1377	18.0	1497						

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

HANDGUN DATA					19	HANDGUN DATA				
10mm AUTO					.41 REMINGTON MAGNUM (CONT'D)					
Gun	HS PRECISION	Barrel length	5"		Powder	Start Chg.	Velocity	Max. Chg.	Velocity	
Primer	CCI 300	Case	HDY		HDY 210 XTP	OAL = 1.570"				
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	No. 2	8.6	1145	9.5	1245	
(L) 145 FN	OAL = 1.250"				No. 5	10.4	1216	11.5	1322	
No. 2	6.8	1190	7.5	1293	No. 7	12.8	1269	14.2	1379	
No. 5	8.7	1244	9.7	1352	No. 9	16.2	1399	18.0	1521	
No. 7	10.8	1258	12.0	1367	5744	18.5	1220	20.5	1326	
No. 9	13.5	1308	15.0	1422						
(L) 175 SWC	OAL = 1.245"				.44 SPECIAL					
No. 2	6.0	1074	6.7	1167	Gun	DOUGLAS	Barrel length	7 1/2"		
No. 5	7.5	1073	8.3	1166	Primer	CCI 300	Case	WIN		
No. 7	9.4	1103	10.4	1199	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
No. 9	12.2	1182	13.6	1285	(L) 245 RN	OAL = 1.600"				
NOS 135 JHP OAL = 1.250"					N100	3.4	692	3.8	752	
No. 2	8.2	1328	9.1	1444	S1000	4.1	728	4.5	791	
No. 5	10.3	1383	11.4	1503	No. 2	4.2	753	4.7	819	
No. 7	12.2	1358	13.6	1476	No. 5	6.1	791	6.8	860	
No. 9	15.8	1386	17.5	1507	(L) 250 SWC	OAL = 1.575"				
HDY 155 JHP OAL = 1.250"					5744	11.3	678	12.5	737	
No. 2	7.2	1192	8.0	1296	IMI 240 JHP OAL = 1.485"					
No. 5	9.0	1227	10.0	1334	N100	3.4	536	3.8	583	
No. 7	11.4	1269	12.7	1379	S1000	3.6	540	4.0	587	
No. 9	14.3	1301	15.9	1414	No. 2	4.1	556	4.5	604	
NOS 170 JHP OAL = 1.250"					No. 5	5.9	672	6.5	730	
No. 2	6.9	1122	7.7	1220	.44/40 WINCHESTER					
No. 5	8.7	1173	9.7	1275	Gun	DOUGLAS	Barrel length	7 1/2"		
No. 7	10.8	1201	12.0	1305	Primer	CCI 300	Case	REM		
No. 9	13.5	1234	15.0	1341	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
HDY 200 XTP OAL = 1.250"					(L) 200 FN	OAL = 1.580"				
No. 2	5.7	958	6.3	1041	5744	15.3	952	17.0	1035	
No. 5	7.0	981	7.8	1066	.44 REMINGTON MAGNUM					
No. 7	8.8	1004	9.8	1091	Gun	RUGER REDHAWK	Barrel length	7 1/2"		
No. 9	11.3	1076	12.5	1170	Primer	CCI 300	Case	WIN		
.41 REMINGTON MAGNUM					<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
Gun	WILSON	Barrel length	9 1/2"		(L) 240 SWC	OAL = 1.560"				
Primer	CCI 300	Case	WIN		No. 2	9.0	1178	10.0	1280	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	No. 5	12.6	1288	14.0	1400	
(L) 210 SWC	OAL = 1.675"				No. 7	15.8	1341	17.5	1458	
No. 2	8.3	1210	9.2	1315	No. 9	19.5	1426	21.7	1550	
No. 5	11.3	1321	12.5	1436	5744	21.6	1330	24.0	1446	
No. 7	13.1	1327	14.5	1442	(L) 300 SSK	OAL = 1.720"				
No. 9	16.2	1455	18.0	1582	No. 2	8.6	1047	9.5	1138	
5744	19.4	1317	21.5	1431	No. 5	10.4	1049	11.6	1140	
SRA 170 JHP OAL = 1.565"					No. 7	13.5	1145	15.0	1245	
No. 2	9.0	1335	10.0	1451	No. 9	16.7	1214	18.5	1320	
No. 5	10.8	1374	12.0	1493						
No. 7	14.0	1431	15.5	1555						
No. 9	17.7	1569	19.7	1705						
5744	21.6	1451	24.0	1577						

HANDGUN

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

HANDGUN DATA					20	HANDGUN DATA				
H A N D G U N	.44 REMINGTON MAGNUM (CONT'D)					.45 ACP (CONT'D)				
	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
	HDY 180 JHP	OAL = 1.560"				HDY 200 XTP	OAL = 1.225"			
	No. 2	10.0	1328	11.1	1444	N100	4.3	803	4.8	873
	No. 5	14.8	1486	16.4	1615	S1000	5.2	841	5.8	914
	No. 7	18.5	1570	20.5	1707	No. 2	5.9	886	6.5	963
	NOS 200 JHP	OAL = 1.595				No. 5	8.7	966	9.7	1050
	No. 2	9.9	1235	11.0	1342	SRA 230 FMJ	OAL = 1.250"			
	No. 5	14.2	1409	15.8	1532	N100	4.1	759	4.5	825
	No. 7	16.8	1415	18.7	1538	S1000	5.0	780	5.5	848
No. 9	22.5	1542	25.0	1676	No. 2	5.5	804	6.1	874	
No. 9	22.5	1542	25.0	1676	No. 5	7.8	853	8.7	927	
RAN 240 FN	OAL = 1.575"				.45 COLT					
No. 2	9.3	1161	10.3	1262	Gun	DOUGLAS	Barrel length	7 1/2"		
No. 5	12.6	1260	14.0	1370	Primer	CCI 300	Case	WIN		
No. 7	15.1	1322	16.8	1437	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
No. 9	18.0	1386	20.0	1507	(L) 225 FN	OAL = 1.620"				
4100	20.3	1414	22.5	1537	N100	5.3	825	5.9	897	
SPR 270 GD	OAL = 1.575"				S1000	5.9	836	6.5	909	
No. 2	9.7	1125	10.8	1223	No. 2	5.5	803	6.1	873	
No. 5	12.2	1219	13.5	1325	No. 5	10.9	950	12.1	1033	
No. 7	14.0	1227	15.6	1334	(L) 240 SWC	OAL = 1.570"				
No. 9	16.7	1252	18.5	1361	N100	5.1	826	5.7	898	
4100	18.5	1293	20.5	1405	S1000	5.7	783	6.3	851	
HDY 300 XTP	OAL = 1.595"				No. 2	5.4	777	6.0	845	
No. 2	8.8	1019	9.8	1108	No. 5	10.2	918	11.3	998	
No. 5	11.7	1122	13.0	1220	5744	16.7	882	18.5	959	
No. 7	13.1	1095	14.5	1190	(L) 255 SWC	OAL = 1.600"				
No. 9	15.9	1172	17.7	1274	N100	5.0	799	5.5	868	
5744	18.0	1096	20.0	1191	S1000	5.2	742	5.8	807	
.45 ACP					.45 COLT					
Gun	1911A1	Barrel length	5"		Gun	DOUGLAS	Barrel length	7 1/2"		
Primer	REM 2 1/2	Case	REM		Primer	CCI 300	Case	WIN		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 155 SWC	OAL = 1.240"				(L) 225 FN	OAL = 1.620"				
N100	5.0	1000	5.5	1087	N100	5.3	825	5.9	897	
S1000	5.9	1076	6.5	1170	S1000	5.9	836	6.5	909	
No. 2	6.8	1108	7.5	1204	No. 2	5.5	803	6.1	873	
No. 5	9.0	1094	10.0	1189	No. 5	10.9	950	12.1	1033	
(L) 230 RN	OAL = 1.230"				(L) 240 SWC	OAL = 1.570"				
N100	4.1	767	4.5	834	N100	5.1	826	5.7	898	
S1000	4.6	826	5.1	898	S1000	5.7	783	6.3	851	
No. 2	5.0	800	5.6	870	No. 2	5.4	777	6.0	845	
No. 5	7.7	891	8.5	968	No. 5	10.2	918	11.3	998	
HDY 185 XTP	OAL = 1.210"				5744	16.7	882	18.5	959	
N100	4.8	880	5.3	957	(L) 255 SWC	OAL = 1.600"				
S1000	5.2	914	5.8	993	N100	5.0	799	5.5	868	
No. 2	6.8	991	7.5	1077	S1000	5.2	742	5.8	807	
No. 5	9.2	1014	10.2	1102	No. 2	5.3	748	5.9	813	
.45 ACP					.45 COLT					
Gun	1911A1	Barrel length	5"		Gun	DOUGLAS	Barrel length	7 1/2"		
Primer	REM 2 1/2	Case	REM		Primer	CCI 300	Case	WIN		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 155 SWC	OAL = 1.240"				(L) 225 FN	OAL = 1.620"				
N100	5.0	1000	5.5	1087	N100	5.3	825	5.9	897	
S1000	5.9	1076	6.5	1170	S1000	5.9	836	6.5	909	
No. 2	6.8	1108	7.5	1204	No. 2	5.5	803	6.1	873	
No. 5	9.0	1094	10.0	1189	No. 5	10.9	950	12.1	1033	
(L) 230 RN	OAL = 1.230"				(L) 240 SWC	OAL = 1.570"				
N100	4.1	767	4.5	834	N100	5.1	826	5.7	898	
S1000	4.6	826	5.1	898	S1000	5.7	783	6.3	851	
No. 2	5.0	800	5.6	870	No. 2	5.4	777	6.0	845	
No. 5	7.7	891	8.5	968	No. 5	10.2	918	11.3	998	
HDY 185 XTP	OAL = 1.210"				5744	16.7	882	18.5	959	
N100	4.8	880	5.3	957	(L) 255 SWC	OAL = 1.600"				
S1000	5.2	914	5.8	993	N100	5.0	799	5.5	868	
No. 2	6.8	991	7.5	1077	S1000	5.2	742	5.8	807	
No. 5	9.2	1014	10.2	1102	No. 2	5.3	748	5.9	813	
.45 ACP					.45 COLT					
Gun	1911A1	Barrel length	5"		Gun	DOUGLAS	Barrel length	7 1/2"		
Primer	REM 2 1/2	Case	REM		Primer	CCI 300	Case	WIN		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 155 SWC	OAL = 1.240"				(L) 225 FN	OAL = 1.620"				
N100	5.0	1000	5.5	1087	N100	5.3	825	5.9	897	
S1000	5.9	1076	6.5	1170	S1000	5.9	836	6.5	909	
No. 2	6.8	1108	7.5	1204	No. 2	5.5	803	6.1	873	
No. 5	9.0	1094	10.0	1189	No. 5	10.9	950	12.1	1033	
(L) 230 RN	OAL = 1.230"				(L) 240 SWC	OAL = 1.570"				
N100	4.1	767	4.5	834	N100	5.1	826	5.7	898	
S1000	4.6	826	5.1	898	S1000	5.7	783	6.3	851	
No. 2	5.0	800	5.6	870	No. 2	5.4	777	6.0	845	
No. 5	7.7	891	8.5	968	No. 5	10.2	918	11.3	998	
HDY 185 XTP	OAL = 1.210"				5744	16.7	882	18.5	959	
N100	4.8	880	5.3	957	(L) 255 SWC	OAL = 1.600"				
S1000	5.2	914	5.8	993	N100	5.0	799	5.5	868	
No. 2	6.8	991	7.5	1077	S1000	5.2	742	5.8	807	
No. 5	9.2	1014	10.2	1102	No. 2	5.3	748	5.9	813	
.45 ACP					.45 COLT					
Gun	1911A1	Barrel length	5"		Gun	DOUGLAS	Barrel length	7 1/2"		
Primer	REM 2 1/2	Case	REM		Primer	CCI 300	Case	WIN		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 155 SWC	OAL = 1.240"				(L) 225 FN	OAL = 1.620"				
N100	5.0	1000	5.5	1087	N100	5.3	825	5.9	897	
S1000	5.9	1076	6.5	1170	S1000	5.9	836	6.5	909	
No. 2	6.8	1108	7.5	1204	No. 2	5.5	803	6.1	873	
No. 5	9.0	1094	10.0	1189	No. 5	10.9	950	12.1	1033	
(L) 230 RN	OAL = 1.230"				(L) 240 SWC	OAL = 1.570"				
N100	4.1	767	4.5	834	N100	5.1	826	5.7	898	
S1000	4.6	826	5.1	898	S1000	5.7	783	6.3	851	
No. 2	5.0	800	5.6	870	No. 2	5.4	777	6.0	845	
No. 5	7.7	891	8.5	968	No. 5	10.2	918	11.3	998	
HDY 185 XTP	OAL = 1.210"				5744	16.7	882	18.5	959	
N100	4.8	880	5.3	957	(L) 255 SWC	OAL = 1.600"				
S1000	5.2	914	5.8	993	N100	5.0	799	5.5	868	
No. 2	6.8	991	7.5	1077	S1000	5.2	742	5.8	807	
No. 5	9.2	1014	10.2	1102	No. 2	5.3	748	5.9	813	
.45 ACP					.45 COLT					
Gun	1911A1	Barrel length	5"		Gun	DOUGLAS	Barrel length	7 1/2"		
Primer	REM 2 1/2	Case	REM		Primer	CCI 300	Case	WIN		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 155 SWC	OAL = 1.240"				(L) 225 FN	OAL = 1.620"				
N100	5.0	1000	5.5	1087	N100	5.3	825	5.9	897	
S1000	5.9	1076	6.5	1170	S1000	5.9	836	6.5	909	
No. 2	6.8	1108	7.5	1204	No. 2	5.5	803	6.1	873	
No. 5	9.0	1094	10.0	1189	No. 5	10.9	950	12.1	1033	
(L) 230 RN	OAL = 1.230"				(L) 240 SWC	OAL = 1.570"				
N100	4.1	767	4.5	834	N100	5.1	826	5.7	898	
S1000	4.6	826	5.1	898	S1000	5.7	783	6.3	851	
No. 2	5.0	800	5.6	870	No. 2	5.4	777	6.0	845	
No. 5	7.7	891	8.5	968	No. 5	10.2	918	11.3	998	
HDY 185 XTP	OAL = 1.210"				5744	16.7	882	18.5	959	
N100	4.8	880	5.3	957	(L) 255 SWC	OAL = 1.600"				
S1000	5.2	914	5.8	993	N100	5.0	799	5.5	868	
No. 2	6.8	991	7.5	1077	S1000	5.2	742	5.8	807	
No. 5	9.2	1014	10.2	1102	No. 2	5.3	748	5.9	813	
.45 ACP					.45 COLT					
Gun	1911A1	Barrel length	5"		Gun	DOUGLAS	Barrel length	7 1/2"		
Primer	REM 2 1/2	Case	REM							

HANDGUN DATA					21	HANDGUN DATA				
.45 COLT—HIGH PRESSURE LOADS FOR RUGER, T/C, FA					.50 ACTION EXPRESS					
Gun	HS PRECISION	Barrel length	7"		Gun	DESERT EAGLE	Barrel length	6"		
Primer	CCI 300	Case	WIN		Primer	CCI 350	Case	SPR		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 325 FNGC OAL = 1.585"					SPR 325 U-C OAL = 1.575"					
No. 7	13.1	1055	14.6	1147	No. 9	21.4	1147	23.8	1247	
No. 9	15.3	1097	17.0	1192	1680	34.0	1201	37.8	1305	
4100	17.7	1154	19.7	1254						
(L) 350 FNGC OAL = 1.675"										
No. 7	12.2	983	13.6	1068						
No. 9	14.6	1038	16.2	1128						
4100	15.8	1072	17.5	1165						
SRA 240 JHC OAL = 1.590"										
No. 7	16.0	1252	17.8	1361						
No. 9	18.5	1280	20.6	1391						
4100	22.3	1374	24.8	1494						
NOS 250 JHP OAL = 1.585"										
No. 7	15.6	1213	17.3	1319						
No. 9	18.2	1262	20.2	1372						
4100	21.6	1335	24.0	1451						
SPR 300 SP OAL = 1.595"										
No. 7	14.6	1122	16.2	1220						
No. 9	16.9	1163	18.8	1264						
4100	18.0	1151	20.0	1251						
.454 CASULL										
Gun	TEST BARREL	Barrel length	7½"							
Primer	CCI 400	Case	FA							
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>						
SRA 240 JHP OAL = 1.705"										
No. 9	25.2	1613	28.0	1753						
5744	31.5	1558	35.0	1693						
1680	32.4	1566	36.0	1702						
SPR 260 JHP OAL = 1.710"										
No. 9	24.1	1524	26.8	1657						
5744	30.6	1553	34.0	1688						
1680	31.5	1514	35.0	1646						
HDY 300 XTP OAL = 1.765"										
No. 9	23.4	1493	26.0	1623						
5744	28.8	1444	32.0	1570						
1680	30.2	1466	33.5	1594						

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TECH LINE: 931-729-4207

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

COWBOY ACTION SHOOTING

This relatively new shooting sport is enjoying ever increasing popularity. As the name implies, cowboy action shooting involves a less formal (read, more fun) combination of rifle, shotgun and handgun competition. Typically both male and female participants don Old West-style costumes and use original or replica blackpowder-style firearms. Cowboy action shooting has had a definite impact on the world of shooting and reloading.

From our viewpoint as a propellant supplier the resurgence of several old, originally black powder, cartridges created a challenging situation. Firearms made during the original cowboy era fired cartridges designed for black powder, which was the only propellant available 125 years ago. These older cartridges present a special set of problems when loaded with modern smokeless propellants. They are of a relatively high case capacity, even with modern solid head case design, because they were originally developed to use black powder. We are also restricted to low chamber pressures because of the firearms that they are chambered in. Even modern replicas, made of newer and better steels, are still true to the original designs and the low pressure limits must still be observed in the interest of shooter safety and longevity of the firearm. Those firearms originally built for black powder are probably best loaded with black powder, as the steel used then is inferior to that used in later production and the current replicas.

As we developed data for these cartridges we paid particular attention to propellant selection in balancing the large case capacity with the low pressure limit in order to achieve consistent ignition and good accuracy. The sport of Cowboy Shooting emphasizes low velocity and low recoil loads. These are desirable from the standpoint of shooter safety since the targets are steel and the ranges short. The low recoil reduces shooter fatigue and allows a quicker recovery time between shots during competition. These low velocity loads are quite sufficient to the task of knocking over target plates.

The following loads are tailored to meet the needs of the modern "Cowboy Action Shooter." They should be used exactly as shown with no reductions in charge weight. Bullet weight and type should be as closely matched as is feasible, as should the overall length of the loaded round. Care must be exercised to match the bullet diameter to the inside diameter of the cylinder throat. Undersize bullets will NOT perform well. They allow the already low gas pressure to flow past the base of the bullet and along the sides. This gas flow vaporizes lead from the bullet surface and deposits it in the cylinder and barrel making the gun harder to clean and usually deteriorating accuracy. The gas loss also reduces the pressure reached and results in poor ignition, lower velocity and more residue from the propellant combustion. It is also very important to have a high bullet pull. A tight fit between the case mouth and the bullet greatly aids ignition. Low bullet pull can and usually does ruin an otherwise excellent load.

Cowboy Action loads operate at pressures that are not compatible with many modern propellants. The propellants from the Accurate and Scot product line used in developing this data have proven suitable for the loads listed, but your favorite propellant may not necessarily work in every cartridge you might wish. **Because of the low charge weight most of these cartridges could hold a double charge of propellant, perhaps more.** It behooves the loader, therefore, to exercise caution and rigorously inspect his ammunition throughout the loading process to ensure that this doesn't happen. **DO NOT ASSUME IT CAN'T HAPPEN TO YOU—IT CAN!** We here in the customer service department at Accurate Arms Company hope that you, the shooter, will find this data of value in pursuing your favorite pastime. If you have any questions or comments please don't hesitate to call us at 931-729-4207, Monday through Friday, 8:00 am – 4:30 pm, central time.

COWBOY ACTION DATA 23 COWBOY ACTION DATA

HANDGUN LOADS

32/20 WINCHESTER

Gun RUGER
 Barrel length 6½"
 Primer CCI 400
 Case REM

Maximum Loads

Bullet	Powder	Grains	Vel.
(L) 100 SWC	No. 5	4.8	865
OAL = 1.585"	No. 7	6.1	924
	No. 9	7.0	924

38 SPECIAL

Gun H.S. Precision/
 S&W Model 14
 Barrel length 8¾"
 Primer CCI 500
 Case HDY

Maximum Loads

Bullet	Powder	Grains	Vel.
(L) 130 SWC	N100	3.3	949
OAL = 1.420"	S1000	3.4	913
	No. 2 IMP	N/R	
	No. 5	N/R	
(L) 158 SWC	N100	3.3	898
OAL = 1.481"	S1000	3.4	857
	No. 2 IMP	4.0	868
	No. 5	5.9	940

357 MAGNUM

Gun S&W
 Barrel length 6"
 Primer CCI 500
 Case HDY

Maximum Loads

Bullet	Powder	Grains	Vel.
(L) 148 DEWC	No. 2 IMP	3.0	746
OAL = 1.370"		4.0	919
(L) 148 HBWC	No. 2 IMP	2.5	645
OAL = 1.320"		4.0	913
(L) 158 SWC*	No. 2 IMP	4.0	864
OAL = 1.510"		5.0	1008

38/40 WINCHESTER

Gun RUGER
 Barrel length 6½"
 Primer WLP
 Case WIN

Maximum Loads

Bullet	Powder	Grains	Vel.
(L) 145 FP	N100	5.8	1027
OAL = 1.580"	No. 2 IMP	5.8	1016
(L) 165 FP	N100	5.2	959
OAL = 1.580"	No. 2 IMP	5.4	946
(L) 185 FP	N100	5.0	885
OAL = 1.580"	No. 2 IMP	5.0	871
(L) 200 FP	N100	4.8	836
OAL = 1.580"	No. 2 IMP	4.8	815

44/40 WINCHESTER

Gun TEST BBL
 Barrel length 7½"
 Primer REM 2½"
 Case REM

Maximum Loads

Bullet	Powder	Grains	Vel.
(L) 190 WC	N100	4.6	861
OAL = 1.390"	S1000	4.9	860
	No. 2 IMP	5.2	891
	No. 5	8.5	950
(L) 200 SWC	N100	5.3	954
OAL = 1.575"	S1000	5.7	929
	No. 2 IMP	6.3	961
	No. 5	9.2	983

.44 RUSSIAN

Gun TEST BBL
 Barrel length 7½"
 Primer CCI 300
 Case STARLINE

Maximum Loads

Bullet	Powder	Grains	Vel.
(L) 200 FN	N100	4.0	873
OAL = 1.240"	S1000	4.6	923
	No. 2	4.8	939
	No. 5	7.5	917
	5744	13.0	919
(L) 240 SWC	N100	3.3	769
OAL = 1.280"	S1000	3.7	781
	No. 2	4.2	824
	No. 5	6.6	814
	5744	11.5	824

COWBOY

*Note: SWC seated with front driving band flush with case mouth (357 Magnum and 44 Magnum).

COWBOY ACTION DATA 25 COWBOY ACTION DATA

LONG RANGE RIFLE LOADS

.30-30 WINCHESTER

Gun TEST BARREL
 Barrel length 24"
 Primer CCI 200
 Case REM

Maximum Loads

Bullet	Powder	Grains	Vel.
(L) LY 160 PBFN OAL = 2.550"	5744	12.6	1297

.32-40 WINCHESTER

Gun TEST BARREL
 Barrel length 24"
 Primer CCI 200
 Case REM

Maximum Loads

Bullet	Powder	Grains	Vel.
(L) LY 165 PBFN OAL = 2.500"	5744	16.0	1436

.38-55 WINCHESTER

Gun TEST BARREL
 Barrel length 24"
 Primer CCI 200
 Case WIN

Maximum Loads

Bullet	Powder	Grains	Vel.
(L) LY 240 PBFN OAL = 2.510"	5744	16.0	1241

.45-70 GOVERNMENT

Gun TEST BARREL
 Barrel length 24"
 Primer CCI 200
 Case REM NICKEL

Maximum Loads

Bullet	Powder	Grains	Vel.
(L) CLE 300 PB OAL = 2.550"	5744	31.0	1597
(L) CLE 405 PB OAL = 2.560"	5744	27.5	1355
(L) LY 500 PBRN OAL = 2.850"	5744	25.0	1209

NOTE: Crimp bullets firmly.

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SHOTSHELL LOADS
 (See Shotshell Section)

RIFLE DATA **26** **RIFLE DATA**

RIFLE DATA

**FOR MORE COMPLETE LOADING INFORMATION, BUY ACCURATE'S
RELOADING MANUAL, BOOK TWO. SEE INSIDE BACK COVER FOR DETAILS.**

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17 REMINGTON

Gun	DOUGLAS	Barrel length	24"
Primer	REM 7½	Case	REM
Powder	Start Chg.	Velocity	Max. Chg. Velocity
HDY 25 HP OAL = 2.170"			
2230	19.4	3567	21.5 3877
2460	19.8	3648	22.0 3965
2520	20.4	3655	22.7 3973
4064	21.6	3721	24.0 4045
2700	24.3	3756	27.0 4083

22 HORNET

Gun	DOUGLAS	Barrel length	24"
Primer	CCI 500	Case	WIN
Powder	Start Chg.	Velocity	Max. Chg. Velocity
(L) 44 RNGC OAL = 1.665"			
5744	8.1	1879	9.0 2042
HDY 35 VMAX OAL = 1.775"			
1680	12.2	2631	13.5 2860
SRA 40 HOR OAL = 1.715"			
5744	8.7	2031	9.7 2208
1680	12.6	2562	14.0 2785
2015	11.3	1842	12.5 2002
NOS 45 HOR OAL = 1.720"			
1680	11.1	2294	12.3 2493
2015	11.3	1912	12.5 2078
HDY 50 SX OAL = 1.780"			
5744	8.1	1795	9.0 1951

222 REMINGTON

Gun	DOUGLAS	Barrel length	24"
Primer	REM 7½	Case	REM/WIN
Powder	Start Chg.	Velocity	Max. Chg. Velocity
NOS 45 SB OAL = 2.065"			
1680	18.9	3033	21.0 3297
2015	22.1	3113	24.5 3384
2230	24.3	3171	27.0 3447
2460	24.3	3133	27.0 3405
2520	22.5	2904	25.0 3156

222 REMINGTON (CONT'D)

Powder	Start Chg.	Velocity	Max. Chg.	Velocity
HDY 50 SX OAL = 2.150"				
1680	16.7	2768	18.5	3009
2015	21.2	2951	23.5	3208
2230	22.1	2969	24.5	3227
2460	22.1	2948	24.5	3204
2520	22.5	2835	25.0	3081
NOS 55 SBT OAL = 2.155"				
1680	17.1	2664	19.0	2896
2015	20.3	2803	22.5	3047
2230	22.1	2858	24.5	3106
2460	22.1	2844	24.5	3091
2520	22.1	2725	24.5	2962

223 REMINGTON

Gun	WILSON	Barrel length	24"	
Primer	REM 7½	Case	REM	
Powder	Start Chg.	Velocity	Max. Chg. Velocity	
HDY 35 VMAX OAL = 2.130"				
1680	18.4	3383	20.4	3677
5744	18.8	3381	20.9	3675
2015	22.2	3509	24.7	3814
2230	25.2	3629	28.0	3945
NOS 45 SP OAL = 2.115"				
1680	17.5	3038	19.5	3302
2015	22.2	3262	24.7	3546
2230	23.1	3180	25.7	3456
2460	23.5	3198	26.1	3476
2495	22.7	3160	25.2	3435
2520	24.4	3150	27.1	3424
SPR 50 TNT OAL = 2.235"				
1680	17.5	2894	19.5	3146
2015	21.8	3116	24.2	3387
2230	22.2	3075	24.7	3342
2460	22.2	3063	24.7	3329
2495	22.7	3019	25.2	3282
2520	24.4	3078	27.1	3346
HDY 53 HPBT OAL = 2.225"				
1680	17.1	2803	19.0	3047
2015	20.9	3007	23.3	3268
2230	22.2	2992	24.7	3252
2460	21.8	2975	24.2	3234
2495	22.2	3005	24.7	3266
2520	23.5	2976	26.1	3235

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

RIFLE DATA					27	RIFLE DATA				
223 REMINGTON (CONT'D)						22 BR REMINGTON (CONT'D)				
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
NOS 55 SBT OAL = 2.230"						NOS 55 SBT OAL = 1.970"				
1680	17.5	2813	19.5	3058		5744	22.1	3068	24.5	3335
2015	21.4	3019	23.8	3281		2015	26.1	3211	29.0	3490
2230	22.2	2959	24.7	3216		2230	28.8	3281	32.0	3566
2460	22.7	2973	25.2	3231		2460	29.3	3317	32.5	3605
2495	22.4	3009	24.9	3271		2495	27.9	3171	31.0	3447
2520	23.5	2966	26.1	3224		2520	29.4	3303	32.7	3590
SRA 69 HPBT OAL = 2.250"						4064	29.3	3232	32.5	3513
2015	19.7	2684	21.9	2917		2700	30.6	3088	34.0	3357
2230	20.9	2695	23.3	2929		22/250 REMINGTON				
2460	21.1	2752	23.5	2991		Gun	APEX	Barrel length	24"	
2495	21.4	2727	23.8	2964		Primer	CCI 200	Case	REM	
2520	23.1	2800	25.7	3044		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
NOTE: Some military cases have lower case capacity than commercial brass cases and may require reduction of charge weight by 8–12%. Use extra caution when loading with military brass.						NOS 50 SP OAL = 2.350"				
22 PPC						2015	30.6	3487	34.0	3790
Gun	DOUGLAS	Barrel length	24"		2230	32.4	3496	36.0	3800	
Primer	REM 7½	Case	SAKO		2460	32.9	3525	36.5	3831	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	2520	33.3	3513	37.0	3819	
SPR 50 HP OAL = 2.000"						4064	34.2	3492	38.0	3796
2015	23.4	3185	26.0	3462		4350	36.0	3249	40.0	3531
2230	26.1	3328	29.0	3617		NOS 55 SBT OAL = 2.370"				
2460	26.1	3291	29.0	3577		2015	29.7	3310	33.0	3598
2495	25.2	3223	28.0	3503		2230	31.5	3320	35.0	3609
2520	26.1	3189	29.0	3466		2460	32.4	3376	36.0	3670
NOS 55 SBT OAL = 1.960"						2520	32.4	3317	36.0	3605
2015	22.5	3016	25.0	3278		4064	33.3	3341	37.0	3632
2230	25.2	3132	28.0	3404		2700	36.0	3363	40.0	3655
2460	25.2	3095	28.0	3364		4350	36.0	3189	40.0	3466
2495	24.8	3147	27.6	3421		HDY 60 HP OAL = 2.400"				
2520	26.1	3097	29.0	3366		2015	29.7	3217	33.0	3497
22 BR REMINGTON						2230	30.6	3151	34.0	3425
Gun	DOUGLAS	Barrel length	24"		2460	31.5	3219	35.0	3499	
Primer	REM 7½	Case	REM		2520	32.4	3231	36.0	3512	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	4064	32.4	3226	36.0	3507	
NOS 40 BT OAL = 2.055"						2700	34.2	3200	38.0	3478
5744	23.9	3536	26.5	3843		4350	36.0	3123	40.0	3395
SPR 50 TNT OAL = 2.000"						SPR 70 SSP OAL = 2.325"				
5744	23.4	3278	26.0	3563		2015	27.0	2876	30.0	3126
2015	27.5	3431	30.5	3729		2230	27.9	2844	31.0	3091
2230	30.0	3464	33.3	3765		2460	27.9	2831	31.0	3077
2460	30.2	3461	33.5	3762		2520	29.3	2892	32.5	3144
2495	28.8	3274	32.0	3559		4064	29.0	2962	32.2	3220
2520	30.3	3451	33.7	3751		2700	31.1	2871	34.5	3121
2700	31.5	3198	35.0	3476		4350	34.2	2984	38.0	3244

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WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

RIFLE DATA					28	RIFLE DATA				
220 SWIFT					6mm BR REMINGTON (CONT'D)					
Gun	RUGER 77V	Barrel length	26"		Powder	Start Chg.	Velocity	Max. Chg.	Velocity	
Primer	FED 210	Case	WIN		SPR 80 SP	OAL = 2.120"				
Powder	Start Chg.	Velocity	Max. Chg.	Velocity	2015	26.1	2800	29.0	3044	
SPR 50 HP	OAL = 2.700"				2230	27.9	2794	31.0	3037	
4064	35.1	3536	39.0	3843	2460	28.8	2874	32.0	3124	
2700	40.5	3712	45.0	4035	2495	27.0	2829	30.0	3075	
4350	39.6	3625	44.0	3940	2520	29.7	2871	33.0	3121	
3100	39.6	3302	44.0	3589	2700	31.5	2698	35.0	2933	
NOS 55 SBT	OAL = 2.680"				243 WINCHESTER					
4064	33.3	3281	37.0	3566	Gun	HS PRECISION	Barrel length	24"		
2700	39.2	3525	43.5	3832	Primer	CCI 200	Case	WIN		
4350	39.6	3584	44.0	3896	Powder	Start Chg.	Velocity	Max. Chg.	Velocity	
3100	39.6	3301	44.0	3588	NOS 55 BT	OAL = 2.605"				
HDY 60 HP	OAL = 2.700"				2015	35.1	3433	39.0	3731	
2700	37.8	3318	42.0	3607	2230	37.4	3502	41.5	3807	
4350	39.6	3514	44.0	3820	2460	38.7	3561	43.0	3871	
3100	39.6	3246	44.0	3528	2520	39.2	3574	43.5	3885	
SPR 70 SSR	OAL = 2.660"				2700	43.7	3517	48.5	3823	
2700	35.1	3160	39.0	3435	4350 (C)	42.8	3235	47.5	3516	
4350	37.4	3207	41.5	3486	3100 (C)	42.8	2919	47.5	3173	
3100	39.6	3139	44.0	3412	HDY 70 SX	OAL = 2.650"				
					2015	32.9	3123	36.5	3395	
					2495	35.1	3210	39.0	3489	
					2520	35.1	3096	39.0	3365	
					4064	37.8	3201	42.0	3479	
					2700	40.5	3218	45.0	3498	
					4350	43.2	3249	48.0	3531	
					3100	43.2	2959	48.0	3216	
					SRA 80/85 HPBT	OAL = 2.660"				
					2495	31.5	2826	35.0	3072	
					4064	34.2	2889	38.0	3140	
					2700	36.9	2889	41.0	3140	
					4350	39.6	3030	44.0	3294	
					3100	41.4	2881	46.0	3132	
					MAGPRO (C)	48.3	3168	53.7	3510	
					SPR 100 SBT	OAL = 2.700"				
					2495	27.0	2441	30.0	2653	
					4064	27.9	2432	31.0	2644	
					2700	32.4	2533	36.0	2753	
					4350	35.1	2743	39.0	2981	
					3100	38.7	2729	43.0	2966	
					MAGPRO	42.8	2838	47.5	3107	
					6mm REMINGTON					
					Gun	DOUGLAS	Barrel length	24"		
					Primer	CCI 200	Case	FED		
					Powder	Start Chg.	Velocity	Max. Chg.	Velocity	
					NOS 55 BT	OAL = 2.765"				
					2015	36.9	3583	41.0	3895	
					2495	40.1	3606	44.5	3920	
					4064	40.5	3709	45.0	4031	
					2700	45.5	3602	50.5	3915	
					4350 (C)	45.9	3456	51.0	3756	
					3100 (C)	45.9	3111	51.0	3381	

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

(C) Denotes a compressed load for maximum charge.

RIFLE DATA					29	RIFLE DATA				
6mm REMINGTON (CONT'D)					257 ROBERTS					
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Gun</u>	<u>DOUGLAS</u>	<u>Barrel length</u>	<u>24"</u>		
HDY 70 SP	OAL = 2.775"				<u>Primer</u>	<u>CCI 200</u>	<u>Case</u>	<u>REM</u>		
2015	36.7	3221	40.8	3501	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
2495	37.8	3283	42.0	3568	SRA 75 HP	OAL = 2.745"				
4064	40.1	3383	44.5	3677	2520	35.6	2915	39.5	3169	
4350	45.0	3154	50.0	3428	4064	38.1	3036	42.3	3300	
3100	45.9	2932	51.0	3187	2700	41.4	2984	46.0	3243	
					4350	42.3	2996	47.0	3257	
SPR 80 SP	OAL = 2.825"				3100	45.9	2910	51.0	3163	
2015	34.9	3014	38.8	3276	SRA 90 HPBT	OAL = 2.735"				
2495	36.0	3018	40.0	3280	2520	33.3	2711	37.0	2947	
4064	39.2	3206	43.5	3485	4064	36.5	2817	40.5	3062	
2700	43.2	3143	48.0	3416	2700	37.8	2750	42.0	2989	
4350	44.6	3134	49.5	3406	4350	40.5	2761	45.0	3001	
3100	45.9	2931	51.0	3186	3100	45.0	2812	50.0	3056	
NOS 100 SP	OAL = 2.825"				NOS 100 BT	OAL = 2.785"				
2015	32.9	2664	36.5	2896	2520	31.5	2525	35.0	2745	
4064	36.0	2824	40.0	3070	4064	34.2	2572	38.0	2796	
2700	41.0	2814	45.5	3059	2700	36.9	2626	41.0	2854	
4350	41.0	2798	45.6	3041	4350	40.1	2666	44.5	2898	
3100	43.2	2743	48.0	2981	3100	44.1	2635	49.0	2864	
					SRA 117 SBT	OAL = 2.775"				
250/3000 SAVAGE					2520	30.6	2351	34.0	2555	
<u>Gun</u>	<u>DOUGLAS</u>	<u>Barrel length</u>	<u>24"</u>		2700	35.1	2409	39.0	2619	
<u>Primer</u>	<u>REM 9½</u>	<u>Case</u>	<u>REM</u>		4350	38.7	2484	43.0	2700	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	3100	43.2	2517	48.0	2736	
SRA 75 HP	OAL = 2.465"				25/06 REMINGTON					
2015	28.4	2866	31.5	3115	<u>Gun</u>	<u>WISEMAN</u>	<u>Barrel length</u>	<u>24"</u>		
2230	30.2	2865	33.5	3114	<u>Primer</u>	<u>CCI 250</u>	<u>Case</u>	<u>REM</u>		
2460	30.6	2925	34.0	3179	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
2520	30.6	2871	34.0	3121	(L) 100 FNGC	OAL = 2.950"				
4064	32.4	2916	36.0	3170	5744	19.8	1906	22.0	2072	
4350	36.9	2791	41.0	3034	SRA 75 HP	OAL = 3.065"				
3100	36.9	2516	41.0	2735	2700	47.7	3453	53.0	3753	
SRA 90 HPBT	OAL = 2.465"				4350 (C)	53.1	3478	59.0	3780	
2015	27.5	2695	30.5	2929	3100 (C)	54.0	3298	60.0	3585	
2230	28.8	2673	32.0	2905	SRA 87/90 HP	OAL = 3.075"				
2460	28.8	2665	32.0	2897	2700	45.0	3143	50.0	3416	
2520	29.3	2670	32.5	2902	4350	48.6	3194	54.0	3472	
4064	31.5	2757	35.0	2997	3100 (C)	50.9	3100	56.5	3370	
4350	36.0	2697	40.0	2931	MAGPRO	56.3	3261	62.5	3573	
3100	36.9	2513	41.0	2731	NOS 100 BT	OAL = 3.250"				
HDY 100 SP	OAL = 2.500"				2700	43.2	2956	48.0	3213	
2015	27.0	2569	30.0	2792	4350	46.8	3011	52.0	3273	
2230	27.0	2449	30.0	2662	3100 (C)	49.5	3020	55.0	3283	
2460	27.9	2472	31.0	2687	8700 (C)	58.5	2616	65.0	2843	
2520	28.8	2539	32.0	2760	NOS 115 PART	OAL = 3.195"				
4064	31.5	2635	35.0	2864	2700	41.1	2713	45.7	2949	
4350	35.1	2559	39.0	2781	4350	44.6	2809	49.5	3053	
3100	36.9	2454	41.0	2667	3100	47.5	2814	52.8	3059	
					8700 (C)	57.6	2579	64.0	2803	

RIFLE

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
 (C) Denotes a compressed load for maximum charge.

RIFLE

RIFLE DATA					30	RIFLE DATA				
25/06 REMINGTON (CONT'D)						260 REMINGTON (CONT'D)				
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
SPR 120 SPBT OAL = 3.120"						SRA 140 HPBT OAL = 2.775"				
2700	40.5	2662	45.0	2893		4064	32.9	2363	36.5	2569
4350	44.1	2707	49.0	2942		2700	36.0	2408	40.0	2617
3100	46.8	2740	52.0	2978		4350	38.7	2546	43.0	2767
MAGPRO	48.6	2777	54.0	3039		3100 (C)	41.4	2516	46.0	2735
8700 (C)	57.6	2505	64.0	2723						
25/20 WINCHESTER						6.5 x 55mm SWEDISH				
<u>Gun</u>	<u>DOUGLAS</u>	<u>Barrel length</u>	<u>24"</u>		<u>Gun</u>	<u>DOUGLAS</u>	<u>Barrel length</u>	<u>24"</u>		
<u>Primer</u>	<u>CCI 400</u>	<u>Case</u>	<u>REM</u>		<u>Primer</u>	<u>CCI 200</u>	<u>Case</u>	<u>PMC</u>		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 65 FN OAL = 1.592"						(L) 140 SPGC OAL = 3.020"				
5744	9.9	1724	11.0	1874		5744	26.1	2181	29.0	2371
						2495	29.7	2178	33.0	2367
(L) 90 FN OAL = 1.615"						2520	30.6	2173	34.0	2362
5744	9.0	1541	10.0	1675		4064	34.2	2293	38.0	2492
HDY 60 FP OAL = 1.592"						2700	36.9	2308	41.0	2509
5744	10.3	1797	11.4	1953		4350	39.6	2319	44.0	2521
SPR 75 FN OAL = 1.585"						3100 (C)	42.3	2278	47.0	2476
5744	10.1	1702	11.2	1850		8700 (C)	47.7	2020	53.0	2196
260 REMINGTON						HDY 100 SP OAL = 2.975"				
<u>Gun</u>	<u>H. S. PRECISION</u>	<u>Barrel length</u>	<u>24"</u>		2520	36.9	2728	41.0	2965	
<u>Primer</u>	<u>REM 9½</u>	<u>Case</u>	<u>REM</u>		4064	39.6	2815	44.0	3060	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	2700	43.2	2846	48.0	3093	
SRA 85 HP OAL = 2.670"						4350	43.2	2695	48.0	2929
5744	20.0	2160	33.0	3214		3100	44.1	2506	49.0	2724
4064	39.6	3081	44.0	3349		HDY 129 SP OAL = 3.025"				
2700	43.2	3073	48.0	3340		2520	33.8	2353	37.5	2558
4350 (C)	43.2	2966	48.0	3224		4064	37.4	2519	41.5	2738
3100 (C)	43.2	2688	48.0	2922		2700	38.7	2443	43.0	2655
HDY 100 SP OAL = 2.750"						4350	41.4	2533	46.0	2753
4064	38.7	2915	43.0	3168		3100	44.1	2503	49.0	2721
2700	42.3	2922	47.0	3176		SPR 140 SP OAL = 3.000"				
4350 (C)	44.1	3005	49.0	3266		2520	33.3	2302	37.0	2502
3100 (C)	45.0	2799	50.0	3042		4064	36.0	2363	40.0	2569
SWF 120 SP OAL = 2.710"						2700	37.8	2364	42.0	2570
4064	35.1	2592	39.0	2817		4350	40.5	2419	45.0	2629
2700	38.7	2601	43.0	2827		3100	42.3	2322	47.0	2524
4350	41.0	2719	45.5	2955		8700 (C)	47.7	2018	53.0	2193
3100 (C)	42.8	2621	47.5	2849		SRA 155 HPBT OAL = 3.090"				
HDY 129 SP OAL = 2.780"						4064	33.8	2197	37.5	2388
4064	34.2	2470	38.0	2685		2700	34.2	2185	38.0	2375
2700	36.9	2474	41.0	2689		4350	38.3	2337	42.5	2540
4350	39.6	2606	44.0	2833		3100	41.4	2336	46.0	2539
3100 (C)	42.3	2663	47.0	2895		8700 (C)	47.7	2220	53.0	2413
SWF 140 SP OAL = 2.740"						.264 WINCHESTER MAGNUM				
4064	31.5	2294	35.0	2494		<u>Gun</u>	<u>H&S PRECISION</u>	<u>Barrel length</u>	<u>24"</u>	
2700	35.1	2331	39.0	2534		<u>Primer</u>	<u>CCI 250</u>	<u>Case</u>	<u>WIN</u>	
4350	37.4	2458	41.5	2672		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
3100 (C)	40.5	2429	45.0	2640		HDY 140 AMAX OAL = 3.325"				
						MAGPRO	58.7	2821	65.2	3079

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
 (C) Denotes a compressed load for maximum charge.

RIFLE DATA					31	RIFLE DATA				
270 WINCHESTER						.270 WINCHESTER SHORT MAGNUM (CONT'D)				
Gun	HS PRECISION	Barrel length	24"			Powder	Start Chg.	Velocity	Max. Chg.	Velocity
Primer	REM 9½	Case	REM			BAR 130 X	OAL = 2.800"			
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		3100 (C)	57.1	2772	63.5	3093
(L) 150 RCBS	OAL = 3.250"					MAGPRO (C)	66.6	2958	74.0	3287
8700	54.0	2184	60.0	2374		HDY 140 BTSP	OAL = 2.760"			
SRA 90 HP	OAL = 3.090"					4350	52.9	2865	58.9	3137
5744	24.0	2174	40.0	3270		3100 (C)	58.0	2811	64.5	3135
4064	47.7	3179	53.0	3455		MAGPRO (C)	66.8	2985	74.2	3275
2700	51.3	3176	57.0	3452		SRA 150 SPBT	OAL = 2.760"			
4350	54.9	3205	61.0	3484		4350	44.6	2550	49.7	2866
3100	54.9	2877	61.0	3127		3100 (C)	55.7	2758	62.0	3036
HDY 100 SP	OAL = 3.175"					MAGPRO (C)	63.0	2864	70.0	3136
5744	24.0	2135	38.5	3100						
4064	46.8	3072	52.0	3339						
2700	50.4	3073	56.0	3340						
4350	54.0	3088	60.0	3356						
3100	54.9	2852	61.0	3100						
NOS 130 BT	OAL = 3.330"									
5744	24.5	1950	36.5	2748						
4064	43.2	2686	48.0	2920						
2700	46.8	2718	52.0	2954						
4350	49.5	2778	55.0	3020						
3100	54.9	2820	61.0	3065						
MAGPRO	58.5	2919	65.0	3234						
HDY 140 SBT	OAL = 3.330"									
5744	25.0	1962	36.0	2621						
2700	46.8	2662	52.0	2893						
4350	50.4	2749	56.0	2988						
3100	54.0	2725	60.0	2962						
8700	57.6	2257	64.0	2453						
SRA 150 SBT	OAL = 3.300"									
5744	26.0	1998	35.5	2536						
2700	45.0	2519	50.0	2738						
4350	47.7	2650	53.0	2880						
3100	52.2	2662	58.0	2894						
MAGPRO	55.4	2725	61.5	3000						
8700	56.7	2329	63.0	2532						
.270 WINCHESTER SHORT MAGNUM						7-30 WATERS (FLAT POINT BULLETS ONLY)				
Gun	WISEMAN	Barrel length	24"			Gun	DOUGLAS	Barrel length	24"	
Primer	WIN WLR	Case	WIN			Primer	REM 9½	Case	REM	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
SPR 100 HP	OAL = 2.675"					NOS 120 FN	OAL = 2.530"			
4350 (C)	61.5	3394	68.5	3696		2015	29.7	2472	33.0	2687
3100 (C)	60.2	2984	67.0	3350		2230	30.6	2434	34.0	2646
MAGPRO (C)	70.2	3200	78.0	3545		2460	30.6	2405	34.0	2614
SRA 130 SPBT	OAL = 2.700"					2520	33.3	2515	37.0	2734
4350	54.1	2950	60.0	3256		4064	34.2	2507	38.0	2725
3100 (C)	58.4	2870	65.0	3212		NOS 139 FN	OAL = 2.665"			
MAGPRO (C)	68.0	3062	75.5	3359		2015	27.9	2211	31.0	2403
						2230	30.6	2339	34.0	2542
						2460	31.1	2344	34.5	2548
						2520	31.1	2274	34.5	2472
						4064	32.0	2329	35.5	2532
						7x57mm MAUSER				
						Gun	DOUGLAS	Barrel length	24"	
						Primer	CCI 200	Case	WIN	
						<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
						SRA 140 SBT	OAL = 3.025"			
						4064	37.8	2468	42.0	2683
						2700	42.8	2523	47.5	2742
						4350	45.9	2609	51.0	2836
						3100	45.9	2356	51.0	2561
						NOS 150 BT	OAL = 3.060"			
						4064	36.0	2317	40.0	2519
						2700	41.4	2416	46.0	2626
						4350	44.1	2504	49.0	2722
						3100	45.9	2375	51.0	2581
						HDY 175 SP	OAL = 3.040"			
						4064	35.1	2155	39.0	2342
						2700	38.7	2209	43.0	2401
						4350	42.3	2306	47.0	2507
						3100	45.0	2247	50.0	2442

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WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
(C) Denotes a compressed load for maximum charge.

RIFLE

RIFLE DATA					32	RIFLE DATA				
7mm08 REMINGTON						.280 REMINGTON				
Gun	DOUGLAS	Barrel length	24"		Gun	DOUGLAS	Barrel length	24"		
Primer	CCI 200	Case	REM		Primer	REM 9½	Case	REM		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 145 GC OAL = 2.670"					SPR 120 SP OAL = 3.200"					
5744	24.3	2110	27.0	2294	2700	47.3	2761	52.5	3001	
(L) 168 GC OAL = 2.735"					4350 51.3 2863 57.0 3112					
5744	24.3	2000	27.0	2174	3100	54.0	2783	60.0	3025	
NOS 120 SP OAL = 2.765"					BAR 140 X OAL = 3.310"					
2015	34.4	2656	38.2	2887	2700	43.7	2493	48.5	2710	
2230	36.3	2656	40.3	2887	4350	45.9	2554	51.0	2776	
2460	36.6	2688	40.7	2922	3100	51.3	2612	57.0	2839	
2520	37.3	2644	41.4	2874	HDY 154 SP OAL = 3.330"					
4064	38.7	2721	43.0	2958	2700	44.1	2501	49.0	2718	
2700	41.9	2641	46.5	2871	4350	48.6	2599	54.0	2825	
4350	42.8	2570	47.5	2794	3100	52.2	2569	58.0	2792	
3100	42.8	2298	47.5	2498	NOS 160 SP OAL = 3.300"					
SRA 140 SBT OAL = 2.800"					2700 43.7 2450 48.5 2663					
2015	33.3	2483	37.0	2699	4350	46.8	2523	52.0	2742	
2230	35.1	2494	39.0	2711	3100	51.8	2553	57.5	2775	
2460	36.0	2547	40.0	2768	HDY 175 SP OAL = 3.300"					
2520	35.6	2484	39.5	2700	2700	41.4	2234	46.0	2428	
4064	37.8	2553	42.0	2775	4350	46.4	2376	51.5	2583	
2700	40.1	2484	44.5	2700	3100	51.3	2467	57.0	2681	
4350	42.8	2579	47.5	2803	7mm REMINGTON MAGNUM					
3100	42.8	2332	47.5	2535	Gun	OBERMEYER	Barrel length	24"		
SRA 150 SBT OAL = 2.800"					Primer	CCI 250	Case	REM		
2015	32.4	2372	36.0	2578	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
2230	34.2	2410	38.0	2620	SPR 120 SP OAL = 3.260"					
2460	34.5	2415	38.3	2625	5744	24.5	2041	47.0	3127	
2520	35.1	2403	39.0	2612	4064	48.6	2906	54.0	3159	
4064	36.9	2454	41.0	2667	2700	55.4	2920	61.5	3174	
2700	39.2	2424	43.5	2635	4350	56.7	2958	63.0	3215	
4350	41.9	2513	46.5	2731	3100	64.2	3059	71.3	3325	
3100	42.3	2294	47.0	2494	8700	71.1	2743	79.0	2982	
NOS 160 SP OAL = 2.800"					SRA 140 SBT OAL = 3.270"					
2015	31.5	2245	35.0	2440	5744	27.5	2050	45.5	2948	
2230	32.9	2240	36.5	2435	4064	47.7	2702	53.0	2937	
2460	33.3	2256	37.0	2452	2700	53.6	2755	59.5	2995	
2520	34.2	2259	38.0	2455	4350	54.9	2786	61.0	3028	
4064	36.0	2349	40.0	2553	3100	61.2	2845	68.0	3092	
4350	41.4	2420	46.0	2630	MAGPRO	66.3	2952	73.7	3220	
3100	42.3	2256	47.0	2452	8700	72.0	2555	80.0	2777	
REM 175 SP OAL = 2.795"					SRA 150 SBT OAL = 3.280"					
2015	31.5	2131	35.0	2316	5744	29.5	2066	43.0	2739	
2230	33.3	2183	37.0	2373	4064	46.4	2583	51.5	2808	
2460	33.3	2177	37.0	2366	2700	51.8	2668	57.5	2900	
2520	34.2	2175	38.0	2364	4350	54.9	2731	61.0	2968	
4064	35.6	2179	39.5	2368	3100	59.4	2763	66.0	3003	
2700	37.8	2196	42.0	2387	8700	71.1	2715	79.0	2951	
4350	41.0	2301	45.5	2501	SRA 160 HPBT OAL = 3.270"					
3100	42.3	2164	47.0	2352	MAGPRO	61.7	2737	68.6	3000	

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

RIFLE DATA					33	RIFLE DATA				
7mm REMINGTON MAGNUM (CONT'D)					7mm REMINGTON ULTRA MAG (CONT'D)					
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
NOS 160 SP OAL = 3.280"					NOS 150 BT OAL = 3.595"					
5744	30.0	2069	42.5	2679	5744	32.0	2026	43.0	2506	
4064	44.6	2454	49.5	2667	5744	50.4	2795	56.0	3038	
2700	51.8	2559	57.5	2781	3100	74.2	3064	82.4	3330	
4350	51.3	2547	57.0	2768	MAGPRO	84.7	3132	89.2	3324	
3100	57.2	2627	63.5	2855	8700	93.6	3128	104.0	3400	
8700	71.1	2698	79.0	2933	SRA 160 SPBT OAL = 3.595"					
NOS 175 SP OAL = 3.275"					5744 33.0 2052 45.0 2529					
5744	31.5	2042	41.5	2513	5744	50.4	2729	56.0	2966	
4064	43.2	2302	48.0	2502	3100	73.4	2968	81.5	3226	
2700	47.7	2375	53.0	2581	MAGPRO	82.7	3033	87.0	3217	
4350	50.4	2441	56.0	2653	8700	91.8	3055	102.0	3321	
3100	54.5	2484	60.5	2700	HDY 175 SP OAL = 3.595"					
MAGPRO	59.4	2640	66.0	2854	5744	50.4	2626	56.0	2854	
8700	67.5	2534	75.0	2754	3100	72.0	2823	80.0	3069	
7mm WINCHESTER SHORT MAGNUM					MAGPRO 81.2 2909 85.5 3080					
<u>Gun</u>	<u>Test Barrel</u>	<u>Barrel length</u>	<u>24"</u>		8700	92.7	2975	103.0	3234	
<u>Primer</u>	<u>WIN WLR</u>	<u>Case</u>	<u>WIN</u>		SWF 175 A-F OAL = 3.595"					
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	3100	69.3	2800	77.0	3043	
WIN 140 JSP OAL = 2.780"					8700	88.2	2881	98.0	3132	
MAGPRO	68.0	2850	76.0	3190	7mm WEATHERBY MAGNUM					
WIN 150 JSP OAL = 2.780"					<u>Gun</u>	<u>DOUGLAS</u>	<u>Barrel length</u>	<u>26"</u>		
MAGPRO	66.6	2800	74.0	3070	<u>Primer</u>	<u>REM 9½M</u>	<u>Case</u>	<u>REM</u>		
WIN 160 FS OAL = 2.780"					<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
MAGPRO	64.8	2700	72.0	2975	BAR 120 X OAL = 3.310"					
7mm REMINGTON ULTRA MAG					4350	63.9	3205	71.0	3484	
<u>Gun</u>	<u>HS PRECISION</u>	<u>Barrel length</u>	<u>26"</u>		3100	68.4	3199	76.0	3477	
<u>Primer</u>	<u>REM 9½M</u>	<u>Case</u>	<u>REM</u>		8700	77.4	2827	86.0	3073	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	HDY 139 SBT OAL = 3.340"					
(L) 145 OAL = 3.500"					4350	62.1	3030	69.0	3293	
5744	30.0	1971	36.0	2228	3100	66.6	3048	74.0	3313	
(L) 168 FPGC OAL = 3.260"					8700	73.8	2695	82.0	2929	
5744	31.0	1952	40.0	2248	NOS 150 BT OAL = 3.350"					
HDY 120 SPHP OAL = 3.595"					4350	58.5	2843	65.0	3090	
3100	79.2	3323	88.0	3612	3100	64.8	2943	72.0	3199	
8700	98.1	3360	109.0	3652	8700	73.8	2670	82.0	2902	
HDY 139 SP OAL = 3.595"					NOS 160 SP OAL = 3.355"					
5744	31.0	2046	42.0	2562	4350	58.5	2796	65.0	3039	
3100	77.4	3174	86.0	3450	3100	63.5	2858	70.5	3106	
MAGPRO	86.9	3265	91.5	3462	8700	72.9	2661	81.0	2892	
8700	95.4	3222	106.0	3502	NOS 175 SP OAL = 3.360"					
BAR 140 X OAL = 3.595"					4350	56.7	2662	63.0	2894	
5744	32.0	2051	43.0	2544	3100	62.1	2738	69.0	2976	
5744	51.3	2842	57.0	3089	8700	72.0	2553	80.0	2775	
3100	75.6	3140	84.0	3413						
8700	94.5	3208	105.0	3487						

RIFLE

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

RIFLE DATA					34	RIFLE DATA				
.30 M1 CARBINE					.30/30 WINCHESTER (CONT'D)					
Gun	DOUGLAS	Barrel length	20"		Powder	Start Chg.	Velocity	Max. Chg.	Velocity	
Primer	CCI 400	Case	REM		(L) 173 FN	OAL = 2.550"				
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	5744	19.8	1872	22.0	2035	
(L) 125 RN	OAL = 1.705"				2015	23.4	1829	26.0	1988	
No. 9	9.9	1627	11.0	1769	2230	23.4	1798	26.0	1954	
5744	12.2	1574	13.5	1711	2460	24.8	1856	27.5	2017	
1680	13.5	1616	15.0	1756	2495	24.8	1852	27.5	2013	
SPR 100 SP	OAL = 1.675"				2520	25.7	1889	28.5	2053	
No. 9	12.0	1854	13.3	2015	SPR 150 FN	OAL = 2.540"				
5744	13.5	1698	15.0	1846	5744	22.5	1985	25.0	2158	
1680	15.3	1695	17.0	1842	2015	26.1	2017	29.0	2192	
SPR 110 FMJ	OAL = 1.670"				2230	28.5	2091	31.7	2273	
No. 9	11.3	1742	12.6	1893	2460	29.3	2107	32.5	2290	
5744	13.1	1644	14.5	1787	2495	27.5	2049	30.5	2227	
1680	14.4	1624	16.0	1765	2520	30.2	2139	33.5	2325	
					4064	29.7	2065	33.0	2245	
					2700	33.3	2084	37.0	2265	
					NOS 170 FN	OAL = 2.545"				
					5744	21.2	1838	23.5	1998	
					2015	24.3	1875	27.0	2038	
					2230	27.0	1954	30.0	2124	
					2460	27.2	1949	30.2	2118	
					2495	26.6	1927	29.5	2095	
					2520	28.4	1959	31.5	2129	
					4064	27.0	1837	30.0	1997	
					2700	31.5	1930	35.0	2098	
					.30/40 KRAG					
					Gun	DOUGLAS	Barrel length	24"		
					Primer	CCI 200	Case	REM		
					<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
					(L) 165 FNGC	OAL = 2.855"				
					5744	25.2	2022	28.0	2198	
					(L) 180 RNGC	OAL = 2.900"				
					5744	23.9	1919	26.5	2086	
					(L) 210 RNGC	OAL = 2.925"				
					5744	22.5	1720	25.0	1870	
					.308 WINCHESTER					
					Gun	HS PRECISION	Barrel length	24"		
					Primer	CCI 200	Case	REM		
					<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
					(L) 152 RNGC	OAL = 2.530"				
					5744	24.3	2052	27.0	2230	
					(L) 165 SIL	OAL = 2.700"				
					5744	24.3	1992	27.0	2165	
					SRA 110 HP	OAL = 2.595"				
					5744	22.1	2040	36.0	2918	
					2015	40.5	2934	45.0	3189	
					2230	42.8	2917	47.5	3171	
					2460	43.7	2938	48.5	3193	
					2495	42.3	2780	47.0	3022	
					2520	42.8	2778	47.5	3020	
					.30/30 WINCHESTER					
					(FN/RN BULLETS ONLY)					
					Gun	HS PRECISION	Barrel length	20"		
					Primer	CCI 200	Case	FED		
					<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
					(L) 152 RN	OAL = 2.450"				
					5744	20.3	1943	22.5	2112	
					2015	23.0	1828	25.5	1987	
					2230	23.4	1815	26.0	1973	
					2460	24.3	1834	27.0	1994	
					2495	25.7	1885	28.5	2049	
					2520	24.8	1844	27.5	2004	

RIFLE

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

RIFLE DATA					35	RIFLE DATA				
.308 WINCHESTER (CONT'D)					7.62x54mm RUSSIAN (CONT'D)					
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
NOS 125 BT OAL = 2.780"					SRA 180 SP OAL = 2.900"					
5744	24.8	2051	34.5	2753	4350	45.9	2297	51.0	2497	
2015	39.2	2777	43.5	3018	3100	49.5	2260	55.0	2457	
2230	42.3	2776	47.0	3017	8700	51.3	1669	57.0	1814	
2460	42.3	2773	47.0	3014	.30/06 SPRINGFIELD					
2495	42.3	2697	47.0	2931	Gun	WILSON	Barrel length	24"		
2520	42.8	2719	47.5	2955	Primer	CCI 200/250	Case	IMI		
HDY 150 SP OAL = 2.745"					Powder	Start Chg.	Velocity	Max. Chg.	Velocity	
5744	27.0	2160	33.5	2551	(L) 152 RN* OAL = 3.035"					
2015	37.4	2543	41.5	2764	5744	30.2	2255	33.5	2451	
2230	39.2	2495	43.5	2712	2015	36.0	2413	40.0	2623	
2460	40.5	2544	45.0	2765	2230	36.9	2379	41.0	2586	
2495	41.4	2582	46.0	2806	2460	36.9	2390	41.0	2598	
2520	41.9	2584	46.5	2809	2495	37.8	2240	42.0	2435	
4064	41.0	2539	45.5	2760	2520	37.8	2375	42.0	2582	
2700	43.7	2306	48.5	2506	4064	41.4	2390	46.0	2598	
SRA 168 HPBT OAL = 2.800"					8700 (C)	54.0	1840	60.0	2000	
5744	28.0	2150	31.5	2376	(L) 180 RN* OAL = 3.015"					
2015	36.0	2431	40.0	2642	5744	28.8	2150	32.0	2337	
2230	37.8	2401	42.0	2610	2015	36.0	2272	40.0	2470	
2460	38.3	2393	42.5	2601	2230	36.9	2228	41.0	2422	
2495	40.1	2442	44.5	2654	2460	36.9	2214	41.0	2406	
2520	40.5	2495	45.0	2712	2495	37.8	2254	42.0	2450	
4064	38.7	2262	43.0	2571	2520	37.8	2219	42.0	2412	
2700	42.3	2294	47.0	2493	4064	40.5	2246	45.0	2441	
NOS 180 BT OAL = 2.800"					8700 (C)	54.0	1839	60.0	1999	
5744	28.0	2117	30.0	2235	(L) 210 RN* OAL = 3.195"					
2230	36.0	2244	40.0	2439	5744	27.0	1859	30.0	2021	
2460	37.4	2276	41.5	2474	2015	32.4	2013	36.0	2188	
2495	38.7	2385	43.0	2592	2230	34.2	2011	38.0	2186	
2520	40.1	2407	44.5	2616	2460	34.7	2016	38.5	2191	
4064	37.8	2269	42.0	2466	2495	36.0	2054	40.0	2233	
2700	42.3	2272	47.0	2470	2520	36.0	2053	40.0	2232	
NOTE: Some military cases have lower case capacity than commercial brass cases and may require reduction of charge weight by 8–12%. Use extra caution when loading with military brass.					4064	38.7	2120	43.0	2304	
7.62x54mm RUSSIAN					8700 (C)	54.0	1853	60.0	2014	
Gun	DOUGLAS	Barrel length	24"		HDY 110 RN OAL = 2.900"					
Primer	CCI 250	Case	NORMA		2015	48.2	3104	53.5	3374	
Powder	Start Chg.	Velocity	Max. Chg.	Velocity	2230	51.3	3114	57.0	3385	
(L) 180 RN OAL = 2.830"					2460	52.7	3147	58.5	3421	
4350	45.0	2244	50.0	2439	2495	52.2	3170	58.0	3446	
3100	47.7	2156	53.0	2343	2520	54.0	3161	60.0	3436	
8700	49.5	1673	55.0	1819	4064 (C)	52.2	3129	58.0	3401	
SRA 150 SP OAL = 2.850"					2700	55.8	3018	62.0	3280	
4350	48.6	2459	54.0	2673	SRA 125 SP OAL = 3.150"					
3100	49.5	2268	55.0	2465	5744	26.0	2046	42.5	3037	
8700	52.2	1746	58.0	1898	2015	46.8	2934	52.0	3189	
					2230	48.0	2918	53.3	3172	
					2460	48.2	2875	53.5	3125	
					2495	48.6	2962	54.0	3220	
					2520	48.6	2876	54.0	3126	
					4064	51.3	3023	57.0	3286	
					2700	55.8	2939	62.0	3195	
					4350 (C)	54.0	2661	60.0	2892	

RIFLE

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
 (C) Denotes a compressed load for maximum charge. *CCI 250 primer used.

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RIFLE DATA					36	RIFLE DATA				
.30/06 SPRINGFIELD (CONT'D)					.30/06 SPRINGFIELD (CONT'D)					
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
SRA 150 SP OAL = 3.250"					SRA 220 RN OAL = 3.200"					
5744	28.0	2058	41.0	2787	5744	32.5	2058	35.5	2210	
2015	43.2	2651	48.0	2881	2015	37.8	2073	42.0	2253	
2230	44.5	2636	49.4	2865	2230	38.3	2068	42.5	2248	
2460	44.6	2633	49.5	2862	2460	38.7	2087	43.0	2268	
2495	46.4	2674	51.5	2907	2495	38.3	2044	42.5	2222	
2520	46.1	2640	51.2	2870	2520	39.6	2105	44.0	2288	
4064	47.3	2769	52.5	3010	4064	40.5	2130	45.0	2315	
2700	53.1	2697	59.0	2932	2700	44.6	2141	49.5	2327	
4350 (C)	53.1	2590	59.0	2815	4350	49.5	2270	55.0	2467	
3100 (C)	53.1	2401	59.0	2610	3100 (C)	53.1	2272	59.0	2470	
MAGPRO (C)	64.6	2841	68.0	2938	8700 (C)	55.8	1995	62.0	2168	
SRA 168 HPBT OAL = 3.295"					NOTE: Data listed above is for Sierra 220 RN. When loading for Sierra 220 HPBT, reduce start and maximum charges by 2 grains each.					
5744	29.0	2106	38.5	2621	NOTE: Some military cases have lower case capacity than commercial brass cases and may require reduction of charge weight by 8-12%. Use extra caution when loading with military brass.					
2015	41.0	2493	45.5	2710	.300 REMINGTON ULTRA MAG					
2230	41.4	2450	46.0	2663	Gun	WISEMAN	Barrel length	24"		
2460	42.0	2446	46.7	2659	Primer	REM 9½M	Case	REM		
2495	42.3	2490	47.0	2707	Powder	Start Chg.	Velocity	Max. Chg.	Velocity	
2520	42.8	2467	47.5	2681	(L) 168 RNGC	OAL = 3.475"				
4064	46.4	2601	51.5	2827	5744	22.5	1417	25.0	1540	
2700	48.6	2513	54.0	2732	(L) 180 RNGC	OAL = 3.400"				
4350 (C)	53.1	2599	59.0	2825	5744	25.0	1604	38.0	2161	
3100 (C)	53.1	2405	59.0	2614	NOS 125 BT	OAL = 3.600"				
SRA 180 HPBT OAL = 3.290"					5744	45.0	2650	67.0	3578	
5744	29.5	2083	37.0	2486	4064	74.7	3364	83.0	3657	
2015	40.1	2381	44.5	2588	2700	74.7	3342	83.0	3633	
2230	39.6	2363	44.0	2568	4350	85.5	3456	95.0	3757	
2460	41.2	2358	45.8	2563	3100 (C)	88.7	3421	98.5	3719	
2495	41.0	2387	45.5	2595	8700 (C)	104.0	3169	115.5	3445	
2520	42.1	2378	46.8	2585	BAR 150 X	OAL = 3.600"				
4064	43.7	2488	48.5	2704	5744	40.0	2340	62.0	3216	
2700	49.5	2434	55.0	2646	4064	66.6	2997	74.0	3258	
4350 (C)	51.3	2498	57.0	2715	2700	67.5	2990	75.0	3250	
3100 (C)	53.1	2402	59.0	2611	4350	76.5	3122	85.0	3394	
MAGPRO (C)	61.7	2673	65.0	2763	3100 (C)	80.1	3110	89.0	3380	
NOS 200 SP OAL = 3.295"					8700 (C)	102.6	3180	114.0	3456	
2015	37.8	2156	42.0	2343	NOS 165 BT	OAL = 3.600"				
2230	39.2	2195	43.5	2386	5744	39.0	2215	61.0	3092	
2460	40.1	2235	44.5	2429	4064	66.6	2868	74.0	3117	
2495	38.7	2189	43.0	2379	2700	64.8	2854	72.0	3102	
2520	40.5	2237	45.0	2432	4350	74.7	2947	83.0	3203	
4064	41.4	2277	46.0	2475	3100 (C)	81.0	3021	90.0	3284	
2700	46.4	2246	51.5	2441	8700 (C)	101.7	3025	113.0	3288	
4350 (C)	49.5	2363	55.0	2569						
3100 (C)	53.1	2356	59.0	2561						
MAGPRO (C)	58.9	2562	62.0	2669						
8700 (C)	55.8	2012	62.0	2187						

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
(C) Denotes a compressed load for maximum charge.

RIFLE DATA					37	RIFLE DATA				
.300 REMINGTON ULTRA MAG (CONT'D)						.300 REMINGTON ULTRA MAG (CONT'D)				
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
SPR 165 GS OAL = 3.550"						SPR 200 SP OAL = 3.600"				
5744	40.0	2277	61.0	3062		5744	38.0	2014	56.0	2689
4064	63.9	2838	71.0	3085		4064	56.7	2448	63.0	2661
2700	65.7	2852	73.0	3100		2700	58.5	2496	65.0	2713
4350	72.5	2972	80.5	3230		4350	62.1	2565	69.0	2788
3100 (C)	79.2	3025	88.0	3288		3100	72.5	2702	80.5	2937
MAGPRO	86.9	3115	96.5	3402		8700	95.4	2869	106.0	3119
8700 (C)	101.7	3099	113.0	3369		SPR 200 GS OAL = 3.550"				
SWF 165 A-F OAL = 3.550"						5744	38.0	2043	56.0	2772
5744	38.0	2184	60.0	3044		4064	58.5	2499	65.0	2716
4064	63.9	2846	71.0	3093		2700	60.3	2523	67.0	2742
2700	67.5	2887	75.0	3138		4350	65.7	2633	73.0	2862
4350	76.5	3014	85.0	3276		3100	72.9	2725	81.0	2962
3100 (C)	82.8	3088	92.0	3356		8700 (C)	99.0	2902	110.0	3154
8700 (C)	101.7	2978	113.0	3237		SWF 200 A-F OAL = 3.550"				
HDY 180 SPBT OAL = 3.600"						5744	38.0	2024	56.0	2731
5744	38.0	2151	59.0	2937		4064	57.6	2490	64.0	2706
4064	63.9	2775	71.0	3016		2700	65.7	2646	73.0	2876
2700	66.6	2793	74.0	3036		4350	71.1	2703	79.0	2938
4350	72.9	2886	81.0	3137		3100	77.4	2777	86.0	3018
3100 (C)	80.1	2996	89.0	3256		8700 (C)	99.9	2866	111.0	3115
8700 (C)	101.7	2994	113.0	3254		SRA 220 RN OAL = 3.570"				
SPR 180 GS OAL = 3.550"						5744	38.0	1921	57.0	2615
5744	38.0	2134	58.0	2882		4064	58.5	2381	65.0	2588
4064	64.4	2738	71.5	2976		2700	60.3	2425	67.0	2636
2700	64.4	2737	71.5	2975		4350	62.1	2433	69.0	2645
4350	72.0	2857	80.0	3105		3100	74.7	2651	83.0	2881
3100 (C)	78.3	2927	87.0	3182		8700 (C)	95.4	2732	106.0	2970
MAGPRO	81.0	2951	90.0	3193		.300 WINCHESTER MAGNUM				
8700 (C)	101.7	3040	113.0	3304		Gun	HS PRECISION	Barrel length	24"	
SWF 180 A-F OAL = 3.550"						Primer	CCI 200	Case	REM	
5744	38.0	2111	59.0	2939		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
4064	61.7	2700	68.5	2935		SRA 110 HP OAL = 3.170"				
2700	66.6	2763	74.0	3003		2520	60.3	3231	67.0	3512
4350	73.8	2866	82.0	3115		2700	70.7	3364	78.5	3656
3100 (C)	80.1	2949	89.0	3205		4350	71.6	3258	79.5	3541
8700 (C)	100.8	2934	112.0	3189		3100	73.8	3145	82.0	3419
NOS 180 PART OAL = 3.600"						HDY 130 SP OAL = 3.300"				
5744	38.0	2118	58.0	2892		2520	56.7	2978	63.0	3237
4064	65.7	2743	73.0	2981		2700	66.2	3115	73.5	3386
2700	67.1	2766	74.5	3007		4350	69.3	3108	77.0	3378
4350	73.8	2878	82.0	3128		3100	73.8	3108	82.0	3378
3100 (C)	80.1	2955	89.0	3212		SRA 150 SP OAL = 3.380"				
8700 (C)	101.7	3057	113.0	3323		5744	32.0	2091	52.0	3030
BAR 180 X OAL = 3.600"						2520	52.2	2722	58.0	2959
5744	38.0	2063	58.0	2876		4064	55.8	2837	62.0	3084
4064	63.9	2686	71.0	2920		2700	62.6	2923	69.5	3177
2700	62.6	2652	69.5	2883		4350	65.7	2892	73.0	3144
4350	67.1	2703	74.5	2938		3100	68.4	2859	76.0	3108
3100 (C)	77.4	2876	86.0	3126						
8700 (C)	101.7	3023	113.0	3286						

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WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
(C) Denotes a compressed load for maximum charge.

RIFLE

RIFLE DATA					38	RIFLE DATA				
.300 WINCHESTER MAGNUM (CONT'D)						.300 WINCHESTER SHORT MAGNUM (CONT'D)				
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
SRA 168 HPBT OAL = 3.475"						SPR 200 GS OAL = 2.760"				
5744	33.0	2063	51.0	2899		2700	54.4	2528	60.4	2748
4064	54.9	2735	61.0	2973		4350 (C)	53.8	2514	59.8	2733
2700	60.3	2722	67.0	2959		.300 REMINGTON SHORT ACTION ULTRA MAG				
4350	64.8	2815	72.0	3060		Gun	WISEMAN	Barrel length	24"	
3100	66.2	2709	73.5	2945		Primer	REM 9½M	Case	REM	
SRA 180 SBT OAL = 3.450"						<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
5744	34.0	2097	49.0	2778		HDY 165 SP OAL = 2.680"				
2700	59.4	2649	66.0	2879		5744	20.4	1527	30.5	2120
4350	62.1	2662	69.0	2894		5744	39.6	2612	44.0	2828
3100	64.8	2667	72.0	2899		SPR 150 SP OAL = 2.800"				
8700	77.4	2588	86.0	2813		4064	54.7	2874	60.8	3191
SRA 200 HPBT OAL = 3.340"						2700 (C)	60.8	2969	67.5	3253
2700	55.8	2481	62.0	2697		4350 (C)	61.8	2877	65.0	3060
4350	57.6	2480	64.0	2696		SRA 165 SPBT OAL = 2.800"				
3100	62.1	2487	69.0	2703		4064 (C)	53.6	2770	59.5	3062
8700	77.4	2527	86.0	2747		2700 (C)	58.7	2794	65.2	3126
SRA 220 RN OAL = 3.300"						SWF 180 SIR OAL = 2.800"				
5744	37.0	2111	46.5	2497		4064 (C)	50.0	2622	55.5	2870
2700	53.6	2249	59.5	2445		2700 (C)	54.5	2676	60.5	2954
4350	58.5	2392	65.0	2600		SPR 200 GS OAL = 2.680"				
3100	60.3	2355	67.0	2560		2700	53.8	2526	59.8	2790
8700	77.4	2478	86.0	2694		.303 BRITISH				
.300 WINCHESTER SHORT MAGNUM						Gun	DOUGLAS	Barrel length	24"	
Gun	WISEMAN	Barrel length	24"		Primer	CCI 250	Case	REM		
Primer	WIN LR	Case	WIN		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	(L) 180 RN OAL = 2.930"					
SPR 150 SP OAL = 2.760"						5744	25.2	1986	28.0	2159
2700	61.7	2984	68.6	3243		2015	34.2	2265	38.0	2462
4350	64.1	3039	71.2	3303		2230	35.1	2262	39.0	2459
MAGPRO (C)	72.5	2946	80.5	3313		2460	36.0	2282	40.0	2480
SRA 165 SPBT OAL = 2.760"						2495	39.6	2327	44.0	2529
5744	27.5	1905	30.5	2071		2520	36.0	2252	40.0	2448
2700	59.6	2846	66.2	3093		4064	39.6	2321	44.0	2523
4350	61.7	2878	68.5	3128		2700	37.8	2127	42.0	2312
MAGPRO (C)	70.2	2828	78.0	3223		4350	41.4	2118	46.0	2302
NOS 165 PART OAL = 2.760"						3100	41.4	1898	46.0	2063
2700	60.7	2881	67.4	3131		8700	43.2	1500	48.0	1630
4350	61.0	2890	67.8	3141		HDY 150 SP OAL = 3.010"				
SRA 180 SPBT OAL = 2.760"						5744	27.9	2220	31.0	2413
2700	58.1	2745	64.6	2984		2015	36.9	2497	41.0	2714
4350	60.8	2782	67.5	3024		2230	38.7	2488	43.0	2704
MAGPRO (C)	68.3	2733	76.0	3028		2460	39.6	2510	44.0	2728
SWF 180 A-F OAL = 2.760"						2495	41.4	2509	46.0	2727
2700	57.6	2722	64.0	2959		2520	41.4	2547	46.0	2769
4350	58.2	2750	64.7	2989		4064	42.8	2535	47.5	2755
BAR 180 X OAL = 2.800"						2700	43.2	2356	48.0	2561
MAGPRO (C)	68.4	2640	76.0	2952		4350	41.4	2074	46.0	2254

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
 (C) Denotes a compressed load for maximum charge.

RIFLE DATA					39	RIFLE DATA				
.303 BRITISH (CONT'D)					8x57mm JS (0.323") (CONT'D)					
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
SRA 180 SP OAL = 3.000"					HDY 170 RN OAL = 2.855"					
5744	26.1	2014	29.0	2189	2015	41.0	2490	45.5	2707	
2015	34.2	2226	38.0	2420	2230	44.1	2524	49.0	2743	
2230	36.0	2274	40.0	2472	2460	44.1	2510	49.0	2728	
2460	36.5	2247	40.5	2442	2520	45.0	2532	50.0	2752	
2495	39.6	2280	44.0	2478	HDY 220 SP OAL = 2.990"					
2520	39.6	2363	44.0	2568	2015	36.9	2129	41.0	2314	
4064	40.5	2334	45.0	2537	2230	37.8	2112	42.0	2296	
2700	41.4	2234	46.0	2428	2460	39.2	2157	43.5	2345	
4350	41.4	2098	46.0	2280	2520	40.5	2163	45.0	2351	
3100	41.4	1879	46.0	2042	2700 (C)	47.7	2247	53.0	2442	
.32/20 WINCHESTER					4350 (C) 45.9 2092 51.0 2274					
Gun	MARLIN	Barrel length	22"		.338 LAPUA MAGNUM					
Primer	CCI 400	Case	REM		Gun	WISEMAN	Barrel length	26"		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	Primer	CCI 250	Case	LAPUA		
(L) 100 SWC OAL = 1.545"					<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
5744	8.4	1107	9.3	1203	HDY 200 SP OAL = 3.560"					
SRA 90 JHC OAL = 1.565"					5744	36.0	1959	40.0	2129	
5744	8.7	1123	9.7	1221	2700	79.2	3015	88.0	3277	
HDY 100 XTP OAL = 1.585"					4350	84.6	3076	94.0	3344	
5744	8.6	1134	9.5	1233	3100	88.2	3057	98.0	3323	
.32/40 WINCHESTER					SPR 250 GS OAL = 3.550"					
Gun	DOUGLAS	Barrel length	24"		2700	70.2	2610	78.0	2837	
Primer	REM 9½	Case	REM		4350	75.6	2705	84.0	2940	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	3100	80.1	2724	89.0	2961	
(L) 170 FNGC OAL = 2.495"					MAGPRO	81.0	2672	90.0	2937	
5744	18.0	1658	20.0	1802	NOS 250 PART OAL = 3.560"					
HDY 170 FN OAL = 2.575"					2700	69.5	2619	77.2	2847	
5744	18.0	1635	20.0	1777	4350	73.8	2689	82.0	2923	
.32/40 SCHUETZEN					3100	77.6	2707	86.2	2942	
Gun	DOUGLAS	Barrel length	24"		SPR 275 SP OAL = 3.555"					
Primer	REM 2½	Case	REM		2700	68.0	2466	75.6	2680	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	4350	73.4	2549	81.5	2771	
(L) 200 FN BREECH SEATED					3100	78.3	2588	87.0	2813	
5744	N/A	N/A	11.0	1043	SWF 275 A-F OAL = 3.460"					
5744	N/A	N/A	12.5	1138	2700	66.6	2455	74.0	2668	
5744	N/A	N/A	14.0	1243	4350	69.5	2502	77.2	2720	
5744	N/A	N/A	15.5	1345	3100	73.2	2533	81.3	2753	
8x57mm JS (0.323")					.338 REMINGTON ULTRA MAG					
Gun	DOUGLAS	Barrel length	24"		Gun	WISEMAN	Barrel length	24"		
Primer	CCI 250	Case	REM		Primer	REM 9½M	Case	REM		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
HDY 150 SP OAL = 2.940"					(L) 193 FPGC OAL = 3.310"					
2015	42.3	2621	47.0	2849	5744	25.0	1595	40.0	2185	
2230	45.5	2674	50.5	2907	HDY 200 SP OAL = 3.575"					
2460	45.9	2674	51.0	2906	5744	N/A	N/A	40.0	2123	
2520	47.3	2719	52.5	2955	2700	74.3	2866	82.5	3115	
					4350	81.0	2941	90.0	3197	
					3100 (C)	85.5	2968	95.0	3226	
					8700 (C)	100.8	2683	112.0	2916	

RIFLE

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
 (C) Denotes a compressed load for maximum charge.

RIFLE

RIFLE DATA					40	RIFLE DATA				
.338 REMINGTON ULTRA MAG (CONT'D)						.338 WINCHESTER MAGNUM (CONT'D)				
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
HDY 225 SP OAL = 3.575"						SPR 275 SSP OAL = 3.330"				
5744	N/A	N/A	40.0	2083		5744	40.0	2036	45.0	2258
2700	72.0	2673	80.0	2905		2495	45.0	2063	50.0	2242
4350	79.2	2798	88.0	3041		2520	47.7	2112	53.0	2296
3100 (C)	82.8	2796	92.0	3039		4064	49.5	2160	55.0	2348
8700 (C)	95.4	2559	106.0	2781		2700	57.2	2255	63.5	2451
SRA 250 SPBT OAL = 3.575"						.35 REMINGTON				
5744	N/A	N/A	42.0	2113		Gun	DOUGLAS	Barrel length	24"	
2700	64.8	2494	72.0	2711		Primer	CCI 200	Case	REM	
4350	74.3	2631	82.5	2860		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
3100 (C)	78.8	2645	87.5	2875		(L) 200 RN	OAL = 2.410"			
8700 (C)	93.6	2472	104.0	2687		2230	29.3	1756	32.5	1909
SWF 275 A-F OAL = 3.490"						2460	30.6	1804	34.0	1961
5744	N/A	N/A	44.0	2082		2520	34.2	1917	38.0	2084
2700	59.4	2273	66.0	2471		SPR 180 FN OAL = 2.465"				
4350	66.6	2379	74.0	2586		2230	32.9	1896	36.5	2061
3100 (C)	75.6	2480	84.0	2696		2460	33.3	1922	37.0	2089
8700 (C)	88.2	2291	98.0	2490		2520	35.1	1952	39.0	2122
.338 WINCHESTER MAGNUM						SRA 200 RN OAL = 2.470"				
Gun	HS PRECISION	Barrel length	24"			2230	31.5	1823	35.0	1982
Primer	CCI 250	Case	FED			2460	33.3	1866	37.0	2028
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		2520	35.1	1905	39.0	2071
(L) 200 FNGC OAL = 3.200"						.35 WHELEN				
5744	28.0	1815	38.0	2302		Gun	DOUGLAS	Barrel length	24"	
HDY 200 SP OAL = 3.335"						Primer	CCI 200	Case	REM	
5744	36.0	2061	52.0	2790		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>
2495	51.3	2582	57.0	2807		(L) 205 RNGC	OAL = 3.045"			
2520	56.3	2616	62.5	2843		5744	34.2	2256	38.0	2452
4064	56.7	2632	63.0	2861		(L) 250 SIL OAL = 3.250"				
2700	63.5	2666	70.5	2898		5744	32.4	1999	36.0	2173
4350	65.7	2714	73.0	2950		(L) 280 RNGC OAL = 3.050"				
3100	68.4	2606	76.0	2833		5744	30.6	1854	34.0	2015
8700	72.0	2119	80.0	2303		HDY 200 SP OAL = 3.140"				
HDY 225 SP OAL = 3.340"						2015	48.6	2574	54.0	2798
2495	48.6	2378	54.0	2585		2230	49.5	2487	55.0	2703
2520	50.4	2373	56.0	2579		2460	51.3	2510	57.0	2728
4064	54.5	2486	60.5	2702		2520	52.7	2535	58.5	2755
2700	59.4	2487	66.0	2703		2700 (C)	58.5	2524	65.0	2744
4350	63.5	2576	70.5	2800		4350 (C)	53.1	2168	59.0	2357
3100	65.7	2467	73.0	2682		3100 (C)	54.0	1967	60.0	2138
8700	71.1	2067	79.0	2247		SRA 225 SBT OAL = 3.280"				
SRA 250 SBT OAL = 3.340"						2015	44.1	2350	49.0	2554
5744	38.0	2056	47.0	2466		2230	47.3	2367	52.5	2573
2495	46.8	2249	52.0	2445		2460	48.6	2404	54.0	2613
2520	50.4	2276	56.0	2474		2520	49.5	2391	55.0	2599
4064	52.2	2344	58.0	2548		2700	55.4	2393	61.5	2601
2700	56.7	2343	63.0	2547		4350 (C)	53.1	2217	59.0	2410
4350	58.5	2379	65.0	2586		3100 (C)	54.0	1992	60.0	2165
3100	63.9	2398	71.0	2607						
8700	72.9	2151	81.0	2338						

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
 (C) Denotes a compressed load for maximum charge.

RIFLE DATA					41	RIFLE DATA				
.35 WHELEN (CONT'D)					.375 REMINGTON ULTRA MAG (CONT'D)					
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
SPR 250 SP OAL = 3.245"					HDY 270 SP OAL = 3.555"					
2015	42.8	2218	47.5	2411	2700	83.7	2646	93.0	2876	
2230	45.9	2235	51.0	2429	4350 (C)	89.1	2706	99.0	2941	
2460	46.4	2237	51.5	2432	SWF 270 A-F OAL = 3.550"					
2520	46.8	2218	52.0	2411	2700	81.0	2606	90.0	2833	
2700 (C)	54.0	2237	60.0	2431	4350 (C)	88.2	2705	98.0	2940	
4350 (C)	54.0	2193	60.0	2384	HDY 300 RN OAL = 3.570"					
3100 (C)	54.0	1965	60.0	2136	2700	81.9	2511	91.0	2729	
					4350 (C)	87.3	2575	97.0	2799	
.375 H&H MAGNUM					BAR 300 X OAL = 3.575"					
Gun	DOUGLAS	Barrel length	25"		2700	73.8	2392	82.0	2600	
Primer	REM 9½M	Case	WIN		4350 (C)	82.8	2471	92.0	2686	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	.38/55 WINCHESTER					
SRA 200 FN OAL = 3.375"					Gun	DOUGLAS	Barrel length	24"		
5744	40.0	2058	60.0	2902	Primer	CCI 300	Case	WIN		
SPR 235 SP OAL = 3.450"					<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
2520	63.9	2645	71.0	2875	(L) 240 FN OAL = 2.510"					
2700	72.0	2649	80.0	2879	5744	19.8	1473	22.0	1601	
4350 (C)	77.4	2608	86.0	2835	2015	28.4	1788	31.5	1943	
3100 (C)	77.4	2362	86.0	2567	2495 (C)	34.2	1858	38.0	2020	
HDY 270 SP OAL = 3.570"					SRA 200 FN OAL = 2.590"					
5744	43.0	2077	54.0	2489	5744	23.0	1705	25.5	1853	
2700 (C)	72.0	2476	80.0	2691	2015	32.4	1961	36.0	2132	
4350 (C)	75.6	2494	84.0	2711	2495 (C)	36.0	1874	40.0	2037	
3100 (C)	77.4	2317	86.0	2519	HDY 220 FN OAL = 2.580"					
SRA 300 SBT OAL = 3.585"					5744	21.2	1516	23.5	1648	
5744	46.0	2021	51.0	2217	2015	28.8	1735	32.0	1886	
2700	67.5	2346	75.0	2550	2495 (C)	34.2	1881	38.0	2045	
4350 (C)	71.1	2343	79.0	2547	BAR 255 SP OAL = 2.475"					
3100 (C)	74.7	2257	83.0	2453	5744	19.4	1277	21.5	1388	
BAR 350 RN OAL = 3.560"					2015	26.8	1485	29.8	1614	
2700	60.3	2078	67.0	2259	2495 (C)	32.4	1589	36.0	1727	
4350 (C)	67.5	2167	75.0	2355	.416 REMINGTON MAGNUM					
3100 (C)	65.7	1938	73.0	2106	Gun	DOUGLAS	Barrel length	24"		
					Primer	REM 9½M	Case	REM		
.375 REMINGTON ULTRA MAG					<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
Gun	WISEMAN	Barrel length	26"		(L) 350 FN OAL = 3.430"					
Primer	REM 9½	Case	REM		5744	49.5	2086	55.0	2267	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	BAR 350 X OAL = 3.680"					
SPR 235 SP OAL = 3.595"					2015	67.5	2409	75.0	2618	
4350 (C)	92.7	2896	103.0	3148	2230	71.1	2433	79.0	2645	
SRA 250 SBT OAL = 3.595"					2460	71.1	2402	79.0	2611	
5744	43.2	1937	48.0	2105	2520	70.2	2358	78.0	2563	
2700	86.4	2777	96.0	3018	4064	74.7	2337	83.0	2540	
4350 (C)	89.1	2793	99.0	3036	2700 (C)	77.4	2333	86.0	2536	
NOS 260 PART OAL = 3.565"					4350 (C)	72.0	2043	80.0	2221	
2700	81.9	2676	91.0	2909						
4350 (C)	86.6	2732	96.2	2970						

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WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
(C) Denotes a compressed load for maximum charge.

RIFLE DATA

42

RIFLE DATA

.416 REMINGTON MAGNUM (CONT'D)

Powder	Start Chg.	Velocity	Max. Chg.	Velocity
HDY 400 RN	OAL = 3.580"			
2015	63.0	2200	70.0	2391
2230	65.7	2190	73.0	2380
2460	66.6	2192	74.0	2383
2520	67.5	2194	75.0	2385
4064	72.0	2225	80.0	2419
2700	76.5	2247	85.0	2442
4350 (C)	78.3	2253	87.0	2449

.416 RIGBY

Gun	DOUGLAS	Barrel length	26"	
Primer	FED 215	Case	FED	
Powder	Start Chg.	Velocity	Max. Chg.	Velocity
(L) 350 FN	OAL = 3.480"			
5744	49.5	1999	55.0	2173
SPR 400 SP	OAL = 3.635"			
3100	90.0	2150	100.0	2337
8700 (C)	108.0	1968	120.0	2139

.40/65 WINCHESTER

Gun	C. SHARPS	Barrel length	36"	
Primer	WIN WLR	Case	WIN	
Powder	Start Chg.	Velocity	Max. Chg.	Velocity
(L) 260 FN	OAL = 2.540"			
5744	23.4	1519	26.0	1651
(L) 300 FN	OAL = 2.660"			
5744	21.6	1394	24.0	1515
2495	38.7	1724	43.0	1874
8700 (C)	54.0	1312	60.0	1426
(L) 350 SP	OAL = 2.660"			
5744	20.7	1321	23.0	1436
2495	36.0	1627	40.0	1768
8700 (C)	48.6	1155	54.0	1255
(L) 400 SP	OAL = 2.830"			
5744	20.7	1255	23.0	1364
2495	33.3	1502	37.0	1633
8700 (C)	46.8	1088	52.0	1183

.444 MARLIN

Gun	DOUGLAS	Barrel length	24"	
Primer	REM 9½	Case	REM	
Powder	Start Chg.	Velocity	Max. Chg.	Velocity
(L) 200 FN	OAL = 2.560"			
5744	34.2	2047	38.0	2225
(L) 240 SWC	OAL = 2.570"			
5744	32.4	1887	36.0	2051
HDY 200 XTP	OAL = 2.520"			
5744	36.0	2113	40.0	2297

.444 MARLIN (CONT'D)

Powder	Start Chg.	Velocity	Max. Chg.	Velocity
SRA 240 JHC	OAL = 2.520"			
5744	33.3	1903	37.0	2069
HDY 265 FP	OAL = 2.570"			
5744	31.5	1769	35.0	1923

.450 MARLIN

Gun	DOUGLAS	Barrel length	24"	
Primer	CCI 250	Case	REM	
Powder	Start Chg.	Velocity	Max. Chg.	Velocity
(L) 300 FN	OAL = 2.550"			
5744	38.7	1928	43.0	2096
(L) 405 FN	OAL = 2.550"			
5744	36.0	1716	40.0	1865
SRA 300 FNHP	OAL = 2.550"			
5744	43.2	2034	48.0	2211
1680	52.2	2198	58.0	2389
2015 (C)	54.9	2217	61.0	2410
2230	58.1	2226	64.5	2420
2460 (C)	60.3	2214	67.0	2407
2495 (C)	59.4	2001	66.0	2175
2520 (C)	56.7	2034	63.0	2211
SPR 350 FNHP	OAL = 2.550"			
5744	39.4	1813	43.8	1971
1680	46.1	1919	51.2	2086
2015 (C)	50.0	2030	55.5	2207
2230 (C)	55.8	2067	62.0	2247
2460 (C)	55.8	2010	62.0	2185
2495 (C)	54.9	1892	61.0	2057
2520 (C)	55.8	1982	62.0	2154
2700 (C)	55.8	1719	62.0	1869
SPR 400 FN	OAL = 2.550"			
5744	36.9	1688	41.0	1835
1680	41.4	1732	46.0	1883
2015	47.3	1883	52.5	2047
2230 (C)	49.9	1877	55.4	2040
2460 (C)	54.0	1909	60.0	2075
2495 (C)	49.5	1689	55.0	1836
2520 (C)	53.1	1875	59.0	2038
2700 (C)	53.1	1620	59.0	1761

**.45/70 TRAP DOOR SPRINGFIELD—
LEVEL 1**

Gun	DOUGLAS	Barrel length	24"	
Primer	CCI 200	Case	REM NICKEL	
Powder	Start Chg.	Velocity	Max. Chg.	Velocity
(L) 300 PB	OAL = 2.550"			
5744	27.9	1469	31.0	1597
(L) 405 PB	OAL = 2.560"			
5744	24.8	1247	27.5	1355
(L) 500 PBRN	OAL = 2.850"			
5744	22.5	1112	25.0	1209

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.
(C) Denotes a compressed load for maximum charge.

RIFLE DATA					43	RIFLE DATA				
.45/70 TRAP DOOR SPRINGFIELD (CONT'D)					.45/70 GOVERNMENT (CONT'D)					
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 500 SCHM OAL = 3.010"					HDY 350 RN OAL = 2.550"					
5744	22.8	1121	25.3	1219	2015	47.7	1777	53.0	1932	
(L) 530 POST OAL = 2.950"					2495 54.9 1892 61.0 2057					
5744	20.2	1084	22.4	1178	2700	54.9	1650	61.0	1794	
SPR 400 JSP OAL = 2.560"					4350 58.5 1596 65.0 1735					
5744	23.4	1078	26.0	1172	3100	58.5	1463	65.0	1590	
.45/70 GOVERNMENT (RUGER, MARLIN, SHARPS, WINCHESTER)—LEVEL 2					SPR 400 FN OAL = 2.560"					
Gun	DOUGLAS	Barrel length	24"		5744	27.9	1319	31.0	1434	
Primer	WIN WLR	Case	WIN		2015	44.1	1620	49.0	1761	
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	2495	49.5	1689	55.0	1836	
(L) 300 PB OAL = 2.550"					2700 49.5 1479 55.0 1608					
5744	34.2	1727	38.0	1877	4350 (C)	54.0	1444	60.0	1570	
(L) 378 RN OAL = 2.565"					3100 (C) 54.0 1336 60.0 1452					
2015	44.1	1675	49.0	1821	8700 (C)	54.0	913	60.0	992	
2495	49.5	1780	55.0	1935	HDY 500 RN OAL = 2.580"					
4350	54.0	1492	60.0	1622	5744	27.9	1369	31.0	1488	
3100	54.0	1366	60.0	1485	2015	36.0	1308	40.0	1422	
8700	54.0	944	60.0	1026	2495	41.4	1415	46.0	1538	
(L) 405 FN OAL = 2.550"					2700 41.4 1221 46.0 1327					
5744	29.7	1462	33.0	1589	HDY 500 RN OAL = 2.795"					
2015	48.6	1532	54.0	1665	4350	52.2	1474	58.0	1602	
2495	48.6	1657	54.0	1801	HDY 500 RN OAL = 2.825"					
4350	50.4	1356	56.0	1474	3100	54.0	1326	60.0	1441	
3100	54.0	1308	60.0	1422	8700	54.0	950	60.0	1033	
8700	54.0	1072	60.0	1165	.45/90 WINCHESTER					
(L) 500 FN OAL = 2.550"					Gun WISEMAN Barrel length 30"					
2015	37.8	1442	42.0	1567	Primer CCI 250 Case BELL					
2495	44.1	1536	49.0	1670	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
2700	42.3	1301	47.0	1414	(L) 300 PB OAL = 2.810"					
4350	52.2	1455	58.0	1582	5744	35.1	1637	39.0	1779	
(L) 500 FN OAL = 2.795"					(L) 405 PB OAL = 2.910"					
3100	54.0	1374	60.0	1493	5744	31.5	1411	35.0	1534	
8700	54.0	920	60.0	1000	(L) 500 SCHM OAL = 3.300"					
(L) 500 SCHM OAL = 3.010"					5744 29.3 1300 32.5 1413					
5744	28.4	1340	31.5	1456	.45/110 SHARPS 2⁷/₈"					
(L) 530 POST OAL = 2.950"					Gun WISEMAN Barrel length 30"					
5744	26.6	1251	29.5	1360	Primer CCI 250 Case HDS					
SRA 300 HP OAL = 2.550"					<u>Powder</u> <u>Start Chg.</u> <u>Velocity</u> <u>Max. Chg.</u> <u>Velocity</u>					
5744	31.5	1568	35.0	1704	(L) 300 PB OAL = 3.300"					
2015	53.1	1991	59.0	2164	5744	39.6	1788	44.0	1944	
2495	59.4	2001	66.0	2175	(L) 405 PB OAL = 3.350"					
2700	58.5	1784	65.0	1939	5744	34.7	1487	38.5	1616	
4350	63.0	1670	70.0	1815	(L) 500 SCHM OAL = 3.750"					
3100	63.0	1569	70.0	1705	5744	33.3	1400	37.0	1522	

RIFLE

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

RIFLE DATA						RIFLE DATA					
.45/120 SHARPS 3 1/4"						.50/140 SHARPS 3 1/4"					
Gun	WISEMAN	Barrel length	30"			Gun	C. SHARPS	Barrel length	30"		
Primer	CCI 250	Case	HDS			Primer	FED 215	Case	ELDORADO		
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>	
(L) 300 PB	OAL = 3.700"					(L) 440 SP	OAL = 3.785"				
5744	45.9	1974	51.0	2146		5744	49.5	1820	55.0	1978	
(L) 405 PB	OAL = 3.815"					(L) 550 FN	OAL = 3.735"				
5744	42.3	1729	47.0	1879		5744	45.0	1597	50.0	1736	
(L) 500 SCHM	OAL = 4.075"					.50 BROWNING					
5744	39.2	1555	43.5	1690	Gun	FRESHOUR	Barrel length	44"			
(L) 570 JONES	OAL = 4.000"					Primer	CCI 35	Case	IMI		
5744	36.9	1437	41.0	1562	<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>		
SPR 400 JFN	OAL = 3.700"					MIL 642 FMJ	OAL = 5.545"				
5744	41.0	1641	45.5	1784	8700	205.2	2696	228.0	2930		
.458 WINCHESTER MAGNUM						MIL 750 FMJ	OAL = 5.545"				
Gun	DOUGLAS	Barrel length	24"			8700	196.2	2484	218.0	2700	
Primer	REM 9 1/2 M	Case	REM								
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>							
(L) 375 RN	OAL = 3.000"										
5744	46.8	2061	52.0	2240							
(L) 400 FN	OAL = 3.000"										
5744	45.9	1996	51.0	2170							
(L) 455 RN	OAL = 3.110"										
5744	44.1	1860	49.0	2022							
(L) 500 RN	OAL = 3.170"										
5744	42.3	1749	47.0	1901							
.50/70 GOVERNMENT											
Gun	C. SHARPS	Barrel length	30"								
Primer	FED 215	Case	DGW								
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>							
(L) 425 SP	OAL = 2.275"										
5744	27.0	1305	30.0	1419							
(L) 550 FN	OAL = 2.200"										
5744	22.5	1111	25.0	1208							
.50/90 SHARPS 2 1/2"											
Gun	C. SHARPS	Barrel length	30"								
Primer	FED 215	Case	ELDORADO								
<u>Powder</u>	<u>Start Chg.</u>	<u>Velocity</u>	<u>Max. Chg.</u>	<u>Velocity</u>							
(L) 365 FN	OAL = 2.870"										
5744	38.7	1651	43.0	1795							
(L) 440 SP	OAL = 3.000"										
5744	34.2	1432	38.0	1557							
(L) 550 FN	OAL = 2.925"										
5744	31.5	1298	35.0	1411							
(L) 700 SPTZ	OAL = 3.125"										
5744	31.5	1181	33.0	1246							

WARNING: Always start at MINIMUM loads listed above as START CHG. See explanation on page 3.

NOTE: VERIFY POWDER CHARGE WITH A SCALE
PRIOR TO LOADING

Load Bushing Data

Hornady 366/APEX Presses					MEC Single Stage Presses				
Desired Grains	SOLO 1000 Bushing	SOLO 1250 Bushing	No. 2 Improved Bushing	Nitro 100 Bushing	Bushing	SOLO 1000 Grains	SOLO 1250 Grains	No. 2 Improved Grains	Nitro 100 Grains
13.0		354		366					
13.5		360		372	20		13.9	17.0	
14.0	387	369		375	21		14.2	18.0	
14.5	393	378		381	22		14.7	18.7	
15.0	399	384		387	23		15.0	19.4	
15.5	408	390		393	24		15.6	20.2	
16.0	411	396		399	25		16.1	20.5	15.5
16.5	417	402	351	405	26	16.0	17.0	21.6	16.3
17.0	420	408	357	411	27	16.3	17.9	22.6	17.0
17.5	429	414	363	417	28	17.3	18.4	23.5	17.5
18.0	432	420	366	423	29	18.0	19.4		18.3
18.5	435	426	372	429	30	18.8	19.9		19.1
19.0	438	429	378	435	31	19.2	20.5		19.7
19.5	441	435	384	441	32	20.8	21.2		20.3
20.0	447	441	387	447	33	21.4	22.3		20.8
20.5	453	447	393	453	34	22.0	23.1		21.5
21.0	459	453	396	456	35	22.8	23.7		22.3
21.5	468	456	402	457	36	23.3	24.6		23.0
22.0	474	459	408	465	37	23.8	25.2		23.9
22.5	480	465	411		38	24.5	26.4		
23.0		471	417		38A	25.3	26.7		
23.5		477	420		39	26.3	28.3		
24.0		480			39A		29.1		
24.5		486			40		29.6		
25.0		492			40A		30.2		
25.5		495			41		31.9		
26.0		501			41A		32.4		
26.5		502			42		33.6		
27.0		510			42A		34.4		
27.5		513			43		35.5		
28.0		516							
28.5		522							
29.0		525							
29.5		531							
30.0		537							
30.5		—							
31.0		543							
31.5		549							
32.0		555							
33.0		558							
					BUSHING	4100			
					11	13.5			

BUSHING

Ponsness-Warren Presses					MEC Progressive Presses				
Bushing Letter	SOLO 1000 Grains	SOLO 1250 Grains	No. 2 Improved Grains	Nitro 100 Grains	Bushing Number	SOLO 1000 Grains	SOLO 1250 Grains	No. 2 Improved Grains	Nitro 100 Grains
D1		12.0		10.7	20		13.5	17.0	
E		13.7	17.0	11.9	21		13.9	18.0	
E1		14.0	18.4	12.5	22		14.4	18.7	
E2		14.5	19.0	13.1	23		14.8	19.4	
F	14.3	15.5	20.2	13.9	24		15.5	20.2	
F1	14.5	15.7	20.5	14.1	25	14.2	16.0	20.5	14.5
G	15.9	17.5	22.7	15.6	26	14.5	16.8	21.6	15.2
G1	16.4	17.7	23.0	15.9	27	15.5	17.5	22.6	15.7
H	17.5	19.0	24.5	16.7	28	16.2	18.0	23.5	16.5
I	18.5	19.5		17.2	29	17.0	18.9		17.3
J	19.7	20.3		17.9	30	17.4	19.6		17.9
J1	20.4	20.8		18.7	31	19.0	20.1		18.5
K	20.7	21.4		19.1	32	19.6	21.0		19.0
L	21.4	22.5		20.2	33	20.2	22.0		19.7
M	22.1	23.5		20.3	34	21.0	22.6		20.5
N	23.5	25.0		22.5	35	21.5	23.2		21.2
O	24.0	25.5		23.0	36	22.0	24.3		22.1
P	24.6	26.0		23.7	37	22.7	25.0		
Q		26.3		24.0	38	23.5	26.0		
R		28.0			38A	24.5	26.5		
S		28.3			39		28.0		
T		30.0			39A		28.9		
U		32.0			40		29.5		
V		32.5			40A		30.1		
					41		31.3		
					41A		32.0		
					42		33.0		
					42A		34.0		
					43		35.0		

NOTE: VERIFY POWDER CHARGE WITH A SCALE
PRIOR TO LOADING

Load Bushing Data

LEE AUTO-DISK CAVITIES																	
Powder	0.30	0.32	0.34	0.37	0.40	0.43	0.46	0.49	0.53	0.57	0.61	0.66					
NITRO100	2.2	2.4	2.5	2.7	3.0	3.2	3.4	3.6	3.9	4.2	4.5	4.9					
No. 2l	2.9	3.0	3.3	3.5	3.8	4.1	4.4	4.6	5.0	5.4	5.8	6.3					
No. 5	4.8	5.1	5.5	5.9	6.4	6.9	7.4	7.9	8.5	9.2	9.8	10.6					
No. 7	4.6	4.9	5.2	5.7	6.1	6.6	7.0	7.5	8.1	8.7	9.3	10.1					
No. 9	4.6	4.9	5.2	5.6	6.1	6.5	7.0	7.5	8.1	8.7	9.3	10.1					
1680	4.6	4.9	5.2	5.6	6.1	6.6	7.0	7.5	8.1	8.7	9.3	10.1					
XMR2015	4.1	4.4	4.7	5.1	5.5	5.9	6.3	6.7	7.3	7.8	8.4	9.0					
2230	4.6	4.9	5.2	5.6	6.1	6.5	7.0	7.5	8.1	8.7	9.3	10.0					
2460	4.6	4.9	5.2	5.6	6.1	6.6	7.0	7.5	8.1	8.7	9.3	10.1					
XMR2495	4.0	4.3	4.5	4.9	5.3	5.7	6.1	6.5	7.1	7.6	8.2	8.8					
2520	4.4	4.7	5.0	5.4	5.9	6.3	6.7	7.2	7.8	8.4	8.9	9.7					
2700	4.4	4.7	5.0	5.4	5.8	6.3	6.7	7.2	7.7	8.3	8.9	9.6					
XMR4350	4.1	4.3	4.6	5.0	5.4	5.8	6.2	6.6	7.2	7.7	8.2	8.9					
XMR3100	4.0	4.3	4.5	4.9	5.3	5.7	6.1	6.5	7.1	7.6	8.2	8.8					
8700	4.4	4.7	4.9	5.4	5.8	6.3	6.7	7.1	7.7	8.3	8.9	9.6					
SOLO 1000	2.3	2.4	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.3	4.6	5.0					
XMP 5744	4.0	4.2	4.5	4.9	5.3	5.7	6.1	6.5	7.0	7.5	8.1	8.7					
LEE AUTO-DISK CAVITIES—Cont'd.																	
Powder	0.71	0.76	0.82	0.88	0.95	1.02	1.09	1.18	1.26	1.36	1.46	1.57					
NITRO100	5.3	5.6	6.1	6.5	7.0	7.6	8.1	8.7	9.3	10.1	10.8	11.6					
No. 2l	6.8	7.3	7.8	8.4	9.0	9.8	10.4	11.3	12.0	13.0	13.9	15.0					
No. 5	11.4	12.2	13.2	14.1	15.3	16.4	17.5	18.9	20.2	21.8	23.4	25.2					
No. 7	10.9	11.6	12.6	13.5	14.5	15.6	16.7	18.1	19.3	20.8	22.4	24.0					
No. 9	10.8	11.6	12.5	13.4	14.5	15.5	16.6	18.0	19.2	20.7	22.2	23.9					
1680	10.8	11.6	12.5	13.4	14.5	15.6	16.6	18.0	19.2	20.8	22.3	24.0					
XMR2015	9.7	10.4	11.2	12.1	13.0	14.0	14.9	16.2	17.3	18.6	20.0	21.5					
2230	10.8	11.6	12.5	13.4	14.5	15.5	16.6	18.0	19.2	20.7	22.2	23.9					
2460	10.8	11.6	12.5	13.4	14.5	15.5	16.6	18.0	19.2	20.7	22.2	23.9					
XMR2495	9.5	10.2	11.0	11.8	12.7	13.6	14.6	15.8	16.8	18.2	19.5	21.0					
2520	10.4	11.1	12.0	12.9	13.9	14.9	16.0	17.3	18.5	19.9	21.4	23.0					
2700	10.4	11.1	12.0	12.9	13.9	14.9	15.9	17.2	18.4	19.9	21.3	22.9					
XMR4350	9.6	10.3	11.1	11.9	12.8	13.8	14.7	16.0	17.0	18.4	19.7	21.2					
XMR3100	9.5	10.2	11.0	11.8	12.7	13.6	14.6	15.8	16.8	18.2	19.5	21.0					
8700	10.3	11.1	11.9	12.8	13.8	14.8	15.8	17.2	18.3	19.8	21.2	22.8					
SOLO 1000	5.3	5.7	6.2	6.6	7.1	7.7	8.2	8.9	9.5	10.2	11.0	11.8					
XMP 5744	9.4	10.0	10.8	11.6	12.6	13.5	14.4	15.6	16.7	18.0	19.3	20.7					
LEE DIPPERS																	
Powder	0.30	0.50	0.70	1.00	1.30	1.60	1.90	2.20	2.50	2.80	3.10	3.40	3.70	4.00	4.30		
NITRO100	2.2	3.7	5.2	7.4	9.6	11.9	14.1	16.3	18.5	20.8	23.0	25.2	27.4	29.7	31.9		
No. 2l	2.9	4.8	6.7	9.5	12.4	15.3	18.2	21.0	23.8	26.7	29.6	32.5	35.3	38.2	41.0		
No. 5	4.8	8.0	11.2	16.1	20.9	25.7	30.5	35.3	40.1	45.0	49.8	54.6	59.4	64.2	69.0		
No. 7	4.6	7.7	10.7	15.3	19.9	24.5	29.1	33.7	38.3	42.9	47.5	52.1	56.7	61.2	65.8		
No. 9	4.6	7.6	10.7	15.2	19.8	24.4	28.9	33.5	38.1	42.6	47.2	51.8	56.4	60.9	65.5		
1680	4.6	7.6	10.7	15.3	19.8	24.4	29.0	33.6	38.2	42.7	47.3	51.9	56.5	61.0	65.6		
XMR2015	4.1	6.8	9.6	13.7	17.8	21.9	26.0	30.1	34.2	38.3	42.5	46.6	50.7	54.8	58.9		
2230	4.6	7.6	10.7	15.2	19.8	24.4	28.9	33.5	38.1	42.6	47.2	51.8	56.3	60.9	65.5		
2460	4.6	7.6	10.7	15.2	19.8	24.4	28.9	33.5	38.1	42.7	47.2	51.8	56.4	60.9	65.5		
XMR2495	4.0	6.7	9.4	13.4	17.4	21.4	25.4	29.4	33.4	37.4	41.4	45.4	49.4	53.5	57.5		
2520	4.4	7.3	10.3	14.6	19.0	23.4	27.8	32.2	36.6	41.0	45.4	49.8	54.2	58.6	63.0		
2700	4.4	7.3	10.2	14.6	19.0	23.4	27.7	32.1	36.5	40.9	45.3	49.7	54.0	58.4	62.8		
XMR4350	4.1	6.8	9.5	13.5	17.6	21.6	25.7	29.7	33.8	37.8	41.9	46.0	50.0	54.1	58.1		
XMR3100	4.0	6.7	9.4	13.4	17.4	21.4	25.4	29.4	33.4	37.4	41.4	45.4	49.4	53.5	57.5		
8700	4.4	7.3	10.2	14.5	18.9	23.3	27.6	32.0	36.4	40.7	45.1	49.4	53.8	58.2	62.5		
SOLO 1000	2.3	3.8	5.3	7.5	9.8	12.0	14.3	16.5	18.8	21.0	23.3	25.6	27.8	30.1	32.3		
XMP 5744	4.0	6.6	9.3	13.2	17.2	21.1	25.1	29.1	33.0	37.0	41.0	44.9	48.9	52.9	56.8		
LEE CHARGE BAR BUSHINGS																	
Powder	.095	.100	.105	.110	.116	.122	.128	.134	.141	.148	.151	.155	.163	.171	.180	.189	.198
NITRO100	11.3	11.9	12.5	13.0	13.8	14.5	15.2	15.9	16.7	17.6	17.9	18.4	19.3	20.3	21.4	22.4	23.5
SOLO 1000	11.4	12.0	12.6	13.2	13.9	14.7	15.4	16.1	17.0	17.8	18.2	18.6	19.6	20.6	21.6	22.7	23.8

BUSHING

SHOTSHELL DATA 47 SHOTSHELL DATA

SHOTSHELL DATA

The data that follows was developed in test barrels with a bore diameter of 0.725" for 12-gauge. Some overbored barrels may give different pressures and velocities.

Please note that after setting up your loading machine for the specific combination of components that you desire, BE SURE TO WEIGH THE INITIAL POWDER CHARGES THROWN BY THE CHARGE BAR. Because of many variable conditions, seldom does the charge thrown match up exactly with the charge listed in the load bushing tables. These variations can be caused by humidity changes, bulk density variations of the powder, and the way each machine is operated. Please use caution when you start reloading on a specific day or when you change component lots.

12-Ga., 2 ³ / ₄ -IN. Winchester Plastic AA-Type Shells Min. Overall Length: 2 ¹ / ₂ -IN.					SOLO 1000		NITRO 100		SOLO 1250	
Ounces Lead	Dram Equivalent	Approx. Velocity, Ft./Sec.	Primer Type	Wad	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
COWBOY ACTION										
3/4	—	1176	WIN 209	FED 12S0	—	—	15.0	4000		
		1232	WIN 209	FED 12S0	—	—	16.0	4500		
		1295	WIN 209	FED 12S0	—	—	17.0	5100		
		1361	WIN 209	FED 12S0	—	—	18.0	6100		
		1160	WIN 209	WAA12SL	17.0	3400	—	—		
		1206	WIN 209	WAA12SL	18.0	3700	—	—		
		1276	WIN 209	WAA12SL	19.0	4700	—	—		
		1336	WIN 209	WAA12SL	20.0	5400	—	—		
7/8	—	1143	WIN 209	FED 12S0	—	—	15.0	4900		
		1196	WIN 209	FED 12S0	—	—	16.0	5700		
		1263	WIN 209	FED 12S0	—	—	17.0	6900		
		1320	WIN 209	FED 12S0	—	—	18.0	7900		
		1148	WIN 209	WAA12SL	17.0	4100	—	—		
		1203	WIN 209	WAA12SL	18.0	5000	—	—		
		1247	WIN 209	WAA12SL	19.0	5400	—	—		
		1305	WIN 209	WAA12SL	20.0	6200	—	—		
1	—	1107	WIN 209	WAA12SL	—	—	15.0	5400		
		1174	WIN 209	WAA12SL	—	—	16.0	6700		
		1223	WIN 209	WAA12SL	—	—	17.0	7400		
		1275	WIN 209	WAA12SL	—	—	18.0	8800		
		1175	WIN 209	WAA 12	17.0	5900	—	—		
		1190	WIN 209	WAA 12	18.0	7200	—	—		
		1221	WIN 209	WAA12	19.0	7300	—	—		
		1271	WIN 209	WAA 12	20.0	8600	—	—		
1 ¹ / ₈	—	1092	WIN 209	WAA12SL	—	—	15.0	7400		
		1130	WIN 209	WAA12SL	—	—	16.0	7900		
		1184	WIN 209	WAA12SL	—	—	17.0	9500		
		1108	WIN 209	WAA 12	17.0	7500	—	—		
		1164	WIN 209	WAA 12	18.0	9300	—	—		
		1194	WIN 209	WAA 12	19.0	9500	—	—		
		1237	WIN 209	WAA 12	20.0	10300	—	—		
REGULAR TARGET LOADS										
7/8	—	1325	CHED 209	WAA12SL	20.5	7200	18.5	7100		
			CCI 209	WAA12SL	21.0	7100	18.5	7500		

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SHOTSHELL DATA					48		SHOTSHELL DATA				
12-Ga., 2 ³ / ₄ -IN. Winchester Plastic AA-Type Shells Min. Overall Length: 2 ⁹ / ₃₂ -IN.			Max. Crimp Depth: 7 ¹ / ₃₂ -IN.		SOLO 1000		NITRO 100		SOLO 1250		
Ounces Lead	Dram Equivalent	Approx. Velocity, Ft./Sec.	Primer Type	Wad	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	
7/8	—	1325	FED209A	WAA12SL	20.5	7700	18.0	8000			
			REM209P	WAA12SL	21.0	6800	18.5	6700			
			WIN 209	WAA12SL	20.5	7900	18.0	7200			
			FIO 616	WAA12SL	20.5	8200	18.0	7700			
			CCI209M	WAA12SL	20.5	8300	18.0	7300			
7/8	—	1445	WIN 209	WAA12SL	22.5	9500	20.5	9800			
			CHED	WAA12SL	22.0	10800					
			CCI 209	WAA12SL	22.0	11600					
			FED209A	WAA12SL	21.3	10800					
			REM209P	WAA12SL	22.0	9900					
1	2 ³ / ₄	1200	WIN 209	WAA12SL	18.5	8500	16.5	7400			
			WIN 209	WINDJAMMER	18.5	7700	17.0	6400			
			WIN 209	CB 2100	18.5	7800	17.0	7000			
			WIN 209	FED 12S0	18.5	8200	16.5	7900			
			WIN 209	GRN DUSTER	18.5	7600	16.5	7100			
			WIN 209	CB 1100	18.5	8500	16.7	6800			
			WIN 209	REMTGT	19.0	8200	16.8	6700			
			CCI 209	WAA12SL	19.0	7700	16.8	7400			
			CCI209M	WAA12SL	18.5	8200	16.8	7600			
			CHED 209	WAA12SL	18.5	8000	16.8	7400			
			FED209A	WAA12SL	18.5	8500	16.8	7600			
			FIO 616	WAA12SL	18.5	7400	16.8	7300			
			REM209P	WAA12SL	19.0	7800	16.8	6700			
CCI 209	HAWK II	19.0	8100	16.8	7500						
1	3	1245	CCI209M	BLUE DUSTER	19.5	8000	17.3	7900			
			WIN 209	WAA12SL	19.5	8200	17.3	8200			
1	3 ¹ / ₄	1290	WIN 209	WAA12SL	20.0	10300	18.0	9000			
			WIN 209	TRAPPER	20.0	9000	18.5	8500			
			WIN 209	CB 1118-12	20.0	9500	18.5	9600			
			WIN 209	REM TGT 12	20.0	9000	18.0	8700			
			WIN 209	REM FIG 8	20.0	9300	18.0	8400			
			WIN 209	FED 12S0	20.0	9900	18.0	9700			
			CCI 209	WAA12	21.0	9400	18.5	10300			
			REM209P	WAA12	20.5	9600	18.5	10200			
			FED209A	GRN DUSTER	20.5	9800	18.5	10300			
			FIO 616	WAA12	20.0	9600	18.0	10600			
			CCI209M	WAA12	20.0	9900	18.0	10700			
1	3 ¹ / ₄	1350	WIN 209	WAA12SL	—	—	19.5	10200			
			CCI 209	GRN DUSTER	—	—	19.8	9900			
			FED209A	FED 12S0	—	—	19.0	10400			
1 ¹ / ₈	Extra Light	1125	WIN 209	WAA12	17.5	9000	15.5	8100	17.0	6400	
			WIN 209	BP 18	17.5	7800	15.5	7900			
			WIN 209	TRAPPER	17.0	9500	15.5	7000	17.0	5800	
			WIN 209	VERSALITE	17.0	9300	15.5	7900	16.8	6500	
			WIN 209	P.C. (Red)	17.5	7900	15.5	7700			
			WIN 209	CB 2118-12	17.0	8200	15.5	8300			
			WIN 209	REM TGT 12	17.0	8800	15.5	8400	17.2	6800	
			WIN 209	REM FIG 8	17.0	8400	15.5	8300	17.2	6000	
			WIN 209	BLUE DUSTER	17.0	7200	15.5	8200	17.2	6500	
			WIN 209	FED 12S3	16.5	10300	15.5	7300	17.2	6600	

SHOTSHELL DATA					49		SHOTSHELL DATA				
12-Ga., 2 ³ / ₄ -IN. Winchester Plastic AA-Type Shells Min. Overall Length: 2 ⁹ / ₃₂ -IN.			Max. Crimp Depth: 5 ¹ / ₃₂ -IN.		SOLO 1000		NITRO 100		SOLO 1250		
Ounces Lead	Dram Equivalent	Approx. Velocity, Ft./Sec.	Primer Type	Wad	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	
1 ¹ / ₈	Extra Light	1125	CCI 209	WAA12	17.0	8900	15.5	8700	17.3	6300	
			CCI 209	CB 2118-12	17.5	7100	15.5	7900	17.2	6000	
			REM209P	WAA12	17.5	7200	15.5	7500	17.6	6000	
			FED209A	WAA12	16.5	9400	15.5	9000	17.2	6300	
			FIO 616	WAA12	16.5	8500	15.5	9100	17.2	6200	
			CCI209M	WAA12	16.5	8600	15.5	9100	17.2	6800	
1 ¹ / ₈	2 ³ / ₄	1145	WIN 209	WAA12	18.0	9700	16.0	8800	17.7	6900	
			WIN 209	WAA12SL	—	—	16.0	8700	17.7	6600	
			WIN 209	VERSALITE	17.5	9800	16.0	9100	17.2	7600	
			WIN 209	P.C. (Red)	18.0	9300	16.0	8200	17.8	6200	
			WIN 209	BP 18	18.0	7900	16.0	8300	17.2	5900	
			WIN 209	CB 2118-12	17.5	8600	16.5	8400	17.2	5800	
			WIN 209	HAWK II	17.5	10000	16.0	9100			
			WIN 209	REM RXP 12	17.5	8900	16.0	8900			
			WIN 209	REM FIG 8	17.5	8500	16.0	8600			
			WIN 209	BLUE DUSTER	17.5	8200	16.0	8700			
			WIN 209	FED 12S3	17.0	10500	16.0	8700			
			CCI 209	WAA12	18.0	10000	16.0	9700			
			CCI 209	CB 1118-12	18.0	8200	16.0	9500			
			REM209P	WAA12	18.0	9500	16.0	7800			
			FED209A	WAA12	17.0	9800	16.0	9700			
			FIO 616	WAA12	17.0	9800	16.0	9200			
CCI209M	BLUE DUSTER	17.0	9400	16.0	9300						
CHED 209	WAA12	17.0	9000	16.5	10400						
1 ¹ / ₈	3	1200	WIN 209	WAA12	19.0	10800	17.0	9700	21.5	9800	
			WIN 209	WAA12SL	—	—	17.0	9900			
			WIN 209	VERSALITE	18.5	10300	17.0	11200	21.5	9500	
			WIN 209	P.C. (Red)	19.0	9700	17.5	10000	21.5	9000	
			WIN 209	BP 18	19.0	9700	17.0	9500	22.0	9500	
			WIN 209	TRAPPER	19.0	10000	17.0	10400	22.0	8900	
			WIN 209	REM RXP 12	18.5	10700	17.0	10000	22.5	9000	
			WIN 209	REM FIG 8	18.5	9800	17.5	9600	22.5	9000	
			WIN 209	BLUE DUSTER	18.5	10700	17.0	11100	22.0	10300	
			CCI 209	WAA12	18.5	10500	17.0	10000	23.5	8800	
			CCI 209	CB 1118-12	19.0	8800	17.0	9600	23.5	8800	
			REM209P	WAA12	18.5	11500	17.0	10100	23.5	9100	
			FED209A	WAA12	19.0	11200	16.5	10900	22.0	9800	
			FIO 616	BLUE DUSTER	19.0	9400	17.0	10700	22.5	9500	
			CCI209M	WAA12	19.0	9500	17.0	10800	22.5	9900	
			CHED 209	WAA12	19.5	9900	17.0	10700			
1 ¹ / ₈	3 ¹ / ₄	1255	WIN 209	WAA12	—	—	—	—	22.5	10800	
			WIN 209	VERSALITE	—	—	—	—	23.0	10800	
			WIN 209	P.C. (Red)	20.0	11000	18.5	11100	23.0	10100	
			WIN 209	BP 18	—	—	18.0	10800	23.0	10800	
			WIN 209	CB 1118-12	20.0	11500	—	—	22.5	10200	
			WIN 209	REM RXP 12	—	—	19.0	10500	23.0	10400	
			WIN 209	REM TGT 12	—	—	18.0	11500	22.5	10200	
			CCI 209	CB 1118-12	20.5	10300	—	—	24.0	9500	
1 ¹ / ₈	3 ¹ / ₂	1310	WIN 209	WAA12					24.0	11000	
			WIN 209	REM FIG 8					25.0	10200	

SHOTSHELL

SHOTSHELL DATA					51		SHOTSHELL DATA				
12-Ga., 2 ³ / ₄ -IN. Remington STS® Plastic Target Shells or Gun Club Target Shells					SOLO 1000		NITRO 100		SOLO 1250		
Min. Overall Length: 2 ³ / ₃₂ -IN.			Max. Crimp Depth: 7/ ₃₂ -IN.		Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	
Ounces Lead	Dram Equi- valent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type							
7/8	—	1215	REM	FED 12SO	18.0	6200	—	—			
		1281	209P		19.0	7300	—	—			
		1314	STS		20.0	7600	—	—			
1	—	1092	REM 209P STS	FED 12SO	—	—	15.0	5600			
		1150			—	—	16.0	6600			
		1207			—	—	17.0	7500			
		1263			—	—	18.0	8500			
		1100			17.0	5200	—	—			
		1153			18.0	5900	—	—			
		1220			19.0	7200	—	—			
		1270			20.0	8400	—	—			
1 ¹ / ₈	—	1074	REM 209P STS	REM TGT	—	—	15.0	6500			
		1122			—	—	16.0	7300			
		1163			—	—	17.0	8100			
		1236			—	—	18.0	10100			
		1010			15.0	5600	—	—			
		1051			16.0	6100	—	—			
		1110			17.0	7600	—	—			
		1146			18.0	8000	—	—			
REGULAR TARGET LOADS											
7/8	—	1325	CHED 209	WIN 7/8 GREY	21.0	6700	18.0	8100			
			CCI 209	REM TGT	21.5	6600	18.5	8000			
			FED209A	REM TGT	20.5	7600	18.0	9000			
			REM209P	REM TGT	21.5	6400	18.0	8100			
			WIN 209	REM TGT	21.0	7500	18.0	7600			
			FIO 616	GREEN DUSTER	21.0	6800	18.0	8100			
CCI209M	REM TGT	21.0	7000	18.0	8000						
7/8	—	1435	REM209P	REM TGT	23.5	8100	21.0	8100			
1	2 ³ / ₄	1200	REM209P	REM FIG 8	20.0	6600	16.5	7600			
			REM209P	REM TGT 12	19.5	7000	16.5	7400			
			REM209P	CB 1100	19.5	6500	16.0	7500			
			REM209P	GREEN DUSTER	18.5	8100	16.0	8000			
			REM209P	TRAPPER	19.0	6700	16.0	8800			
			CCI 209	REM FIG 8	19.5	6300	16.5	7800			
			CCI 209	REM TGT 12	20.0	6200	16.5	7900			
			WIN 209	REM FIG 8	19.0	7100	16.0	7500			
			WIN 209	REM TGT 12	19.5	7200	16.0	7700			
			FED209A	REM FIG 8	18.5	7500	16.0	8400			
			FED209A	REM TGT 12	18.5	7400	16.0	8300			
			1	3 ¹ / ₄	1290	REM209P	REM FIG 8	21.5	7300	18.0	9300
REM209P	REM TGT 12	22.0				7500	18.0	10100			
REM209P	CB 1100	21.5				7700	18.0	10100			
REM209P	GREEN DUSTER	21.0				9100	18.0	9900			
REM209P	TRAPPER	21.0				7900	17.5	10200			
CCI 209	REM FIG 8	22.0				7700	18.0	8700			
CCI 209	REM TGT 12	22.0				7800	18.0	10200			
WIN 209	REM FIG 8	21.0				8600	18.0	9200			
WIN 209	REM TGT 12	21.5				8700	18.0	9900			
FED209A	REM FIG 8	20.5				9000	18.0	10200			
FED209A	REM TGT 12	20.5				8900	18.0	10900			
CCI209M	REM FIG 8	21.0				9100	18.0	10000			
CCI209M	REM TGT 12	21.0	8200	18.0	10400						
1 ¹ / ₈	Extra Light	1125	REM209P	REM FIG 8	18.0	8300	16.0	6500			
			REM209P	REM RXP 12	18.0	8200	16.0	7200			

SHOT SHELL

SHOTSHELL DATA 52 SHOTSHELL DATA

12-Ga., 2 ³ / ₄ -IN. Remington STS® Plastic Target Shells or Gun Club Target Shells					SOLO 1000		NITRO 100		SOLO 1250	
Min. Overall Length: 2 ³ / ₂ -IN.			Max. Crimp Depth: ¹ / ₂ -IN.							
Ounces Lead	Dram Equi- valent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
1 ¹ / ₈	Extra Light	1125	WIN 209	BLUE DUSTER	18.5	8500	16.0	7400		
			FED209A	REM RXP 12	18.0	8900	15.5	7900		
			CCI209M	REM RXP 12	17.5	9600	16.0	6900		
1 ¹ / ₈	2 ³ / ₄	1145	REM209P	REM FIG 8	18.5	8400	16.5	7900	18.0	7600
			REM209P	REM TGT 12	18.5	7200	16.5	8500	18.0	6800
			REM209P	REM RXP 12	18.5	8800	16.5	9300		
			REM209P	VERSALITE	19.0	7700	16.0	8100	18.0	7000
			REM209P	P.C. (Red)	18.5	8300	16.5	7200		
			REM209P	BLUE DUSTER	19.0	7600	16.5	7600		
			REM209P	CB 1118	19.0	7600	16.5	7900		
			REM209P	WAA12	19.0	9200	16.5	8600		
			CCI 209	REM FIG 8	19.0	8300	17.0	7900	18.0	6800
			CCI 209	REM TGT 12	19.0	7300	17.0	8000	18.0	7300
			CCI 209	REM RXP 12	19.0	7600	17.0	7700	18.0	7300
			WIN 209	REM FIG 8	18.5	8200	16.5	7900	18.0	6900
			WIN 209	REM TGT 12	18.5	8200	16.5	7800	18.0	7300
			WIN 209	REM RXP 12	18.5	8100	16.5	8300	18.0	7100
			FED209A	BLUE DUSTER	18.5	8500	16.0	8400	18.0	7400
			FED209A	REM TGT 12	18.5	8700	16.0	8400	18.0	7000
			FED209A	REM RXP 12	18.5	9200	16.0	9000	18.0	7300
			FIO 616	REM FIG 8	18.5	7700	16.5	6900	18.0	6700
CCI209M	REM FIG 8	18.5	7000	16.5	7800	18.0	8000			
1 ¹ / ₈	3	1200	REM209P	BLUE DUSTER	20.0	8700	17.5	8900	19.5	7700
			REM209P	REM TGT 12	20.0	9000	17.5	8700	19.5	8100
			REM209P	REM RXP 12	20.0	9000	17.5	9400	20.0	8400
			REM209P	VERSALITE	20.0	9000	17.5	9200	19.2	8100
			REM209P	P.C. (Red)	20.0	9100	17.5	8700	19.7	7600
			REM209P	WINDJAMMER	20.5	8100	17.5	7700	19.7	7700
			REM209P	CB 1118	20.0	8200	17.5	9000	19.5	8400
			REM209P	WAA12	20.0	8800	17.0	10200	19.5	8500
			CCI 209	BLUE DUSTER	20.0	8200	18.0	10000	19.3	8400
			CCI 209	REM TGT 12	20.0	8100	18.0	9600	19.3	8400
			CCI 209	REM RXP 12	20.0	8000	17.5	9700	19.5	8100
			WIN 209	REM FIG 8	20.0	9900	17.5	9400	19.2	8600
			WIN 209	REM TGT 12	20.0	9500	17.5	9900	19.0	8400
			WIN 209	REM RXP 12	19.5	9800	17.5	9700	19.5	8600
			FED209A	REM FIG 8	19.5	10000	17.5	9800	19.3	8400
			FED209A	REM TGT 12	19.5	10000	17.0	9600	19.3	8400
			FED209A	REM RXP 12	19.5	10500	17.0	10000	19.5	8100
			FIO 616	BLUE DUSTER	20.0	9400	17.5	9400	19.2	8600
CCI209M	REM FIG 8	20.0	8400	17.5	8900	19.2	8800			
1 ¹ / ₈	3 ¹ / ₄	1255	FED209A	REM RXP 12					24.0	8900
			FED209A	P.C. (Red)					24.0	8900
			FED209A	WINDJAMMER					24.0	10200
1 ¹ / ₈	3 ¹ / ₂	1310	REM209P	REM FIG 8					27.5	7700
			REM209P	REM RXP 12					26.5	8900
			REM209P	WAA12F114					25.0	8500
			REM209P	CB 1118					26.0	8500
			CCI 209	WAA12F114					26.5	8900
			WIN 209	WAA12F114					24.5	10400
1 ¹ / ₄	3 ¹ / ₄	1220	FED209A	WAA12F114					23.5	10300
			FIO 616	WAA12F114					22.5	9700

SHOT SHELL

SHOTSHELL DATA 53 SHOTSHELL DATA

12-Ga., 2 ³ / ₄ -IN. Remington STS® Plastic Target Shells or Gun Club Target Shells					SOLO 1000		NITRO 100		SOLO 1250	
Min. Overall Length: 2 ⁹ / ₃₂ -IN.			Max. Crimp Depth: 1/32-IN.		Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
Ounces Lead	Dram Equiv- alent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type						
1/4	3/4	1220	CCI209SC	WAA12F114					22.5	9400
			FED209A	WAA12F114					22.5	9800
			CCI 209	WAA12F114					22.5	9400
			WIN 209	WAA12F114					22.0	10400

12-Ga., 2 ³ / ₄ -IN. Federal Gold Medal Plastic Target Shells					SOLO 1000		NITRO 100		SOLO 1250	
Min. Overall Length: 2 ¹⁰ / ₃₂ -IN.			Max. Crimp Depth: 1/32-IN.		Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
Ounces Lead	Dram Equiv- alent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type						
COWBOY ACTION										
3/4	—	1150	FED209A	FED12S0 + 1-135	—	—	15.0	4200		
		1180	FED209A	FED12S0 + 1-135	—	—	16.0	4300		
		1250	FED209A	FED12S0 + 1-135	—	—	17.0	5100		
		1296	FED209A	FED12S0 + 1-135	—	—	18.0	5500		
		1146	FED209A	FED12S0 + 1-135	17.0	3900	—	—		
		1217	FED209A	FED12S0 + 1-135	18.0	4700	—	—		
		1262	FED209A	FED12S0 + 1-135	19.0	5100	—	—		
7/8	—	1327	FED209A	FED12S0 + 1-135	20.0	6200	—	—		
		1079	FED209A	FED12S0 + 1-135	—	—	15.0	4400		
		1137	FED209A	FED12S0 + 1-135	—	—	16.0	4900		
		1212	FED209A	FED12S0 + 1-135	—	—	17.0	6000		
		1269	FED209A	FED12S0 + 1-135	—	—	18.0	6700		
		1106	FED209A	FED12S0 + 1-135	17.0	4700	—	—		
		1169	FED209A	FED12S0 + 1-135	18.0	5500	—	—		
1	—	1213	FED209A	FED12S0 + 1-135	19.0	6000	—	—		
		1275	FED209A	FED12S0 + 1-135	20.0	6900	—	—		
		1087	FED209A	FED 12S0	—	—	15.0	5500		
		1125	FED209A	FED 12S0	—	—	16.0	5900		
		1193	FED209A	FED 12S0	—	—	17.0	6900		
		1257	FED209A	FED 12S0	—	—	18.0	7900		
		1108	FED209A	FED 12S0	17.0	5700	—	—		
1 1/8	—	1167	FED209A	FED 12S0	18.0	6800	—	—		
		1209	FED209A	FED 12S0	19.0	7500	—	—		
		1244	FED209A	FED 12S0	20.0	7900	—	—		
		1062	FED209A	FED 12S0	—	—	15.0	6600		
		1113	FED209A	FED 12S0	—	—	16.0	7400		
		1172	FED209A	FED 12S0	—	—	17.0	8700		
		1216	FED209A	FED 12S0	—	—	18.0	9500		
3/8	—	1108	FED209A	FED 12S3	17.0	7800	—	—		
		1130	FED209A	FED 12S3	18.0	7900	—	—		
		1182	FED209A	FED 12S3	19.0	8700	—	—		
		1223	FED209A	FED 12S3	20.0	9600	—	—		
		REGULAR TARGET LOADS								
3/8	—	1325	CCI 209	FED 12S0	22.5	5900	19.5	6000		
			FED209A	FED 12S0	21.5	7100	18.5	7600		
			CCI209SC	FED 12S0	20.5	7600	19.5	7000		
			WIN 209	FED 12S0	21.5	7200	19.0	7000		
			FIO 616	FED 12S0	21.5	7200	19.0	7300		

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SHOTSHELL DATA 54 SHOTSHELL DATA

SHOT SHELL

12-Ga., 2 ³ / ₄ -IN. Federal Gold Medal Plastic Target Shells Min. Overall Length: 2 ¹⁰ / ₃₂ -IN.			Max. Crimp Depth: 1/32-IN.		SOLO 1000		NITRO 100		SOLO 1250	
Ounces Lead	Dram Equivalent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
7/8	—	1325	CCI209M	FED 12S0	21.0	7300	19.0	7100		
1	2 ³ / ₄	1200	FED209A	FED 12S3	19.5	7500	17.0	7300		
			FED209A	FED 12S0	19.5	7000	17.5	7400		
			FED209A	BP ITD	19.5	7000	17.5	7100		
			FED209A	REM TGT 12	19.0	6900	17.0	6800		
			FED209A	WINDJAMMER	19.5	6900	17.5	7200		
			FED209A	WAA12SL	19.0	7300	17.0	7000		
			FED209A	GREEN DUSTER	19.5	7000				
			FED209A	ACT T-28	20.5	7500				
			CCI 209	FED 12S0	20.5	6900	18.5	6500		
			WIN 209	FED 12S0	20.0	7600	17.5	7400		
			REM209P	FED 12S0	20.0	6700	18.5	6700		
			FIO 616	FED 12S0	20.0	8200	17.0	7200		
CCI209M	FED 12S0	19.5	8300	17.0	7100					
1	3/4	1290	FED209A	FED 12S3	21.5	9200	19.0	9100		
			FED209A	FED 12S0	21.5	9500	18.5	9000		
			FED209A	BP ITD	21.5	8500	19.0	8100		
			FED209A	REM TGT 12	21.5	8700	18.5	8700		
			FED209A	REM FIG 8	21.5	8500	19.0	8100		
			FED209A	WAA12SL	21.5	9500	19.0	9000		
			FED209A	GREEN DUSTER	22.0	8800				
			FED209A	ACT T-28	22.5	8100				
			CCI 209	FED 12S0	22.5	8500	20.0	8900		
			WIN 209	FED 12S0	22.0	9200	19.0	9100		
			REM209P	FED 12S0	22.5	8200	20.0	8900		
			FIO 616	FED 12S0	22.5	9500	19.0	9300		
CCI209M	FED 12S0	22.0	9100	19.0	9200					
1 ¹ / ₈	Extra Light	1125	FED209A	FED 12S3	18.5	7100	16.0	7800		
			FED209A	VERSALITE	18.5	7600				
			FED209A	P.C. (Red)	18.5	7400				
			FED209A	WINDJAMMER	19.0	6500	16.3	7300		
			FED209A	CB 1118	17.5	7400	16.0	7200		
			FED209A	REM FIG 8	17.5	7100	16.5	7100		
			FED209A	UNIWAD	17.5	7100				
			FED209A	BLUE DUSTER	17.5	7200				
			FED209A	ACT TG-30	19.0	8200				
			CCI 209	FED 12S3	19.0	7300	16.5	6900		
			WIN 209	FED 12S3	19.0	7900	16.0	6600		
			REM209P	FED 12S3	19.0	7400	16.5	6200		
FIO 616	FED 12S3	18.5	7500	16.5	6600					
CCI209M	FED 12S3	18.5	8100	16.5	6700					
1 ¹ / ₈	2 ³ / ₄	1145	FED209A	FED 12S3	19.0	8000	16.5	8300		
			FED209A	FED 12S0	18.5	8100	16.5	8600		
			FED209A	VERSALITE	19.0	8300	16.0	8000		
			FED209A	P.C. (Red)	19.5	8400	16.5	7000		
			FED209A	WINDJAMMER	19.5	7300	16.5	7600		
			FED209A	CB2118	19.0	7700	16.5	7600		
			FED209A	REM FIG 8	19.0	7700	17.0	7700		
			FED209A	BP ITD	18.5	7400	16.5	7800		
			FED209A	BLUE DUSTER	19.0	8400	16.0	7200		
			FED209A	ACT TG-30	19.5	8500	16.5	8700		

SHOTSHELL DATA 55 SHOTSHELL DATA

12-Ga., 2 ³ / ₄ -IN. Federal Gold Medal Plastic Target Shells Min. Overall Length: 2 ¹⁹ / ₃₂ -IN.			Max. Crimp Depth: ³ / ₃₂ -IN.		SOLO 1000		NITRO 100		SOLO 1250	
Ounces Lead	Dram Equiv- alent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
1 ¹ / ₈	2 ³ / ₄	1145	CCI 209	FED 12S3	19.5	7600	17.5	7000		
			WIN 209	FED 12S3	19.5	8000	17.5	7200		
			REM209P	FED 12S3	19.5	8000	17.5	7100		
			FIO 616	FED 12S3	19.0	7800	17.5	7200		
			CCI209M	FED 12S3	19.0	8300	17.5	7400		
1 ¹ / ₈	3	1200	FED209A	FED 12S3	20.0	9700	17.5	8800	22.7	7200
			FED209A	FED 12S0	19.5	9200	17.5	9500	22.5	7600
			FED209A	VERSALITE	19.5	9300	17.0	8700	22.5	7500
			FED209A	P.C. (Red)	20.0	8400	18.0	8300	23.0	6800
			FED209A	WINDJAMMER	21.0	7900	18.0	8500	22.5	7100
			FED209A	CB2118	19.5	9300	17.5	8800	22.5	7000
			FED209A	REM FIG 8	19.5	9000	17.5	8100	23.0	6700
			FED209A	BP ITD	20.0	8800	17.5	8700	22.5	7000
			FED209A	BLUE DUSTER	19.5	10000	18.0	8500	22.5	7500
			FED209A	ACT TG-30	20.5	9600	17.5	9200	22.5	7600
			CCI 209	FED 12S3	20.5	8700	18.5	8000	23.0	6400
			WIN 209	FED 12S3	20.5	8700	18.5	8500	23.0	7100
			REM209P	FED 12S3	20.5	8600	18.5	8300		
			FIO 616	FED 12S3	20.5	8700	18.5	8500	23.0	7300
CCI209M	FED 12S3	20.0	9400	18.5	8700	22.5	7100			
1 ¹ / ₈	3 ¹ / ₄	1255	FED209A	FED 12S3	21.0	10200	18.5	10500	23.5	8000
			FED209A	VERSALITE	20.5	10200	18.5	10200	23.5	8000
			FED209A	P.C. (Red)	21.0	9600	19.0	9400	24.0	7500
			FED209A	WINDJAMMER	22.5	8700	18.5	9100	23.5	7700
			FED209A	CB2118	20.5	10700	18.5	10100	23.5	7900
			FED209A	REM FIG 8	20.5	10300	19.0	9600	23.5	7200
			FED209A	BP ITD	21.0	9700	19.0	10200	24.0	7700
			FED209A	BLUE DUSTER	20.5	10600	18.5	9700	23.5	7800
			FED209A	ACT TG-30	22.0	10700	18.5	10600	23.5	7700
			CCI 209	FED 12S3	22.0	10200	19.5	9700		
			WIN 209	FED 12S3	22.0	9700	19.5	10200	23.5	8000
			REM209P	FED 12S3	22.0	9600	19.0	10000		
			FIO 616	FED 12S3	22.0	9500	19.5	10200	23.5	7600
			CCI209M	FED 12S3	21.5	10700	19.5	10900	23.5	7500
1 ¹ / ₄	3 ¹ / ₄	1220	FED209A	FED 12S4					23.0	9700
			CCI 209	FED 12S4					24.5	8200
			WIN 209	FED 12S4					24.0	8800
			CCI209M	FED 12S4					23.5	9500
1 ¹ / ₄	3 ¹ / ₂	1275	FED209A	FED 12S4					25.0	10500

SHOT SHELL

12-Ga., 2 ³ / ₄ -IN. Federal Gold Medal Plastic Target Shells Min. Overall Length: 2 ¹⁹ / ₃₂ -IN.			Max. Crimp Depth: ³ / ₃₂ -IN.		SOLO 1000		NITRO 100		SOLO 1250	
Ounces Lead	Dram Equiv- alent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
7 ⁷ / ₈	—	1325	CCI 209	FED 12S0	23.0	5800	20.5	6300		
			FED209A	FED 12S0	22.5	6700	19.5	6800		
			REM209P	FED 12S0	23.0	6900	20.5	6600		
			WIN 209	FED 12S0	21.5	7200	19.5	6400		
			FIO 616	FED 12S0	21.5	7400	20.0	6400		
			CCI209M	FED 12S0	21.5	7200	20.0	6400		

SHOT SHELL

SHOT SHELL DATA					56		SHOT SHELL DATA				
12-Ga., 2 ³ / ₄ -IN. Federal Champion Paper Target Shells Min. Overall Length: 2 ¹⁰ / ₃₂ -IN.			Max. Crimp Depth: 7 ¹ / ₃₂ -IN.		SOLO 1000		NITRO 100		SOLO 1250		
Ounces Lead	Dram Equivalent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	
1	2 ³ / ₄	1200	FED209A	FED 12S3	19.5	6600	17.5	6600			
			FED209A	WAA12	19.5	5500	17.5	6800			
			WIN 209	FED 12S3	19.5	6500	17.5	6400			
			FIO 616	FED 12S3	19.5	6800	17.5	6800			
			CCI209M	FED 12S3	19.5	6700	17.5	6500			
1	3 ¹ / ₄	1290	FED209A	FED 12S3	21.5	9000	19.5	8600			
			FED209A	WAA12	21.0	7500	19.0	8400			
			WIN 209	FED 12S3	21.5	8300	19.0	8600			
			FIO 616	FED 12S3	21.5	8600	19.0	8100			
			CCI209M	FED 12S3	21.5	9000	19.0	7900			
1 ¹ / ₈	2 ³ / ₄	1145	FED209A	FED 12S4	18.5	8500	16.5	8200			
			FED209A	WAA12	18.5	7900	16.5	7800			
			FED209A	BP TRAP C	19.0	8200	17.0	7800			
			FED209A	HAWK II	18.5	8200	17.0	7600			
			WIN 209	FED 12C1	19.5	7900	17.0	6700			
1 ¹ / ₈	3	1200	FED209A	FED 12S4	19.5	9800	17.5	9700			
			FED209A	WAA12	20.0	9500	18.0	9000			
			FED209A	BP TRAP C	20.0	9100	18.0	8900			
			FED209A	HAWK II	19.5	8800	18.0	8900			
1 ¹ / ₈	3 ¹ / ₄	1255	FED209A	FED 12S4	21.0	10800	19.0	11300			
			FED209A	WAA12	21.0	10500	19.0	10000	23.5	7500	
			FED209A	BP TRAP	21.0	10900	19.0	9900	24.5	7800	
			FED209A	HAWK II	20.5	9600	19.0	9500	25.0	7500	
1 ¹ / ₈	3 ¹ / ₂	1310	FED209A	WAA12F114					26.0	9200	
			FED209A	VERSALITE					25.0	8500	
			FED209A	HAWK II					26.0	8100	
1 ¹ / ₄	3 ¹ / ₄	1220	FED209A	FED 12S4					24.0	8000	
			FED209A	WAA12F114					24.0	9300	
			FED209A	REM RP12					24.0	8500	
			CCI 209	FED 12S4					24.5	8300	
			WIN 209	FED 12S4					24.0	9400	
			FIO 616	FED 12S4					24.0	9200	
			CCI209M	FED 12S4					24.0	9300	
1 ¹ / ₄	3 ¹ / ₂	1275	FED209A	FED 12S4					25.0	9700	

12-Ga., 2 ³ / ₄ -IN. FIOCCHI Target Shells Min. Overall Length: 2 ⁹ / ₃₂ -IN.					Max. Crimp Depth: 7 ¹ / ₃₂ -IN.		SOLO 1000		NITRO 100		SOLO 1250	
Ounces Lead	Dram Equivalent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
7 ⁸ / ₁₆	—	1325	CCI209SC	BP 078	20.5	7600	18.5	7700				
			FED209A	BP 078	20.0	8100	18.0	8500				
			WIN 209	BP 078	20.5	8000	18.0	7700				
			FIO 616	BP 078	20.5	7700	18.5	8100				
			CCI209M	BP 078	21.0	7400	18.5	8000				
1	2 ³ / ₄	1200	FIO 616	FED 12S0	19.5	7800	17.0	8100				
			WIN 209	FED 12S0	20.0	6500	17.0	7200				
			REM209P	FED 12S0	20.5	6900	17.0	7100				
			FED209A	FED 12S0	19.0	8000	17.0	8500				
			CCI209M	FED 12S0	19.5	7600	17.0	7400				
1	3 ¹ / ₄	1290	FIO 616	FED 12S3	21.0	10500	18.5	9900				
			WIN 209	FED 12S3	20.5	11400	18.5	8800				

SHOTSHELL DATA 57 SHOTSHELL DATA

12-Ga., 2 ³ / ₄ -IN. FIOCCHI Target Shells					SOLO 1000		NITRO 100		SOLO 1250	
Min. Overall Length: 2 ³ / ₂ -IN.			Max. Crimp Depth: ¹ / ₃₂ -IN.							
Ounces Lead	Dram Equivalent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
1	3/4	1290	REM209P	FED 12S3	22.0	9700	18.5	8800		
			FED209A	FED 12S3	20.5	10700	18.5	10300		
			CCI209M	FED 12S3	21.0	9900	18.5	8900		
1/8	Extra Light	1125	FIO 616	FED 12S3	18.5	7300	15.5	8000		
			FIO 616	Super Hawk	18.0	7400	15.5	8000		
			WIN 209	FED 12S3	18.0	7500	15.5	7300		
			WIN 209	Super Hawk	17.5	7800	15.5	7300		
			REM209P	FED 12S3	19.0	6100	16.0	7800		
			REM209P	Super Hawk	18.0	7200	16.0	7600		
			FED209A	FIOTL1	18.0	8200	15.5	8800		
			FED209A	Super Hawk	18.0	8300	15.5	8400		
			CCI209M	FIOTL1	19.0	7000	15.5	8000		
CCI209M	Super Hawk	19.0	7900	16.0	7500					
1/8	2 ³ / ₄	1145	FIO 616	FIOTL1	19.0	8200	16.5	8100		
			FIO 616	Super Hawk	18.5	7900	16.0	8100		
			WIN 209	FIOTL1	18.5	7900	16.5	8300		
			WIN 209	Super Hawk	18.5	8400	16.0	7900		
			REM209P	FIOTL1	19.5	7300	16.5	8000		
			REM209P	Super Hawk	18.5	7600	16.5	7900		
			FED209A	FIOTL1	19.0	8400	16.5	9300		
			FED209A	Super Hawk	19.0	8600	16.0	9100		
			CCI209M	FIOTL1	19.0	7800	16.5	9100		
CCI209M	Super Hawk	18.5	8200	16.5	8000					
1/8	3	1200	FIO 616	FIOTL1	20.0	9200	17.5	9100	22.0	7400
			FIO 616	WAA12	19.5	9000	17.5	9000	22.0	7300
			WIN 209	FIOTL1	20.5	7900	17.5	8900	22.0	7600
			WIN 209	WAA12	19.5	9900	17.5	9900	22.0	7400
			REM209P	FIOTL1	20.5	8000	17.5	9100		
			REM209P	REM RXP	20.0	8100	17.5	9000		
			FED209A	FIOTL1	20.0	10900	17.5	10500	22.0	7500
			FED209A	WAA12	19.0	9600	17.0	9900	22.0	7600
			CCI209M	FIOTL1	20.0	8800	17.5	10300	22.5	6900
CCI209M	WAA12	19.5	8700	17.5	9600	22.5	7200			
1/8	3/4	1255	FIO 616	FED 12S3	21.5	9100	18.5	10900	23.0	8200
			FIO 616	ACT TG-30	21.5	9000	18.5	10800		
			WIN 209	FED 12S3	21.5	9100	18.5	10700	22.5	8400
			FED209A	FED 12S3	21.5	9400			22.5	8700
1/8	3/2	1310	FIO 616	FIOTL1					24.0	9700
			WIN 209	WAA12F114					23.5	10000
			WIN 209	FIOTL1					24.0	10000
			FED209A	FIOTL1					23.5	9500
			FED209A	WAA12F114					23.5	10000
REM209P	WAA12F114					25.0	9100			
1/4	3/4	1220	WIN 209	WAA12F114				23.0	9900	
1/4	3/2	1275	FIO 616	WAA12F114					24.5	10600
			FIO 616	WAA12R					24.5	9100
			CCI209SC	WAA12F114					25.0	10600
			WIN 209	FED 12C1					24.5	9600
FED209A	FED 12C1					24.5	10500			

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SHOT SHELL

SHOTSHELL DATA 58 SHOTSHELL DATA

16-Ga., 2 ³ / ₄ -IN. Shotshell Target and Field Loads											
Shell Brand	Min. Overall Length: 2 ⁹ / ₃₂ -IN.			Max. Crimp Depth: ³ / ₃₂ -IN.		SOLO 1000		NITRO 100		SOLO 1250	
	Ounces Lead	Dram Equivalent	Approx. Velocity, Ft./Sec.	Primer Type	Wad Type	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
FED FIELD & HI-P	1	2 ¹ / ₂	1165	FED209A	AA16 + 1-135	16.0	10500	14.5	9700	18.5	8000
				WIN 209	AA16 + 1-135	16.0	9700	15.0	9800	19.0	7400
				REM209P	SP16 + ¹ / ₄	17.5	8800	15.0	8700	20.0	7600
				CCI 209	AA16 + 1-135	17.5	9100	15.0	8900	19.0	8500
				FED209A	BPSP16			18.5	7300		
	1	2 ³ / ₄	1220	FED209A	AA16 + 1-135	17.0	11100	16.0	10900	19.0	9300
				WIN 209	AA16 + 1-135	17.0	11200	16.5	10200	20.0	8300
				REM209P	SP16 + ¹ / ₄	18.0	11500	15.5	10000	22.0	8900
				CCI 209	AA16 + 1-135	—	—	15.5	10000	20.0	8900
				FED209A	BPSP16	—	—			20.0	8900
	1 ¹ / ₈	2 ³ / ₄	1185	FED209A	WAA16					19.5	10600
				WIN 209	WAA16					20.0	9500
WIN AA	1	2 ¹ / ₂	1165	FED209A	WAA16					17.0	9200
				WIN 209	WAA16					17.0	9500
				REM209P	WAA16					17.5	7800
				CCI 209	WAA16					17.0	7800
	1	2 ³ / ₄	1220	FED209A	WAA16					18.5	10600
				WIN 209	WAA16					18.5	10700
				REM209P	WAA16					18.5	9300
				CCI 209	WAA16					18.5	10100
	1 ¹ / ₈	2 ³ / ₄	1185	FED209A	REMSP16					18.5	10700
				WIN 209	REMSP16					19.5	9800
ACTIV	1	2 ¹ / ₂	1165	FED209A	AA16 + 1-135	15.0	10500	15.0	10700	17.5	6000
				WIN 209	AA16 + 1-135	15.5	10900	15.0	10100	17.5	6000
				CCI 209	AA16 + 1-135	15.5	10300	15.5	9600	19.0	6500
	1	2 ³ / ₄	1220	FED209A	AA16 + 1-135					20.0	8400
				WIN 209	AA16 + 1-135					20.0	8000
				CCI 209	AA16 + 1-135					20.0	8300
	1 ¹ / ₈	2 ³ / ₄	1185	FED209A	WAA16					19.0	9600
				WIN 209	WAA16					19.0	9200

20-Ga., Cowboy Action Loads					SOLO 1000		NITRO 100	
Shotshell Brand	Ounces Lead	Approx. Velocity Ft./Sec.	Primer Type	Wad	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
WIN AA	3/4	1037	WIN 209	WAA20	—	—	9.5	7400
		990	WIN 209	WAA20	10.4	7100	—	—
REM STS	3/4	1021	REM 209	WAA + 1-135	—	—	9.5	7400
		1030	REM 209	WAA + 1-135	10.5	7600	—	—
FED HI-P	3/4	1072	FED209A	WAA + 1-135	—	—	10.5	7500
		1042	FED209A	WAA + 1-135	11.0	7400	—	—

20-Ga., 2 ³ / ₄ -IN. Shotshell Target and Field Loads							SOLO 1250	
Shotshell Brand	Ounces Lead	Dram Equivalent	Approx. Velocity Ft./Sec.	Primer Type	Wad Type	Grains Solo 1250	Approx. Pressure PSI	
Winchester AA (one-piece) 8-point crimp	7/8	2 ¹ / ₄	1155	WIN 209	WAA20	14.0	11400	
				WIN 209	REM RXP 20	14.5	10300	
				WIN 209	P.C. 20	14.5	9900	
	7/8	SKEET	1200	WIN 209	P.C. 20	15.5	11800	
				WIN 209	WAA20F1	15.0	12000	
				WIN 209	REM RXP 20	15.5	11500	

SHOTSHELL DATA 59 SHOTSHELL DATA

20-Ga., 2¼-IN. Shotshell Target and Field Loads					SOLO 1250			
Shotshell Brand	Ounces Lead	Dram Equivalent	Approx. Velocity Ft./Sec.	Primer Type	Wad Type	Grains Solo 1250	Approx. Pressure PSI	
Winchester Dove & Quail (polyformed with plastic base wad) 6-point crimp	7/8	2¼	1155	WIN 209	WAA20	17.5	10200	
				WIN 209	WAA20F1	17.5	9000	
				WIN 209	REM RXP 20	17.5	8900	
				WIN 209	P.C. 20	17.0	9300	
				WIN 209	WINDJAMMER	16.5	10000	
				CCI 209	WAA20	16.5	8800	
				REM209P	WAA20	16.5	9300	
				FED209A	WAA20	16.0	9400	
	7/8	SKEET	1200	WIN 209	WAA20	18.5	10700	
				WIN 209	REM RXP 20	18.5	10800	
				CCI 209	WAA20	18.5	10800	
				REM209P	WAA20	18.5	10400	
	Remington STS (one-piece) 8-point crimp	7/8	2¼	1155	REM209P	REM RXP 20	16.0	10200
					REM209P	REM SP20	16.0	10000
REM209P					WAA20	16.0	10800	
REM209P					WINDJAMMER	16.0	10400	
REM209P					REM RXP 20	17.0	11200	
WIN 209					REM RXP 20	17.0	11400	
FED209A					REM RXP 20	17.0	11400	
Federal Hi-Power and Target (two-piece with plastic base wad) 6-point crimp	7/8	2¼	1155	FED209A	FED 20S1	18.0	8900	
				FED209A	REM RXP 20	18.5	8700	
				FED209A	P.C. 20	18.5	8800	
				FED209A	WINDJAMMER	18.0	9100	
				FED209A	W-28	18.5	8400	
				CCI 209	FED 20S1	18.5	8900	
	7/8	SKEET	1200	WIN 209	FED 20S1	18.0	9100	
				FED209A	FED 20S1	19.0	9900	
				FED209A	REM RXP 20	19.5	10400	
				FED209A	P.C. 20	19.5	10100	
				CCI 209	FED 20S1	19.5	10400	
ACTIV Industries 6-point crimp	7/8	2¼	1155	WIN 209	W-28	17.5	8700	
				WIN 209	P.C. 20	18.0	8900	
				WIN 209	WINDJAMMER	17.5	9200	
				CCI 209	W-28	18.0	9400	
				FED209A	W-28	17.5	9900	
	7/8	SKEET	1200	WIN 209	W-28	18.5	10600	
				WIN 209	P.C. 20	19.0	10400	
				WIN 209	WINDJAMMER	18.5	10800	
				CCI 209	W-28	19.0	10400	
				FED209A	W-28	18.5	10300	

S H O T S H E L L

SHOTSHELL DATA 60 SHOTSHELL DATA

28-Gauge Shotgun Target Loads						SOLO 1250	
Shotshell Brand	Ounces Lead	Dram Equivalent	Approx. Velocity Ft./Sec.	Primer Type	Wad Type	Grains Solo 1250	Approx. Pressure PSI
REMINGTON PREMIER	3/4	SKEET	1155	REM 209	REM PT 28	13.0	10700
					P.C.	12.5	11000
					BP Sporting*	12.5	9900
	3/4	SKEET	1200	REM 209	REM PT 28	13.5	12000
					P.C.	13.5	11900
					BP Sporting*	13.0	10400
FEDERAL	3/4	SKEET	1155	CCI 209	BP Sporting*	13.0	11400
					FED 28S1	13.0	12500
	3/4	SKEET	1200	REM 209	BP Sporting*	13.5	10300
WIN	3/4	SKEET	1155	WIN 209	REM PT 28	12.5	12200

*Note: BP Sporting Wad used with 11/16 oz. No. 9 only.

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.410-BORE, 2 1/2-IN. PLASTIC SHELLS					4100	
Shotshell Brand	Ounces Lead	Velocity, FPS	Primer	Wad	Grains*	Approx. PSI
FEDERAL OR REMINGTON	1/2	1200	FED209A	WAA41	13.5	9400
			FED209A	REM SP410	13.5	9700
			FED209A	P.C.	13.5	9600
WINCHESTER AA	1/2	1200	FED209A	P.C.	13.5	10700
			FED209A	REM SP410	13.5	11100
			FED209A	WAA41	13.5	11200
			FED209A	FC410SC	13.5	12600

*4100: 13.5 gr requires MEC #11 Bushing.

12-Gauge 2 3/4" Shotgun Slug Data Lee Drive Key Slug					No. 2 Improved		No. 5	
Shotshell Brand	Slug Wt. Ounces	Velocity Ft./Sec.	Primer	Wad	Grains Wt.	Approx. Pressure PSI	Grains Wt.	Approx. Pressure PSI
ACTIV	7/8 oz.	1501	WIN 209	ACTIV TG-30 + .135 NITRO CARD	25.5	10300	—	—
ACTIV	7/8 oz.	1593	WIN 209	ACTIV TG-30 + .135 NITRO CARD	—	—	40.0	10700
ACTIV	1 oz.	1553	WIN 209	ACTIV TG-30	—	—	41.5	10300
Fed G.M.	7/8 oz.	1509	WIN 209	ACTIV TG-30 + .070 NITRO CARD	25.5	9700	—	—
Fed G.M.	7/8 oz.	1638	WIN 209	ACTIV TG-30 + .135 NITRO CARD	—	—	42.0	10200
Fed G.M.	1 oz.	1529	WIN 209	FED 12S3	—	—	41.5	9100
Rem STS	7/8 oz.	1466	WIN 209	ACTIV TG-30	22.5	10700	—	—
Rem STS	1 oz.	1535	WIN 209	WAASL	—	—	38.5	10800
WIN AA	7/8 oz.	1492	WIN 209	ACTIV TG-30	25.0	10000	—	—
WIN AA	7/8 oz.	1608	WIN 209	ACTIV TG-30	—	—	40.0	10800
WIN AA	1 oz.	1494	WIN 209	WAA	—	—	38.5	9700



A QUICK GUIDE TO SHOTSHELL PRIMERS

(Approximately in Increasing Order of Strength)

Abbreviation/Manufacturer/SupplierComments

REM 209P (STS) Remington Arms Corp— A medium primer, well-suited to the Scot propellant line but may require a slightly higher charge weight of propellant than hotter primers for equal ballistics.

CCI 209 Blount Industries—A medium strength primer. Suitable for use with all Scot propellants. Do not confuse with the CCI 209M which is hotter.

WIN 209 Olin-Winchester Div.—A medium strength primer. Suitable for use with all Scot propellants.

CHED 209 Cheddite—Very similar to Winchester 209 primers in our testing.

FIO 616 Focchi SPA/Italy—A “magnum” strength primer. The 616 is of a slightly larger diameter. It is suitable for use with all Scot propellants.

CCI209M Blount Industries—A “magnum” strength primer, suitable for use with all Scot propellants. This primer will produce higher pressures than the CCI 209.

FED209A Federal Cartridge Co.—A “magnum” strength primer developed by Federal as a replacement for their FED 209. This primer is much more powerful and must not be directly substituted for the FED 209 as excessive pressure will result.

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QUICK GUIDE TO WADS AND WAD ASSEMBLIES

Per Shot Weight	Similar Wads
12 GAUGE: 7/8 and 1 oz.	WINAA12SL, CB 1100-12, Green duster, Windjammer (<i>long</i>), HAWK II (black), PC Purple, TGT 12
1 oz.	Federal 12S0, CB 2100-12
1 1/8 oz.	WINAA12, WT-12, CB 01118, CB 1118-12, Black Magic, Blue Duster
1 1/8 oz.	Federal-12S3, CB 2118-12
1 1/8 oz.	Remington-Fig8, CB 3118-12
1 1/8 oz.	Windjammer (<i>short</i>), CB 4118-12, PC Red
20 GAUGE: 7/8 oz.	WIN AA20, CB 1078-20, Duster-20
28 GAUGE: 3/4 oz.	WAA 28, CB 1034-28, Duster-28
410 GAUGE: 1/2 oz.	WIN AA41, CB 1050-41, Duster 410, Federal 410 SC, Remington SP 140



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