

Basic Reloading Manual



H HODGDON
THE BRAND THAT'S TRUE

IMR
LEGENDARY POWDERS

WINCHESTER
SMOKELESS PROPELLANTS
FOR LOADING PROFESSIONALS

PRINTED IN USA
2015

The All New Enduron™ Technology Rifle Powders from IMR® Legendary Powders

FEATURES

- TEMPERATURE INSENSITIVE, BOTH HOT AND COLD
- REDUCES COPPER FOULING FROM BUILDING FOR DOZENS OF ROUNDS
 - SHORT GRAINS FOR EASY METERING
- IDEAL BULK DENSITY WITH A FULL CASE IN MOST APPROPRIATE CARTRIDGES
- ENVIRONMENTALLY FRIENDLY HAVING NO INGREDIENTS HARMFUL TO THE ENVIRONMENT

THE POWDERS



IMR 4166™ This fine, extruded powder is the first in the series of Enduron™ Technology powders.

IMR 4166 is the perfect burn speed for cartridges like the 308 Win/7.62mm NATO, 22-250 Remington, 257 Roberts and dozens more.



IMR 4451™ As a medium burn speed, this Enduron™ Technology powder gives top performance in the venerable 30-06, 270 Winchester and 300 Winchester Short Magnum, to name just a few.



IMR 7977™ This slowest burn rate Enduron™ Technology powder, IMR 7977 is a true magnum powder.

Outstanding performance in the 300 Winchester Magnum, 7mm Remington Magnum and the 338 Lapua Magnum, plus a host of others, is the hallmark of this extruded propellant.

Three Powder Reloading Manuals in One

Reload Data from THREE powder companies is included in this one reloading manual; Hodgdon, IMR, and Winchester Smokeless Propellants. Data is listed for most popular Rifle, Pistol, and Shotgun cartridges.

For the most comprehensive up to date reload data, including the most recent new caliber introductions, go to the Reloading Data Center at hodgdon.com, or call 913-362-9455 for customer service.



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Mission Statement

Hodgdon Powder Company operates following Biblical principles to honor God. Our mission is to provide quality products and services in a manner which enhances the lives of our employees, families, customers, suppliers, and our communities. In doing so, we will deal with integrity and honesty, reflecting that people are more important than dollars and that our purpose is to bring credit to our Lord Jesus Christ.

Shooters!

Guarantee the future of shooting by educating tomorrow's handloaders. Hodgdon Powder, Co. supports the NRA Foundation's Handloading Education Endowment Fund – you can too! Contact; Executive Director, The NRA Foundation, 11250 Waples Mill Road, Fairfax, VA 22030





Pistol & Shotgun Powders

In Order of Approximate Burning Rate

TITEWAD® Through advanced technology, Hodgdon Powder Co. has produced a superior flattened spherical shotgun powder. Unlike spherical propellants in the past, TITEWAD features low charge weights, mild muzzle report, minimum recoil and reduced residue for optimum ballistic performance. This outstanding propellant, designed for 12 gauge only, meters superbly and is ideal for 7/8, 1 and 1-1/18 ounce loads. As the name implies, “a little goes a long way!”

Hi-Skor 700-X™ This extruded flake powder is ideally suited for shotshells in 12 and 16 gauge where clay target and light field loads are the norm. It doubles as an excellent pistol target powder for such cartridges as the 38 Special and 45 ACP and many more.

TRAIL BOSS® Trail Boss was designed specifically for low velocity lead bullets suitable for Cowboy Action shooting. It is primarily a pistol powder but has some application in rifles. It is based on a whole new technology that allows very high loading density, good flow through powder measures, stability in severe temperature variation, and, most importantly, additional safety to the handloader.

CLAYS® Introduced in January 1992, CLAYS has “taken the clay target world by storm.” It is the most clean burning, consistent 12 ga. 7/8 oz., 1 oz. and 1-1/8 oz. powder available today. The superb burning characteristics of this powder produce soft, smooth recoil, ultra clean burning, mild muzzle report, and excellent patterns. These features transfer directly to handgun applications where target shooting is the main goal. 45 ACP and 38 Special are only two of the cartridges in which CLAYS provides “tack driving” target accuracy with flawless functioning.

INTERNATIONAL® INTERNATIONAL is the second in the “CLAYS” series of powders. Its burning speed accommodates 12 ga., 2-3/4” light, medium and heavy 1-1/8 oz. loads, with some very nice 1 oz. listings. Also, it works splendidly in 20 ga., 7/8 oz. target and light field loads. As with CLAYS, clean burning and flawless functioning is the rule.

TITEGROUP® As the name implies, this spherical propellant was designed for accuracy. Because of the unique design, this powder provides flawless ignition with all types of primers including the lead-free versions. Unlike pistol powders of the past, powder position in large cases (45 Colt, 357 Magnum and others) has virtually no effect on velocity and performance. Cowboy Action, Bullseye and Combat Shooters should love this one! TITEGROUP has it all

HP38® HP38 is a spherical pistol powder that is great for low velocity and mid-range target loads in 38 Special, 44 Special and 45 ACP. This high energy powder provides economy in loading.

UNIVERSAL® UNIVERSAL handles the broadest spectrum of cartridges for both pistol and shotgun. From the 25 ACP to the 44 Magnum, UNIVERSAL provides outstanding performance. In shotgun, it produces excellent loads in 28 ga. 3/4 oz., 20 ga. 7/8 oz., 16 ga. 1 oz., and even 12 ga.

Hi-Skor 800-X™ This large-grained flake powder is at its best when used in heavy field loads from 10 gauge to 28 gauge. In handgun cartridges 800-X performs superbly in cartridges like the 10mm auto and 44 Remington Magnum. Excellent velocity and uniformity translate into top accuracy.

CFE®PISTOL® New for 2014, this excellent spherical pistol propellant utilizes our CFE formula, Copper Fouling Eraser, virtually eliminating copper fouling, plus providing top velocities with clean burning and minimal muzzle flash. For competitive shooters and handloaders seeking the perfect powder for target or self-defense loads, CFE Pistol provides optimum performance in cartridges like the 9mm Luger, 38 Super, 40 S&W, the venerable 45 ACP and many more.

HS-6® HS-6 is a fine spherical propellant that has wide application in pistol and shotshell. In pistol, 9mm, 38 Super, 40 S&W and 10mm Auto are some of the cartridges where HS-6 provides top performance. In shotshell HS-6 yields excellent heavy field loadings in 10 ga., 12 ga., 16 ga., 20 ga., and even the efficient and effective 28 ga. HS-6 is truly an outstanding spherical propellant.

LONGSHOT® This new spherical shotshell powder is the most versatile heavy field propellant Hodgdon has ever produced. Great field loads in 10 ga., 12 ga., 16 ga., 20 ga., and 28 ga. are shown herein. This propellant provides true magnum velocities with superb patterns. In addition, LONGSHOT is the best choices for those competitors shooting “race” games such as “Buddy” shoots, “Annie Oakleys” and more.

H110® H110 is the spherical powder that screams “no wimps, please!” It delivers top velocities with top accuracy in the 44 Magnum, 454 Casull and 475 Linebaugh. Silhouette shooters claim it is the most accurate 44 powder they have ever used. In addition, H110 is “the” choice for the miniscule 410 Bore shotgun. It handles all 2-1/2”, 1/2 oz. loads as well as all 11/16 oz. loads for the 3” version.

LIL' GUN® The 410 Bore has long been difficult to load due to shortcomings in powder fit, metering, along with poor burning characteristics. Not any more! LIL' GUN was designed to fit, meter and perform flawlessly in the 410 Bore. No more spilled shot or bulged cases. In addition LIL' GUN has many magnum pistol applications and is superb in the 22 Hornet.

Rifle Powders

In Order of Approximate Burning Rate

▶ **H4198™** This Extreme Extruded propellant has gone through some changes since its inception, all the time maintaining the same important burning speed of the past. The kernels were shortened for improved metering and necessary elements were added to make it extremely insensitive to hot/cold temperatures. H4198 is outstanding in cartridges like the 222 Remington, 444 Marlin and 7.62 x 39.

▶ **H322**® This extreme powder has won more benchrest matches than all other propellants combined. It provides match grade accuracy in small and medium capacity cartridges like the 223 Remington, 6mm PPC and the 7mm TCU. As a fine extruded powder, it flows through powder measures with superb accuracy.

▶ **BENCHMARK**® As the name implies, this Extreme Extruded propellant was developed for precision cartridges, such as benchrest and small varmint cartridges like the 6mm PPC, 22 PPC, 6mm BR, 22 BR, 223 Remington and 222 Remington. Additionally, it performs superbly in the 308 Winchester with light match bullets like the 147 gr. and 155 gr. versions. With small, easy metering granules, competitors will love how it flows through progressive presses.

H335® H335 originated as a military powder for the 5.56 NATO, or 223 Remington, as handloaders know it. Obviously, it sees endless use in the 222 Remington, 223 Remington and other small cartridges. In particular, prairie dog shooters will find this a favorite, as J.B. Hodgdon has for years!

▶ **H4895**® H4895 is a most versatile rifle powder. This member of the Extreme Extruded line is great for 17 Remington, 250-3000 Savage, 308 Winchester and 458 Winchester, to name just a few. It is amazingly accurate in every cartridge where it is listed in our data. It had its origin in the 30-06 as a military powder and was the first powder Bruce Hodgdon sold to the loading public.

▶ **VARGET**® The first of Hodgdon's revolutionary Extreme Extruded Powders, VARGET features small extruded grains for uniform metering, insensitivity to hot/cold temperatures and higher energy for improved velocities over other powders in its burning speed class. Easy ignition and clean burning translate into superb accuracy, higher scores and more clean, one shot kills. Outstanding performance and velocity can be obtained in popular cartridges such as the 223 Remington, 22-250 Remington, 308 Winchester, 30-06, 375 H&H and many more.

BL-C(2)® BL-C(2) is a spherical powder that began as a military powder used in the 7.62 NATO, commonly known as the 308 Winchester. When it was first introduced to the handloader, benchrest shooters and other target shooters made it an instant success. BL-C(2) works extremely well in the 223 Remington, 17 Remington, 22 PPC and of course, the 308 Winchester, plus many more.

CFE® **223** Introduced in January 2012, this versatile, spherical rifle propellant incorporates in its formula CFE, Copper Fouling Eraser. This ingredient, originally used in military propellant, greatly deters copper fouling. It contributes to longer periods of top accuracy with less barrel cleaning time. Being a spherical powder, metering is superbly accurate. CFE 223 yields top velocities in many cartridges such as the 204 Ruger, 223 Remington/5.56mm NATO, 22-250 Remington and the 308 Winchester/7.62mm NATO, plus many, many more. Match, Varmint and AR shooters will love this one!

LEVEREVOLUTION® Hodgdon® Powder Company and Hornady® Manufacturing have teamed together to answer the frequently asked reloading question; "Can I buy the powder used in Hornady LEVEREVOLUTION factory ammunition?" Yes, this is the same spherical propellant used in Hornady's innovative and award winning high performance factory ammunition. This fabulous propellant meters flawlessly and makes lever action cartridges like the 30-30 Winchester yield velocities in excess of 100 fps over any published handloads, with even greater gains over factory ammunition. Other cartridges include the 35 Remington, 308 Marlin Express, 338 Marlin Express and the 25-35 Winchester. The list of cartridges and bullets is limited with this highly specialized powder, but where it works, it really works!

H380® H380 was an unnamed spherical rifle propellant when the late Bruce Hodgdon first used it. When a 38.0 grain charge behind a 52 grain bullet gave one hole groups from his 22 caliber Wildcat (now called 22-250), he appropriately named the powder H380. H380 is also a superb performer in the 220 Swift, 243, 257 Roberts and other fine varmint cartridges.

H414® This spherical powder gives excellent results in a wide range of uses, from the 22-250 Remington to the 375 H&H. It is simply ideal in the 30-06. As with all of our spherical powders, it delivers incredibly consistent charge weights through nearly any type of powder measure. H414 yields similar results to H4350 in most cartridges, although charge weights will vary.

▶ **H4350™** The burning speed of this Extreme Extruded propellant has been known to shooters for decades. Over time, Hodgdon has modernized H4350 by shortening the grains for improved metering and making it insensitive to hot/cold temperatures. H4350 is great in cartridges such as the 243 Winchester, 6mm Remington, 270 Winchester, 338 Winchester Magnum and many more. For magnums with light to moderate weight bullets, it can't be beat!

HYBRID 100V™ This excellent new product is the result of combining the technologies of spherical powders and extruded propellants. The chemistry of a spherical powder is combined with the geometry of an extruded propellant, creating a smooth-metering, super short granule extruded shaped propellant with high energy. HYBRID 100V has a burn speed between H4350 and H4831,

yielding superb performance in such popular calibers as 270 Winchester, 243 Winchester Super Short Magnum, 7mm Remington Magnum, 300 Winchester Magnum and dozens more.

▶ **H4831**® It is probably safe to say more big game has been taken with H4831 than any other powder. Bruce Hodgdon was the first supplier to introduce this popular burning rate in 1950. Since that time, it has become a favorite for cartridges like the 270 Winchester, 25-06 Remington, 280 Remington and 300 Winchester Magnum. As an Extreme Extruded propellant it shares the fine quality of insensitivity to hot/cold temperatures, as well as superb uniformity from lot to lot.

▶ **H4831SC**® Ballistically, this Extreme Extruded powder is the exact copy of H4831. Physically, it has a shorter grain size, therefore, the designation SC, or short cut. The shorter, more compact kernels allow the powder to flow through powder measures more smoothly, helping to alleviate the constant cutting of granules. With the smoother flow characteristics comes more uniform charge weights while the individual grains orient more compactly, creating better loading density.

SUPERFORMANCE® This is another of the spherical powders Hodgdon® Powder Company and Hornady® Manufacturing introduced to answer the frequently asked reloading question: "Can I buy the powder used in Hornady Superformance factory ammunition?" Superformance delivers striking velocities in cartridges like the 22-250 Remington, 243 Winchester and 300 Winchester Short Magnum. Velocities well in excess of 100 fps over the best published handloads and even larger gains over factory ammunition! Because this propellant is tailored for specific applications, the number of cartridges and bullets is limited, but where it works, it really works!

▶ **H1000**® This very slow burning Extreme Extruded powder is perfect for highly over-bored magnums like the 7mm Remington Magnum, 7mm STW and the 30-378 Weatherby. In addition, with heavy bullets, H1000 gives top velocity and performance in such cartridges as the 6mm-284, 257 Weatherby, 270 Winchester, and 300 Winchester Magnum. In a short period of time this powder has achieved considerable notoriety among long range match shooters.

▶ **RETUMBO**® This magnum powder was designed expressly for the really large over-bored cartridges such as the 7mm Remington Ultra Magnum, 300 Remington Ultra Magnum, 30-378 Weatherby Magnum, etc. RETUMBO adds 40-100 fps more velocity to these cartridges wname implies, this new generation Extreme Extruded rifle propellant is a clean burning powder designed expressly for the 50 caliber BMG cartridge. Because it shares the same technology as VARGET, H50 BMG displays a high degree of thermal stability in temperature extremes. Tests have conclusively proven that H50BMG yields very low extreme spreads in velocity and pressure. All this translates into small groups at extended ranges!

US869® This spherical powder is superb with heavy bullets in big, over-bore, magnum rifle cartridges. Because it is very dense, it allows the shooter to use enough powder to create true magnum loads. US869 is also used in the 50 caliber BMG, where it yields high velocity and great accuracy with 750 and 800 grain projectiles. A truly great 1000-yard competition propellant.

▶ **H50BMG** As the name implies, this new generation Extreme Extruded rifle propellant is a clean burning powder designed expressly for the 50 caliber BMG cartridge. Because it shares the same technology as VARGET, H50 BMG displays a high degree of thermal stability in temperature extremes. Tests have conclusively proven that H50BMG yields very low extreme spreads in velocity and pressure. All this translates into small groups at extended ranges!



In the shooting world there are two kinds of people. Those who like to plink around, with little or no regard to accuracy and consistency. And then there are those who take the discipline of shooting to a whole new extreme. Shooters, not unlike yourself, who sense changes in performance with changes in the weather. People who recognize lot differences in certain powders with a single pull of the trigger. For those discriminating few, Hodgdon is proud to offer the Extreme Series. This exclusive line of extruded powders was developed with extreme conditions in mind. They're manufactured so you can't tell the difference in performance from one lot to the next. And whether you're hunting deer in the dead of winter or prairie dogs in the middle of July, you'll get the same consistent performance, load after load. Some would say our obsession with performance is a bit extreme. We couldn't agree more.

TEMPERATURE EXTREMES

You live in the "real" world, where 12 point bucks are rare and it's never 70° when you decide to fire your rifle. Where you shoot it's either freezing cold or burning hot. Not exactly ideal conditions for your rifle, or you for that matter. Fortunately, Hodgdon's Extreme powders perform just as well at 125° as they do at 0°. Using an exclusive extrusion process and exacting quality standards, Hodgdon has created a line of propellants that performs better at hot and cold temperatures than any other powder on the market. So when you sight in your rifle this summer, you can count on unbeatable accuracy this winter.

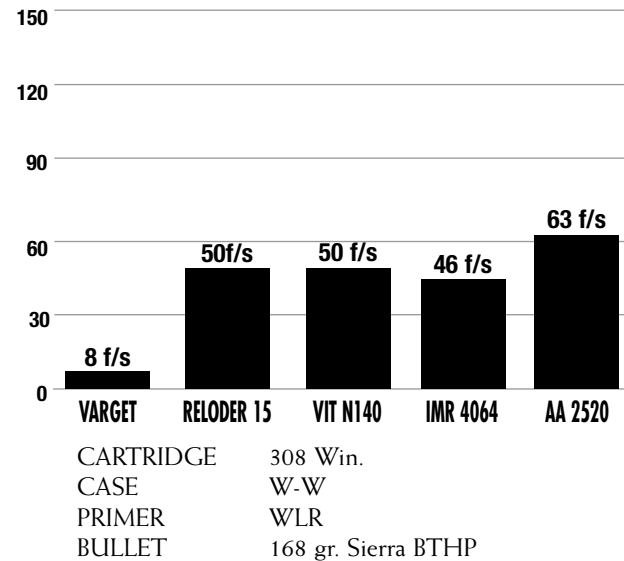
LOT CONSISTENCY

Hodgdon goes through painstaking measures to ensure that all powder is consistent from lot to lot. And while the casual user may never notice, you certainly will. No matter when you purchase Hodgdon powder, you can feel confident that the performance you receive from one lot will match that of another.

SHORT GRAIN METERING

With Hodgdon Extreme powders you get the best of both worlds. On one hand you get extruded performance that outperforms the best long grain powders on the market in any kind of weather. On the other, the shorter grains produced in the extrusion process meter extremely well. That means you can use Extreme powders in progressive loaders for high volume loading. Whether you're loading for targets, big game, plinking or varmints, Hodgdon has an extruded powder that will work for you.

**EXTREME VELOCITY SPREAD
FOR TEMPERATURES BETWEEN 0°-125°**



Rifle Usage

	TARGET	SILHOUETTE	LIGHT	MEDIUM	MAGNUM	50 CAL.
TRAIL BOSS	X		X			
Lil' GUN			X			
H4198	X		X			
H322	X	X	X	X		
BENCHMARK	X	X	X	X		
H335	X	X	X	X		
H4895	X	X	X	X		
VARGET	X	X	X	X		
BL-C(2)	X	X	X	X		
CFE 223	X	X	X	X		
LEVEREVOLUTION	X	X	X	X		
H380		X				
H414		X		X		
H4350		X		X	X	
HYBRID 100V		X		X	X	
H4831				X	X	
H4831 SC				X	X	
SUPERFORMANCE				X	X	
H1000				X	X	
RETUMBO					X	
US869					X	X
H50BMG					X	X

Shotgun Usage

	TARGET				LIGHT FIELD					HEAVY FIELD					
	12 GA	20 GA	28 GA	410 BORE	12 GA	16 GA	20 GA	28 GA	410 BORE	10 GA	12 GA	16 GA	20 GA	28 GA	410 BORE
CLAYS	X				X										
TITIEWAD	X				X										
Hi-SKOR 700X	X				X	X									
INTERNATIONAL	X	X			X		X								
TITEGROUP	X				X										
UNIVERSAL	X	X	X		X	X	X	X							
Hi-SKOR 800X	X	X	X		X	X	X	X		X	X	X	X	X	
HS-6			X			X	X	X			X				
LONGSHOT	X	X	X							X	X	X	X	X	
Lil' GUN				X					X					X	X
H110				X					X						X

Pistol Usage

	TARGET	LIGHT DUTY	MEDIUM DUTY	MAGNUM
CLAYS	X	X		
Hi-SKOR 700X	X	X		
TITEGROUP	X	X		
TRAIL BOSS	X	X		
UNIVERSAL	X	X	X	
HP-38	X	X	X	
Hi-SKOR 800-X	X	X	X	
HS-6		X	X	
CFE PISTOL	X	X	X	X
Lil' GUN			X	X
H110			X	X



Pistol Powder

In Order of Approximate Burning Rate

IMR 4227™ This is the Magnum Pistol Powder in the IMR lineup. If it says Magnum, IMR 4227 is the choice for true magnum velocities and performance. In rifles this powder delivers excellent velocity and accuracy in such cartridges as the 22 Hornet and 221 Fireball.

Rifle Powders

In Order of Approximate Burning Rate

IMR 4198™ This fast burning rifle powder gives outstanding performance in cartridges like the 222 Remington, 221 Fireball, 45-70, and 450 Marlin. Varmint shooters with small-bore cartridges love it.

IMR 3031™ A propellant with many uses, IMR3031 has long been a favorite of 308 Match shooters using 168-grain match bullets. It is equally effective in small-capacity varmint cartridges from 223 Remington to 22-250 Remington, and it's a great 30-30 Winchester powder.

IMR 8208 XBR™ The latest in the versatile IMR line of fine propellants, this accurate metering, super short grained rifle powder was designed expressly for match, varmint, and AR sniper cartridges. Ideally suited for cartridges like the 223 Remington/5.56mm, 308 Winchester/7.62mm NATO and the 6mm PPC, shooters will find IMR 8208 XBR totally insensitive to changes in temperature, while yielding max velocities and "tack driving" accuracy. Clearly, the competitor's "choice" and the Varmint Hunter's "dream powder".

IMR 4895™ Originally a military powder featured in the 30-06, IMR 4895 is extremely versatile. From the 17 Remington to the 243 Winchester to the 375 H&H Magnum, accuracy and performance are excellent. In addition, it is a longtime favorite of Match shooters.

IMR 4166™ This fine, extruded propellant is the first in the series of Enduron™ Technology powders. The main features of the Enduron™ Technology series are copper fouling reducer, insensitivity to temperature changes, ideal loading density and being environmentally friendly. IMR 4166 is the perfect burn speed for cartridges like the 308 Win/7.62mm NATO, 22-250 Remington, 257 Roberts and dozens more. Positively, a versatile, match grade propellant.

IMR 4064® The most versatile propellant in the IMR line, used for 223 Remington, 22-250 Remington, 220 Swift, 6mm Remington, 243 Winchester Super Short Magnum, 308 Winchester, 338 Winchester Magnum, and the list goes on and on. Versatility with uniformity and accuracy.

IMR 4320™ Short granulation, easy metering, and perfect for the 223 Remington, 22-250 Remington, 250 Savage, and other medium burn rate cartridges. Long a top choice for the vintage 300 Savage cartridge as well.

IMR 4350™ The number one choice for the new short magnums, both Remington and Winchester versions. For magnums with light to medium bullet weights, IMR 4350 is the best choice.

IMR 4451™ Another new Enduron™ Technology extruded powder, IMR 4451, gives top performance in the venerable 30-06, 270 Winchester and 300 Winchester Short Magnum, to name just a few. This propellant is ideally suited for many, many mid-range burn speed cartridges. Simply scroll through the list of cartridges on the Hodgdon Reloading Data Center, and see how many of your favorite cartridges are covered with this fine powder. Once the shooter tries this one in that favorite cartridge, his search is over!

IMR 4831™ Slightly slower in burn speed than IMR4350, IMR 4831 gives top velocities and performance with heavier bullets in medium-sized magnums.

IMR 7828™ The BIG magnum powder. This slow burner gives real magnum performance to the large over-bored magnums, such as the 300 Remington Ultra Magnum, the 30-378 Weatherby Magnum, and the 7mm Remington Ultra Magnum. This powder is highly regarded by most magnum aficionados.

IMR 7828 SSC™ This magnum rifle powder has exactly the same burn rate as standard IMR 7828 and uses the same data. However, due to the super short kernels, metering is virtually as good as a spherical powder. This allows up to 4% more powder space in the case and in many loads yields more velocity than standard 7828. Such loads are marked with an asterisk in the data to show where standard 7828 will not fit.

IMR 7977™ The slowest burn rate Enduron™ Technology extruded powder is IMR 7977, and is a true magnum cartridge propellant. It yields outstanding performance in such cartridges as the 300 Winchester Magnum, 7mm Remington Magnum, 338 Lapua and a host of others. Loading density is perfect for magnums, nicely filling the case at maximum charges, contributing to superb uniformity and accuracy. The 7mm Remington Magnum "never had it so good"!



Rifle Usage

	TARGET	SILHOUETTE	LIGHT	MEDIUM	MAGNUM	50 CAL.
IMR 4227			X			
IMR 4198	X		X			
IMR 3031	X	X	X	X		
IMR 8208 XBR	X	X	X	X		
IMR 4895	X	X	X	X		
IMR 4166	X	X	X	X		
IMR 4064	X	X	X	X		
IMR 4320	X	X	X	X		
IMR 4007 SSC		X		X	X	
IMR 4350		X		X	X	
IMR 4451		X		X	X	
IMR 4831				X	X	
IMR 7828				X	X	
IMR 7828 SSC				X	X	
IMR 7977				X	X	

Shotgun Usage

	TARGET				LIGHT FIELD					HEAVY FIELD					
	12 GA	20 GA	28 GA	410 BORE	12 GA	16 GA	20 GA	28 GA	410 BORE	10 GA	12 GA	16 GA	20 GA	28 GA	410 BORE
IMR 4227				X					X						X

Pistol Usage

	TARGET	LIGHT DUTY	MEDIUM DUTY	MAGNUM
IMR 4227			X	X

WINCHESTER

SMOKELESS PROPELLANTS

FOR LOADING PROFESSIONALS

Pistol & Shotgun Powders

In Order of Approximate Burning Rate

WST[®] The choice for 12 gauge AA duplicate handloads and standard velocity handgun loads. Ideal for use in 45 Auto match applications. Consistent, clean, low flash and smoke are benefits to the shooter.

231[®] One of the most popular reloading propellants, 231 is a pistol powder ideally suited to the 38 Special, 45 Auto, and 9mm standard loads. Consistency, clean burning, low flash, and a broad range of applications make this a powder of choice for any pistol cartridge reloader.

SUPER HANDICAP[™] Super Handicap is the same propellant used in Winchester's Super Handicap ammunition. This slow-burning, high energy propellant gives the shooter great handicap or long range sporting clays loads at up to 1250 fps with a 1-1/8 ounce shot charge. Great velocity with excellent patterns!

AutoComp[™] AutoComp is a new high performance powder optimized for semi-auto pistol competition and self defense. It yields faster split times with improved compensator gas volume in calibers like 9mm Luger, 40 S&W, 38 Super and 45 ACP. All this with less muzzle flash and clean burning!

WSF[®] Super-Field propellant is the propellant of choice for Winchester 20 gauge AA Target loads. WSF is an ideal choice to maximize velocities in 12 gauge 1-1/8 ounce and 1-1/4 ounce loads. Super-Field also performs well in 38 Super, 9mm, and 40 S&W pistol loads. Excellent propellant for action pistol applications.

296[®] This propellant was developed for Winchester factory-loaded ammunition for 357 Magnum, 44 Magnum, and 410 Bore. Its high loading density provides optimal velocity. 296 is recommended by Winchester for 410 Bore AA loads.

Rifle Powders

In Order of Approximate Burning Rate

748[®] 748 is the powder of choice for 223 Remington ammunition. The low flame temperature of 748 extends barrel life compared to other similar speed powders. It is ideal for a wide variety of centerfire rifle loads, including 222 Remington, 30-30 Winchester, 308 Winchester, and up to 485 Winchester Magnum.

760[®] Combine Winchester components with 760 to duplicate 30-06 Springfield factory load ballistics. 760 has ideal flow characteristics that give it an advantage over other propellants with similar burn rates. 760 is recommended as an excellent choice for 22-250 Remington, 300 Winchester Magnum, as well as 300 WSM.

Rifle Usage

	TARGET	SILHOUETTE	LIGHT	MEDIUM	MAGNUM	50 CAL.
748	X	X	X	X		
760		X	X	X	X	

Pistol Usage

	TARGET	LIGHT DUTY	MEDIUM DUTY	MAGNUM
WST	X	X		
231	X	X	X	
AUTO COMP	X	X	X	
WSF	X	X		
296			X	X

Shotgun Usage

	TARGET				LIGHT FIELD				HEAVY FIELD						
	12 GA	20 GA	28 GA	410 BORE	12 GA	16 GA	20 GA	28 GA	410 BORE	10 GA	12 GA	16 GA	20 GA	28 GA	410 BORE
WST	X				X										
SUPER HANDICAP	X				X										
WSF	X	X			X	X					X				
296				X					X						X

Relative Burn Rate From Fastest to Slowest

1 NORMA R1	43 Alliant 410	85 Hodgdon BL-C(2)
2 Winchester WAALite	44 Alliant 2400	86 CFE 223
3 Vihtavuori N310	45 Accurate Arms No. 9	87 Hodgdon Leverevolution
4 Alliant e3	46 NORMA R123	88 Hodgdon H380
5 Hodgdon TITEWAD	47 Vihtavuori N110	89 IMR 4007 SSC
6 Alliant Red Dot	48 Hodgdon LIL' GUN	90 Vihtavuori N540
7 Hodgdon CLAYS	49 Hodgdon H110	91 Winchester 760
8 Hodgdon Hi-Skor 700-X	50 Winchester 296	92 Hodgdon H414
9 Alliant Bullseye	51 IMR 4227	93 Vihtavuori N150
10 Winchester WST	52 Hodgdon H4227	94 Accurate Arms 4350
11 Hodgdon TITEGROUP	53 IMR SR 4759	95 Accurate Arms 2700
12 Alliant American Select	54 Accurate Arms 1680	96 IMR 4350
13 Accurate Arms Solo 1000	55 NORMA 200	97 IMR 4451
14 Alliant Green Dot	56 Alliant Reloder 7	98 Hodgdon H4350
15 Hodgdon Trail Boss	57 IMR 4198	99 NORMA 204
16 Winchester Super Handicap	58 Hodgdon H4198	100 Hodgdon HYBRID 100V
17 Hodgdon INTERNATIONAL	59 Vihtavuori N120	101 Vihtavuori N550
18 Hodgdon PB	60 Hodgdon H322	102 Alliant Reloder 19
19 Vihtavuori N320	61 Accurate Arms 2015BR	103 IMR 4831
20 Accurate Arms No. 2	62 Vihtavuori N130	104 Accurate Arms 3100
21 IMR SR 7625	63 IMR 3031	105 Vihtavuori N160
22 Hodgdon HP-38	64 Vihtavuori N133	106 Hodgdon H4831 & H4831SC
23 Winchester 231	65 Hodgdon BENCHMARK	107 Hodgdon Superformance
24 Alliant 20/28	66 Hodgdon H335	108 Winchester Supreme 780
25 Alliant Power Pistol	67 Accurate Arms 2230	109 NORMA MRP
26 Alliant Unique	68 Accurate Arms 2460	110 Alliant Reloder 22
27 Hodgdon UNIVERSAL	69 IMR 8208 XBR	111 Vihtavuori N560
28 Alliant Herco	70 Hodgdon H4895	112 Vihtavuori N165
29 Winchester WSF	71 Vihtavuori N530	113 IMR 7828 & IMR 7828 SSC
30 Vihtavuori N340	72 IMR 4895	114 Vihtavuori N170
31 Hodgdon Hi-Skor 800-X	73 Vihtavuori N135	115 IMR 7977
32 IMR SR 4756	74 Alliant Reloder 12	116 Hodgdon H1000
33 Accurate Arms No. 5	75 IMR 4320	117 Hodgdon RETUMBO
34 Hodgdon HS-6	76 Accurate Arms 2495BR	118 Vihtavuori N570
35 Winchester, AutoComp	77 IMR 4166	119 Accurate Arms 8700
36 Hodgdon CFE Pistol	78 IMR 4064	120 Hodgdon H870
37 Vihtavuori 3N37	79 NORMA 202	121 Vihtavuori 24N41
38 Vihtavuori N350	80 Accurate Arms 2520	122 Hodgdon H50BMG
39 Vihtavuori 3N38	81 Alliant Reloder 15	123 Hodgdon US869
40 Alliant Blue Dot	82 Vihtavuori N140	124 Vihtavuori 20N29
41 Accurate Arms No. 7	83 Hodgdon VARGET	
42 Hodgdon LONGSHOT	84 Winchester 748	

Properties

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.

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.

How to check 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. For more instructions call Hodgdon Powder.

Consideration for Storage

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

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

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

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

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

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

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

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

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

Shipping and Storage of Smokeless Propellants

14.3 Smokeless Propellants

14.3.1 Quantities of smokeless propellants not exceeding 11.3 kg (25 lb) in shipping containers approved by the U.S. Department of Transportation shall be permitted to be transported in a private vehicle.

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

14.3.3 Transportation of more than 22.7 kg (50 lb) of smokeless propellants in a private vehicle shall be prohibited.

14.3.4 Commercial shipments of smokeless propellants for small arms that has been classed in Division 1.3 shall be permitted to be reclassified as Division 4.1 flammable solid for transportation purposes for shipment by motor vehicle, rail car, vessel, or cargo-only aircraft, subject to the conditions stated in the U.S. Department of Transportation 49 CFR 173.171.

14.3.5 Commercial shipments of smokeless propellants exceeding 45.4 kg (100 lb) or not packaged in accordance with the regulations cited in 14.3.4 shall be transported in accordance with the U.S. Department of Transportation regulations for Division 1.1 or 1.3 explosives.

14.3.6 Smokeless propellants shall be stored in shipping containers specified by U.S. Department of Transportation "Hazardous Materials Regulations."

14.3.7 Quantities

14.3.7.1 Smokeless propellants intended for personal use in quantities not exceeding 9.1 kg (20 lb) shall be permitted to be stored in original containers in residences.

14.3.7.2 Quantities exceeding 9.1 kg (20 lb), but not exceeding 22.7 kg (50 lb), shall be permitted to be stored in residences where kept in a wooden box or cabinet having walls of at least 25.4 mm (1 in.) nominal thickness.

14.3.8 Not more than 22.7 kg (50 lb) of smokeless propellants, in containers of a 0.45 kg (1 lb) maximum capacity, shall be displayed in commercial establishments.

14.3.9 Commercial stocks of smokeless propellants shall be stored as follows:

- (1) Quantities exceeding 22.7 kg (50 lb), but not exceeding 45.4 kg (100 lb), shall be stored in portable wooden boxes having walls of at least a 25.4 mm (1 in) thickness.
- (2) Quantities exceeding 45.4 kg (100 lb), but not exceeding 363 kg (800 lb), shall be stored in nonportable storage cabinets having walls of at least 25.4 mm (1 in) thickness.
- (3) Not more than 181 kg (400 lb) shall be permitted to be stored in any one cabinet, and cabinets shall be separated by a distance of at least 7.63 m (25 ft) or by a fire partition having a fire resistance of at least 1 hour.
- (4) Quantities exceeding 363 kg (800 lb) but not exceeding 2268 kg (5000 lb) shall be permitted to be stored in a building, provided the following requirements are met:
 - (a) The warehouse or storage room shall not be accessible to unauthorized personnel.
 - (b) Smokeless propellants shall be stored in nonportable storage cabinets having wood walls of at least 25.4 mm (1 in.) thickness and having shelves with no more than 0.92 m (3 ft) of separation between shelves.
 - (c) No more than 181 kg (400 lb) shall be stored in any one cabinet.
 - (d) Cabinets shall be located against the walls of the storage room or warehouse with at least 12.2 m (40 ft) between cabinets.
 - (e) The separation between cabinets shall be permitted to be reduced to 6.1 m (20 ft) where barricades twice the height of the cabinets are attached to the wall, midway between each cabinet.
 - (f) The barricades shall extend at least 3 m (10 ft) outward, shall be firmly attached to the wall, and shall be constructed of 6.4 mm (1/4 in) boiler plate, 51 mm (2 in.) thick wood, brick, or concrete block.
 - (g) Smokeless propellants shall be separated from materials classified by the U.S. DOT as flammable liquids, flammable solids, and oxidizing materials by a distance of 7.63 m (25 ft) or by a fire partition having a fire resistance of at least 1 hour.
 - (h) The building shall be protected by an automatic sprinkler system installed in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*.
- (5) Smokeless propellants not stored in accordance with 14.3.9(1) through 14.3.9(4) shall be stored in a Type 4 magazine constructed and located in accordance with Chapter 9.

Warnings

- Ballistic data shown in this manual was obtained under strictly controlled laboratory conditions.
- For all powders use only the components shown. If the reloader makes any changes in components or gets new lot numbers, he should begin again with the starting loads and work up to maximum cautiously.
- Ballistic data varies considerably depending on many factors, including components used, how such components are assembled, the type of firearm used, and the reloading techniques and safety precautions utilized by the individual.

- Hodgdon Powder Company disclaims any warranties with respect to any and all products sold or distributed by it, the safety or suitability thereof, or the results obtained, whether express or implied, including without limitation, any implied warranty of merchantability or fitness for a particular purpose and/or any other warranty.
- The individual assumes the risk of safe loading practices. Failure to do so or violation of any of these warnings could result in severe personal injury (including death) or gun damage to the user or bystanders.
 - Use flat point bullets in tubular magazines.
 - For those loads listed where a starting load is not shown, start 10% below the suggested maximum load and then approach maximums carefully, watching for any sign of pressure (difficult extraction, cratered and flattened or blown primers, and unusual recoil).
 - No data shown in the lead shot data section should be used with steel, bismuth, or other non-toxic shot.
 - Never substitute components (except where indicated) when loading shotshells using this data. Substitution of different components could cause excessive or dangerous pressures, which could damage or destroy your firearm or cause serious personal injury or even death to the user and/or bystanders.
 - Since Hodgdon Powder Company has no control over variations in components, reloading tools or reloader's procedures, the individual is solely responsible for any changes in ballistics that may occur using this data.
 - Never exceed the charge recommendations listed in this data.
 - Never mix any two powders regardless of type, brand or source.
 - Never substitute any smokeless powder for black powder, for Pyrodex®, Triple Seven®, or other black powder substitute.
 - Buyers and users assume all risk, responsibility and liability whatsoever for any and all injuries (including death), losses, or damages to persons or property (including consequential damages), arising from the use of any product or data, whether or not occasioned by seller's negligence or based on strict product liability or principles of indemnity or contribution. Hodgdon neither assumes nor authorizes any person to assume for it any liability in conjunction with the use of any product or data.
 - Use this data with Hodgdon, IMR, and Winchester powders only.

Warnings

- 40 S&W: This data is intended for use in firearms with barrels which fully support the cartridge in the chamber. Use of this data in firearms which do not fully support the cartridge may result in bulged cases, ruptured cases, case head separation, or other conditions which may result in damage to the firearm and/or result in injury or death of the shooter and/or bystanders. Check with your firearm manufacturer if in doubt.
- After choosing an appropriate load, be sure to weigh actual charges thrown by a bushing or charge bar. No bushing or charge bar throws the exact charge as listed in the tables. Such changes occur because of small tolerances in bushing sizes, tolerances in bulk density of powder, and the way each loader is mounted and operated. It is important to verify weights for safety and to insure getting the type load you want.
- Trail Boss® was designed to work in specific charge weight ranges. Do not use charges less than the starting load shown, nor greater than the maximum shown.
- Damascus barrels should be considered unsafe with any powder.
- H110 and W296 loads should not be reduced more than 3% due to inconsistency of velocity at the lower pressure.
- Powder left in the reloader's powder measure hoppers for extended periods, overnight or several days, should be avoided. Powder needs to be stored in original containers ONLY, when not in use. Numerous modern smokeless powders are double base in construction, containing both Nitrocellulose and Nitroglycerine. Many powder measures currently available use an inexpensive plastic containing polystyrene, which Nitroglycerine adversely affects when contact is made for extended periods of time, resulting in etching or mishaping the plastic. Normal usage during the reloading process does not provide adequate time for this to occur, so simply draining hoppers into the original containers when the reloading is completed for the day, prevents ruining the hoppers.

RIFLE AND PISTOL data

This Reloading Data is presented in a format to make it easy to find the intended load information. The sequence of the data is:

3. Caliber Name – smallest to largest
4. Shellcase Capacity – smallest to largest
5. Bullet Weight – lightest to heaviest
6. Powder Burn Rate – slowest to fastest burning

All the Rifle data is presented first, followed by the Pistol data which is in the same formatting sequence. There is a separate third section for smokeless Cowboy Action data.

Primarily, the data for this edition was developed through the use of pressure barrels. All loads for standard U.S. cartridges adhere to the guidelines provided by the Sporting Arms and Ammunition Manufacturers' Institute (S.A.A.M.I.). Maximum loads for wildcat cartridges and cartridges not covered by S.A.A.M.I. were obtained by visual case head signs such as flat or cratered primers, difficult extraction and measured case heads.

Pressures were gauged by one of two methods, mechanically with Copper Units of Pressure (CUP), or electronically with a transducer as Pounds per Square Inch (PSI). CUP is determined by using a copper slug called a "crusher." The crusher is placed in a fixture over the chamber where a hole passes through the barrel to the chamber. When the cartridge is fired, gases swell and cause the crusher to flatten. The results are compared to a Tarage Table and converted to pressure in CUP. The electronic method utilizes a force transducer, which rests against the cartridge in the chamber. When the cartridge is fired, the gases cause the brass to expand against the force transducer and the results are measured in pounds per square inch (PSI). The two systems do not provide the same maximum number for each cartridge, so no correlation can be made between systems. However, each cartridge has a standard for both systems, and therefore, actual maximums are physically the same.

When working up a load, the reloader should always begin with the starting load, advance in small increments, watch for pressure signs and begin again if changing components. Generally, the best powder choice is the one which most nearly fills the case for the intended velocity. Most cartridges have only a certain number of appropriate powders. Those cartridges that are more versatile can use a wider range of burning speeds. For others, lesser numbers of propellants will give optimum results.

Most often, slower burning powders are more suitable with heavy bullets, while faster powders are better with lighter bullets. Of course, most reloaders like a powder that delivers near-maximum or maximum results throughout the range of bullets, but that is not always obtainable, since some cartridges (like the 30-06) have too wide a range of bullets for any one burning rate to be ideal.

The reloader that seriously loads for any given rifle/pistol will choose different components (primers, powders, bullets, cases) in varying combinations to obtain the best overall performance and accuracy. After all, the reloader reloads to save money, but he also reloads to improve accuracy and performance, creating special loads he cannot find on the dealers' shelves.

Brands

BAR	- Barnes
BTB	- Beartooth Bullets
BERB	- Berry's Bullets
BER	- Berger
BLX	- Bull-X
CPB	- Cast Performance Bullets
FA	- Freedom Arms
HDY	- Hornady
JLK	- Jimmy Knox
LY	- Lyman
MEI	- Meister
NOS	- Nosler
REM	- Remington
SIE	- Sierra
SFIRE	- Sure Fire
SFT	- Swift
SPR	- Speer
WDLGH	- Woodleigh
WIN	- Winchester

Data

C - Compressed Powder Charge

Primers

LR	- Large Rifle
LRM	- Large Rifle Magnum
SR	- Small Rifle
SRM	- Small Rifle Magnum
LP	- Large Pistol
LPM	- Large Pistol Magnum
SP	- Small Pistol
SPM	- Small Pistol Magnum

Bullets

AB	- Accu-Bond
A-Max	- Hornady Match
BK	- Blitz King
BR	- Bench Rest
BT	- Ballistic Tip
BTSP	- Boat Tail Spire Point
FMC	- Full Metal Case
FMJ	- Full Metal Jacket
FMJBT	- Full Metal Jacket Boat Tail
FN	- Flat Nose
FP	- Flat Point
FPJ	- Full Plated Jacket
FS	- Fail Safe
GC	- Gas Check
GDHP	- Gold Dot Hollow Point
GDSP	- Gold Dot Soft Point
GS	- Grand Slam
HB	- Hollow Base
HC	- Hollow Cavity
HP	- Hollow Point
HPBT	- Hollow Point Boat Tail
HSP	- Hollow Soft Point
IB	- Inter Bond
JFP	- Jacketed Flat Point
JHC	- Jacketed Hollow Cavity
JRN	- Jacketed Round Nose
JSP	- Jacketed Soft Point
JSWC	- Jacketed Semi-Wadcutter
LBBWC	- Lead Bevel Base Wadcutter
LCN	- Lead Conical Nose
LFN	- Lead Flat Nose
LFNPB	- Lead Flat Nose Plain Base
LFP	- Lead Flat Point
LHBWC	- Lead Hollow Base Wadcutter

LRN	- Lead Round Nose
LSWC	- Lead Semi-Wadcutter
MC	- Metal Case
MK	- Match King
MRX	- Maximum Range X Bullet
MT-SP	- Mag Tip Soft Point
PART	- Partition
PSPCL	- Pointed Soft Point "Core-Lokt"
RN	- Round Nose
SB	- Solid Base
SBP	- Spitzer Boat Tail
SCIR	- Scirocco
SJ	- Short Jacket
SMP	- Semi-Pointed
SP	- Soft Point, Spitzer, Spire Point
SPBT	- Soft Point Boat Tail
SSP	- Single Shot Pistol
SST	- Super Shock Tip
ST	- Silvertip
SX	- Super Explosive
TMJ	- Totally Metal Jacket
TNT	- Varmint Bullet
TSX	- Triple Shock X Bullet
VLD	- Very Low Drag
V-MAX	- Varmint Express
WC	- Wadcutter
W/GC	- With Gas Check
X	- X Bullet
XBT	- X Boat Tail
XBTC	- X Boat Tail Coated
XFB	- X Flat Base
XPB	- X Pistol Bullet
XTP	- Extreme Terminal Performance

*Max loads that show an asterik following the "C" for compressed load will not fit with standard 7828. Reduce by 4%.

BULLET	POWDER	GR	VEL	CUP
17 HORNET				
BBL: 24"		CASE: HORNADY		
		PR: FEDERAL 205M		
20 GR. HDY V-MAX				
COL: 1.715"				
H4198	11.8C	3463	39,300 PSI	
IMR 4227	10.1	3356	45,400 PSI	
296	8.7	3301	45,100 PSI	
H110	8.7	3301	45,100 PSI	
LIL'GUN	10.0	3629	48,200 PSI	
25 GR. HDY HP				
COL: 1.715"				
H335	13.2C	3145	45,900 PSI	
H322	12.8C	3283	36,200 PSI	
H4198	11.1C	3187	42,500 PSI	
IMR 4227	9.3	3032	45,700 PSI	
LIL'GUN	8.9	3195	48,000 PSI	
30 GR. BER HP				
COL: 1.715"				
H335	12.5C	2866	44,000 PSI	
H322	12.5C	3020	48,000 PSI	
H4198	10.8C	3024	47,300 PSI	
204 RUGER				
BBL: 24"		CASE: HORNADY		
		PR: FEDERAL 205M		
32 GR. HDY V-MAX				
COL: 2.250"				
CFE 223	30.9	4091	55,000 PSI	
Varget	29.0C	3798	47,400 PSI	
IMR 4166	28.5C	3881	57,400 PSI	
BL-C(2)	30.7	4081	55,500 PSI	
IMR 4895	29.0C	3949	51,900 PSI	
H335	28.3	4044	54,800 PSI	
H4895	29.0C	3980	51,100 PSI	
IMR 8208 XBR	29.0	4130	56,500 PSI	
Benchmark	28.0	4047	57,100 PSI	
H322	27.5	4030	56,400 PSI	
IMR 4198	23.5	4006	55,400 PSI	
40 GR. HDY V-MAX				
COL: 2.250"				
CFE 223	29.0	3769	56,700 PSI	
Varget	28.1C	3647	55,100 PSI	
IMR 4166	26.9	3578	57,300 PSI	
IMR 4064	27.5C	3616	52,000 PSI	
BL-C(2)	30.0	3774	56,200 PSI	
IMR 4895	27.8C	3695	56,000 PSI	
IMR 8208 XBR	27.3	3754	56,300 PSI	
H335	26.8	3738	56,700 PSI	
H4895	27.7C	3741	56,000 PSI	
IMR 3031	25.6C	3694	56,600 PSI	
Benchmark	25.7	3646	55,400 PSI	
H322	25.1	3639	55,900 PSI	
22 HORNET				
BBL: 24"		CASE: WINCHESTER		
		PR: WINCHESTER SR		
35 GR. HDY V-MAX				
COL: 1.725"				
H4198	11.5C	2420	26,300 CUP	
H4227	11.6C	2896	42,500 CUP	
H110	12.3	3060	41,400 CUP	

BULLET	POWDER	GR	VEL	CUP
Li'l'Gun 13.0 2842 24,000 CUP				
45 GR. HDY SP				
COL: 1.750"				
IMR 4198	10.5C	2010	20,100 CUP	
H4198	11.5C	2400	32,000 CUP	
IMR 4227	9.8	2484	42,000 CUP	
SR 4759	8.0C	2000	24,700 CUP	
H110	10.4	2574	43,000 CUP	
Li'l'Gun	13.0	2787	31,600 CUP	
222 REMINGTON				
BBL: 24"		CASE: WINCHESTER		
		PR: WINCHESTER SR		
40 GR. SIE HP				
COL: 2.125"				
H335	25.0	3371	44,600 CUP	
H4895	24.0C	3133	34,200 CUP	
IMR 8208 XBR	25.0C	3452	42,800 PSI	
Benchmark	25.0	3303	40,700 CUP	
H322	23.0	3313	44,000 CUP	
IMR 4198	21.2C	3583	48,700 PSI	
H4198	21.4	3480	45,700 CUP	
IMR 4227	16.0	3240	45,200 PSI	
50 GR. HDY SP				
COL: 2.130"				
CFE 223	26.2	3268	47,600 PSI	
Varget	25.0C	3114	40,600 CUP	
IMR 4320	25.0C	3100	47,600 PSI	
IMR 4064	23.5C	3065	46,200 PSI	
748	24.0	2980	38,000 CUP	
BL-C(2)	25.0	3000	38,600 CUP	
IMR 4895	24.0C	3106	47,400 PSI	
H335	23.6	3120	45,700 CUP	
H4895	23.8C	3022	36,500 CUP	
IMR 8208 XBR	23.3	3201	47,100 PSI	
Benchmark	24.0	3168	45,800 CUP	
H322	22.2	3079	43,200 CUP	
IMR 4198	19.3	3152	49,000 PSI	
H4198	20.5	3160	44,200 CUP	
223 REMINGTON				
BBL: 24"		CASE: WINCHESTER		
		PR: WINCHESTER SR		
50 GR. SPR SP				
COL: 2.210"				
CFE 223	28.5	3505	53,600 PSI	
Varget	27.5C	3383	44,800 CUP	
IMR 4320	27.5C	3270	48,900 PSI	
IMR 4166	26.2C	3267	51,600 PSI	
748	26.0	3200	40,000 CUP	
BL-C(2)	28.0	3428	47,100 CUP	
IMR 4895	26.7C	3211	45,200 PSI	
H335	26.0	3393	51,700 CUP	
H4895	27.5C	3468	51,300 CUP	
IMR 8208 XBR	25.8	3407	53,300 PSI	
IMR 3031	25.0	3268	46,900 PSI	
Benchmark	26.5	3396	50,400 CUP	
H322	24.0	3301	49,300 CUP	
IMR 4198	21.9	3352	52,100 PSI	
H4198	21.5	3223	45,900 CUP	

BULLET	POWDER	GR	VEL	CUP
55 GR SPR SP				
COL: 2.200"				
CFE 223	27.8	3329	51,300 PSI	
Varget	27.5C	3384	49,700 CUP	
IMR 4320	26.1C	3146	50,700 PSI	
IMR 4064	25.7C	3201	52,600 PSI	
IMR 4166	26.2C	3195	53,200 PSI	
748	26.3	3150	39,000 CUP	
BL-C(2)	27.5	3313	48,500 CUP	
IMR 4895	26.2C	3219	53,200 PSI	
H335	25.3	3203	49,300 CUP	
H4895	26.0	3315	49,000 CUP	
IMR 8208 XBR	25.3	3268	53,100 PSI	
IMR 3031	24.6C	3233	52,500 PSI	
Benchmark	25.6	3264	50,000 CUP	
H322	23.0	3106	48,900 CUP	
IMR 4198	20.4	3122	53,600 PSI	
H4198	21.0	3150	47,600 CUP	
22-250 REMINGTON				
BBL: 24"		CASE: WINCHESTER		
		PR: WINCHESTER LR		
50 GR. SIE SP				
COL: 2.350"				
H4350	42.0	3579	48,900 CUP	
H414	40.0	3765	48,600 CUP	
760	40.0	3765	48,600 CUP	
IMR 4007 SSC	40.2C	3945	63,100 PSI	
H380	41.0	3742	45,300 CUP	
CFE 223	39.8	3968	62,600 PSI	
Varget	37.5	3834	50,400 CUP	
IMR 4320	38.0	3864	62,800 PSI	
IMR 4064	37.0	3866	61,900 PSI	
IMR 4166	36.8C	3874	63,200 PSI	
BL-C(2)	34.5	3740	48,400 CUP	
IMR 4895	37.6	3862	61,500 PSI	
H335	34.5	3753	48,700 CUP	
H4895	36.5	3827	50,200 CUP	
IMR 8208 XBR	36.0	3925	62,900 PSI	
IMR 3031	35.0	3862	62,600 PSI	
Benchmark	36.0	3903	51,400 CUP	
H322	32.0	3628	50,300 CUP	
55 GR. SPR SP				
COL: 2.350"				
H4350	39.0	3490	47,800 CUP	
H414	39.0	3582	46,700 CUP	
760	39.0	3582	46,700 CUP	
IMR 4007 SSC	39.0	3786	62,300 PSI	
H380	41.0	3713	50,700 CUP	
CFE 223	39.2	3855	63,500 PSI	
Varget	36.5	3664	50,400 CUP	
IMR 4320	36.5	3689	62,200 PSI	
IMR 4064	36.3	3713	62,000 PSI	
IMR 4166	36.2	3751	63,400 PSI	
BL-C(2)	34.0	3606	49,600 CUP	
IMR 4895	36.5	3725	62,400 PSI	
H335	33.0	3589	51,100 CUP	
H4895	35.5	3670	49,300 CUP	

BULLET	POWDER	GR	VEL	CUP
IMR 8208 XBR	35.8	3768	62,700 PSI	
IMR 3031	34.1	3691	62,500 PSI	
Benchmark	33.6	3674	50,200 CUP	
H322	30.0	3480	49,800 CUP	
Trail Boss	13.0	1984	26,600 PSI	
220 SWIFT				
BBL: 24"		CASE: WINCHESTER		
		PR: WINCHESTER LR		
50 GR. HDY SP				
COL: 2.680"				
H414	44.0	3826	49,600 CUP	
760	44.0	3826	49,600 CUP	
IMR 4007 SSC	43.0	3922	52,500 CUP	
H380	43.5	3947	53,800 CUP	
Varget	36.0	3770	50,200 CUP	
BL-C(2)	38.0	3888	51,000 CUP	
IMR 4895	38.7	3868	52,900 CUP	
H4895	38.0	3840	51,200 CUP	
IMR 3031	36.5	3877	53,100 CUP	
55 GR. HDY SP				
COL: 2.680"				
H4831	46.0	3616	46,600 CUP	
Hybrid 100V	42.0C	3627	52,600 CUP	
H4350	42.0	3619	50,800 CUP	
H414	44.0	3833	53,700 CUP	
760	44.0	3833	53,700 CUP	
IMR 4007 SSC	42.0	3771	52,900 CUP	
H380	42.5	3839	53,300 CUP	
Varget	36.0	3645	51,900 CUP	
IMR 4064	37.5	3742	52,500 CUP	
BL-C(2)	36.0	3682	49,900 CUP	
IMR 4895	38.0	3739	53,000 CUP	
H4895	37.0	3698	52,000 CUP	
IMR 3031	35.2	3687	52,700 CUP	
243 WINCHESTER				
BBL: 24"		CASE: WINCHESTER		
		PR: WINCHESTER LR		
70 GR. SPR HP				
COL: 2.625"				
Suprform	51.0C	3661	57,900 PSI	
H414	46.0	3568	49,800 CUP	
760	46.0	3568	49,800 CUP	
IMR 4007 SSC	46.5	3515	50,900 CUP	
H380	46.0	3567	48,900 CUP	
CFE 223	41.5	3487	57,400 PSI	
Varget	40.5	3574	50,100 CUP	
IMR 4320	42.5	3541	50,300 CUP	
IMR 4064	42.5	3541	50,000 CUP	
IMR 4166	41.9	3600	58,800 PSI	
BL-C(2)	39.0	3384	50,400 CUP	
IMR 4895	42.6	3558	50,000 CUP	
H4895	39.5	3477	49,200 CUP	
IMR 8208 XBR	38.6	3461	58,100 CUP	
IMR 3031	39.0	3485	51,100 CUP	
Benchmark	39.3	3491	50,300 PSI	
100 GR. SPR BTSP				
COL: 2.650"				
H1000	47.0 C	3000	49,800 CUP	

Loads Listed Are Maximum, Do Not Exceed, Reduce By 10% To Start
For complete data, visit our website at www.hodgdon.com

*Max loads that show an asterik following the "C" for compressed load will not fit with standard 7828. Reduce by 4%.

BULLET	POWDER	GR	VEL	CUP
IMR 7977	49.1C	3122	58,100 PSI	
IMR 7828	46.0C*	3009	51,100 CUP	
Supreme 780	47.5	3046	49,300 CUP	
H4831	42.0	2924	50,100 CUP	
Hybrid 100V	43.7C	3100	51,700 CUP	
IMR 4831	43.0	2947	50,800 CUP	
H4350	40.0	2973	51,000 CUP	
H414	40.0	2963	50,600 CUP	
IMR 4350	42.0	2958	50,100 CUP	
IMR 4451	42.7	3090	58,400 PSI	
760	40.0	2963	50,600 CUP	
IMR 4007 SSC	39.5	2905	50,400 CUP	
H380	36.0	2770	50,100 CUP	
Varget	33.7	2838	50,400 CUP	
IMR 4064	36.5	2902	51,100 CUP	
IMR 4166	37.3	2984	58,100 PSI	
IMR 4895	35.7	2862	50,100 CUP	
H4895	33.0	2818	50,100 CUP	
Trail Boss	15.3	1603	39,100 CUP	

257 ROBERTS		CASE: REMINGTON	
BBL: 24"		PR: REMINGTON 9 1/2	
75 GR. HDY HP		COL: 2.795"	
H4831	53.0	3307	37,500 CUP
Hybrid 100V	49.0C	3380	42,900 CUP
H4350	50.0	3422	44,000 CUP
H414	52.0	3555	45,300 CUP
760	52.0	3555	45,300 CUP
H380	48.0	3563	45,600 CUP
CFE 223	42.0	3369	44,800 CUP
Varget	41.0	3453	43,700 CUP
IMR 4166	43.8	3471	47,500 CUP
BL-C(2)	46.0	3531	46,700 CUP
H335	46.0	3548	45,000 CUP
H4895	44.0	3561	47,300 CUP
IMR 8208 XBR	43.0	3456	44,900 CUP
Benchmark	41.7	3434	45,000 CUP

100 GR. SPR SPBT		COL: 2.770"	
H4831	49.0	3010	44,100 CUP
Hybrid 100V	48.0C	3205	45,400 CUP
H4350	45.0	2970	45,400 CUP
IMR 4451	46.2	3067	47,100 CUP
H414	45.0	3098	44,500 CUP
760	45.0	3098	44,500 CUP
H380	44.0	3108	46,600 CUP
Varget	38.0	2981	44,900 CUP
IMR 4166	39.4	3022	47,400 CUP
BL-C(2)	39.0	2958	45,400 CUP
H335	39.0	3042	47,800 CUP
H4895	38.0	2990	46,100 CUP
IMR 8208 XBR	39.5	3085	44,700 CUP

BULLET	POWDER	GR	VEL	CUP
25-06 REMINGTON		CASE: REMINGTON		
BBL: 24"		PR: REMINGTON 9 1/2		
100 GR. NOS PART		COL: 3.200"		
H1000	59.7C	3212	50,700 CUP	
IMR 7977	61.0C	3372	61,300 PSI	
IMR 7828 SSC	57.2C	3203	51,300 CUP	
Supreme 780	55.5	3229	50,000 CUP	
H4831	54.3	3172	51,400 CUP	
Hybrid 100V	52.5	3295	51,800 CUP	
IMR 4831	54.0	3233	51,400 CUP	
H4350	50.0	3155	51,500 CUP	
IMR 4451	51.9	3329	61,600 PSI	
H414	47.0	3059	50,700 CUP	
IMR 4350	52.8	3257	51,200 CUP	
760	47.0	3059	50,700 CUP	
IMR 4007 SSC	50.8	3256	51,100 CUP	
Varget	44.0	3125	51,400 CUP	
IMR 4064	44.0	3122	50,800 CUP	
IMR 4166	46.1	3243	59,700 PSI	
IMR 4895	45.3	3155	50,400 CUP	
H4895	43.0	3072	51,000 CUP	
Trail Boss	19.2	1712	30,600 PSI	

120 GR. SFT SP		COL: 3.150"	
Retumbo	60.0C	2991	50,300 CUP
H1000	55.5	2902	50,600 CUP
IMR 7977	57.2	3064	61,000 PSI
IMR 7828 SSC	54.0	2923	50,300 CUP
Supreme 780	53.0	2984	50,000 CUP
H4831	51.5	2856	51,200 CUP
Hybrid 100V	50.0	3009	51,200 CUP
IMR 4831	53.0C	3065	50,900 CUP
H4350	47.5	2816	50,900 CUP
IMR 4350	52.0C	3049	50,800 CUP
Varget	41.0	2755	51,900 CUP
H4895	40.0	2694	51,700 CUP

6.5 X 55mm SWEDISH MAUSER		CASE: WINCHESTER	
BBL: 24"		PR: WINCHESTER LR	
120 GR. NOS BT		COL: 3.000"	
IMR 7828 SSC	49.5C	2802	45,600 CUP
H4831	49.5C	2802	45,900 CUP
Hybrid 100V	45.5	2787	46,000 CUP
IMR 4831	48.5C	2913	46,200 CUP
H4350	46.0	2792	45,800 CUP
IMR 4451	44.0	2761	46,300 CUP
H414	44.5	2783	46,000 CUP
IMR 4350	46.8C	2863	46,000 CUP
760	44.5	2783	46,000 CUP
IMR 4007 SSC	44.2	2788	45,100 CUP
H380	44.3	2784	46,000 CUP
Varget	39.0	2812	45,300 CUP
IMR 4064	40.0	2764	45,100 CUP
IMR 4895	39.6	2767	45,900 CUP

BULLET	POWDER	GR	VEL	CUP
H4895	37.8	2715	46,000 CUP	
140 GR. SPR SP		COL: 3.030"		
H1000	51.5C	2651	46,000 CUP	
IMR 7977	49.1C	2646	45,300 CUP	
IMR 7828 SSC	48.2	2678	45,800 CUP	
Supreme 780	47.8	2592	45,300 CUP	
HH4831	47.0	2586	45,700 CUP	
Hybrid 100V	44.5	2642	45,200 CUP	
IMR 4831	46.3	2700	45,400 CUP	
H4350	44.0	2617	45,700 CUP	
H414	41.5	2565	45,600 CUP	
IMR 4350	45.0	2677	46,000 CUP	
IMR 4451	43.0	2592	46,200 CUP	
760	41.5	2565	45,600 CUP	
IMR 4007 SSC	42.8	2591	45,300 CUP	
H380	40.5	2520	45,100 CUP	
Varget	36.0	2528	46,000 CUP	
IMR 4064	38.0	2563	45,800 CUP	
IMR 4895	37.8	2550	45,500 CUP	
H4895	35.8	2493	45,700 CUP	

270 WINCHESTER		CASE: WINCHESTER	
BBL: 24"		PR: WINCHESTER LR	
130 GR. HDY SP		COL: 3.180"	
H1000	64.0 C	3025	48,100 CUP
IMR 7977	62.0C	3038	55,100 PSI
IMR 7828	60.2	3085	50,300 CUP
Supreme 780	60.0	3043	61,900 PSI
H4831	60.0 C	3019	51,000 CUP
Hybrid 100V	56.0C	3066	61,800 PSI
IMR 4831	55.8	3002	50,300 CUP
H4350	54.3	3012	50,500 CUP
H414	53.5	3003	50,800 CUP
IMR 4350	55.0	3028	49,900 CUP
IMR 4451	56.0	3089	62,900 PSI
760	53.5	3003	50,800 CUP
IMR 4007 SSC	51.5	2949	63,700 PSI
H380	49.8	2884	51,000 CUP
Varget	46.0	2931	49,600 CUP
IMR 4320	47.0	2916	50,200 CUP
IMR 4064	47.5	2932	50,000 CUP
IMR 4895	46.9	2957	50,600 CUP
H4895	45.0	2922	51,000 CUP
IMR 8208 XBR	45.0	2934	62,800 PSI
Trail Boss	19.7	1537	27,100 PSI

150 GR. HDY SP		COL: 3.285"	
H1000	59.0 C	2831	51,000 CUP
IMR 7977	60.8C	2940	61,300 PSI
IMR 7828	56.8	2850	50,400 CUP
Supreme 780	56.8	2774	61,200 PSI
H4831	55.7	2804	51,200 CUP
Hybrid 100V	52.0	2811	61,900 PSI
IMR 4831	53.0	2815	50,900 CUP
H4350	49.0	2724	51,000 CUP

BULLET	POWDER	GR	VEL	CUP
IMR 4451	52.0	2815	62,000 PSI	
H414	48.0	2706	51,200 CUP	
IMR 4350	51.6	2809	50,900 CUP	
760	48.0	2706	51,200 CUP	
IMR 4064	45.0	2719	50,700 CUP	
IMR 4166	45.3	2766	63,800 PSI	
IMR 4895	44.5	2704	50,600 CUP	

7mm-08 REMINGTON		CASE: REMINGTON	
BBL: 24"		PR: REMINGTON 9 1/2	
120 GR. NOS BT		COL: 2.800"	
H4350	50.0 C	3039	44,600 CUP
H414	49.0	3023	47,600 CUP
760	49.0	3023	47,600 CUP
IMR 4007 SSC	49.0C	3118	49,000 CUP
H380	48.0	2977	43,400 CUP
CFE 223	49.5	3151	50,000 CUP
Varget	45.0	3117	49,900 CUP
IMR 4320	44.7	3001	50,400 CUP
IMR 4166	43.9	3017	50,000 CUP
IMR 4064	43.9	3017	50,000 CUP
BL-C(2)	46.5	3109	50,100 CUP
IMR 4895	44.0	3022	49,800 CUP
H335	42.0	2984	49,400 CUP
H4895	43.7	3085	49,700 CUP
IMR 8208 XBR	42.7	2997	48,900 CUP
IMR 3031	41.0	2987	50,500 CUP
Benchmark	41.3	2968	49,000 CUP

140 GR. SFT SP		COL: 2.750"	
H4350	48.0 C	2868	49,800 CUP
IMR 4451	45.5C	2798	59,100 PSI
H414	46.0	2791	49,500 CUP
IMR 4350	46.5C	2826	50,000 CUP
760	46.0	2791	49,500 CUP
IMR 4007 SSC	46.0	2847	49,600 CUP
H380	45.7	2775	49,400 CUP
CFE 223	43.2	2796	48,800 CUP
Varget	42.2	2819	49,800 CUP
IMR 4320	41.4	2749	49,800 CUP
IMR 4064	40.5	2770	50,300 CUP
IMR 4166	42.3	2841	49,400 CUP
BL-C(2)	42.5	2796	49,700 CUP
IMR 4895	41.0	2752	49,600 CUP
H335	37.5	2647	49,800 CUP
H4895	40.5	2769	49,700 CUP
IMR 8208 XBR	39.7	2732	48,800 CUP
IMR 3031	38.3	2695	49,600 CUP
Benchmark	38.3	2688	49,300 CUP
Trail Boss	16.0	1472	43,300 CUP

7 X 57mm MAUSER		CASE: WINCHESTER	
BBL: 24"		PR: WINCHESTER LR	
120 GR. NOS BT		COL: 3.000"	
H4831	52.5C	2777	40,800 CUP
Hybrid 100V	48.0C	2806	41,700 CUP

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*Max loads that show an asterik following the "C" for compressed load will not fit with standard 7828. Reduce by 4%.

BULLET	POWDER	GR	VEL	CUP
H4350	51.0C	2945	45,800	CUP
IMR 4451	47.5	2814	45,900	CUP
H414	51.0	2938	45,600	CUP
760	51.0	2938	45,600	CUP
H380	47.5	2860	46,000	CUP
Varget	44.0	2979	46,000	CUP
H4895	42.0	2859	45,400	CUP
Benchmark	41.5	2863	46,000	CUP
140 GR. NOS BT				
H4831	49.5C	2719	46,000	CUP
Hybrid 100V	46.5C	2654	43,300	CUP
H4350	46.5	2682	46,000	CUP
IMR 4451	45.0	2599	46,000	CUP
H414	47.0	2715	46,000	CUP
760	47.0	2715	46,000	CUP
IMR 4007 SSC	44.5	2645	46,200	CUP
H380	44.0	2614	46,000	CUP
Varget	37.7	2516	46,000	CUP
H4895	37.5	2530	45,800	CUP
Benchmark	38.0	2571	45,700	CUP
280 REMINGTON				
BBL: 24" CASE: REMINGTON PR: REMINGTON 9 1/2				
140 GR. NOS PART				
H4831	58.5	2927	48,500	CUP
Hybrid 100V	54.0C	2847	47,000	CUP
H4350	53.5	2918	48,500	CUP
IMR 4451	54.2	2913	58,700	PSI
H414	51.0	2867	47,900	CUP
760	51.0	2867	47,900	CUP
Varget	45.5	2838	48,100	CUP
H4895	45.2	2830	48,400	CUP
160 GR. SFT SP				
H1000	61.0C	2714	47,500	CUP
Supreme 780	56.7	2718	49,500	CUP
H4831	55.0	2660	49,500	CUP
Hybrid 100V	52.0C	2712	48,600	CUP
H4350	49.5	2610	48,900	CUP
IMR 4451	50.5	2709	57,900	PSI
760	47.5	2558	49,700	CUP
H4895	41.5	2535	49,500	CUP
7MM REM. MAGNUM				
BBL: 24" CASE: WINCHESTER PR: WINCHESTER LR				
140 GR. NOS PART				
Retumbo	75.0 C	3107	49,400	CUP
H1000	70.0	3036	50,600	CUP
IMR 7977	72.0	3175	59,900	PSI
IMR 7828	69.0	3095	59,200	PSI
Supreme 780	69.3	3134	58,000	PSI
H4831	64.0	2950	50,200	CUP
Hybrid 100V	63.0	3138	59,800	PSI
IMR 4831	65.4	3053	59,400	PSI
H4350	59.0	2927	50,000	CUP

BULLET	POWDER	GR	VEL	CUP
IMR 4451	62.0	3136	58,800	PSI
H414	60.2	2967	49,300	CUP
IMR 4350	62.8	3045	58,600	PSI
760	60.2	2967	49,300	CUP
IMR 4007 SSC	60.0	3025	58,600	PSI
Trail Boss	24.5	1724	31,000	PSI
162 GR. HDY SPBT				
US869	80.0	2921	54,400	PSI
Retumbo	73.5 C	2963	50,500	CUP
H1000	70.0	2905	49,600	CUP
IMR 7977	69.5C	2955	59,300	PSI
IMR 7828	65.0	2882	59,000	PSI
Supreme 780	65.5	2953	59,700	PSI
H4831	64.0	2871	49,800	CUP
Hybrid 100V	60.0	2922	59,500	PSI
IMR 4831	61.8	2877	59,500	PSI
H4350	58.0	2799	49,400	CUP
IMR 4350	60.0	2861	58,100	PSI
IMR 4451	58.7	2938	59,200	PSI
30-30 WINCHESTER				
BBL: 24" CASE: WINCHESTER PR: WINCHESTER LR				
150 GR. SIE FN				
760	35.9	2090	30,000	CUP
LVR	38.5C	2512	34,800	CUP
CFE 223	36.8	2409	36,700	PSI
Varget	34.5	2349	36,200	CUP
IMR 4320	32.5	2127	36,500	CUP
IMR 4064	33.3	2236	36,200	CUP
IMR 4166	32.6	2262	41,300	PSI
748	34.5	2310	36,000	CUP
BL-C(2)	37.0	2358	33,900	CUP
IMR 4895	33.5	2213	34,300	CUP
H335	33.0	2308	36,200	CUP
H4895	34.0	2390	36,700	CUP
IMR 8208 XBR	32.0	2316	36,700	CUP
IMR 3031	30.5	2192	36,000	CUP
Benchmark	29.0	2183	37,200	CUP
IMR 4198	23.0	2055	35,500	CUP
H4198	24.0	2110	36,800	CUP
160 GR. CAST LFN				
Trail Boss	9.0	1195	29,100	CUP
170 GR. SIE FP				
760	33.6	1975	30,000	CUP
LVR	36.3C	2332	35,400	CUP
CFE 223	35.0	2258	36,800	PSI
Varget	33.0	2168	36,500	CUP
IMR 4320	32.5	2068	36,300	CUP
IMR 4064	31.7	2090	35,300	CUP
IMR 4166	30.7	2087	40,600	PSI
748	32.0	2145	36,000	CUP
BL-C(2)	36.0	2227	34,700	CUP
IMR 4895	31.7	2068	35,300	CUP
H335	30.5	2086	36,300	CUP

BULLET	POWDER	GR	VEL	CUP
H4895	30.5	2138	35,200	CUP
IMR 8208 XBR	30.9	2181	37,500	CUP
IMR 3031	29.2	2085	35,800	CUP
Benchmark	27.0	2001	36,100	CUP
IMR 4198	22.3	1896	32,100	CUP
H4198	22.5	1918	32,600	CUP
308 WINCHESTER				
BBL: 24" CASE: WINCHESTER PR: FEDERAL 210M				
150 GR. NOS BT				
IMR 4007 SSC	46.0 C	2648	48,000	PSI
CFE 223	51.5	2974	57,000	PSI
Varget	47.0 C	2937	50,300	CUP
IMR 4320	49.0 C	2936	59,800	PSI
IMR 4064	47.7 C	2903	57,100	PSI
748	48.5	2865	48,000	CUP
BL-C(2)	48.0	2839	50,000	CUP
IMR 4895	47.3 C	2920	57,700	PSI
H335	44.0	2787	51,200	CUP
H4895	45.5	2870	51,000	CUP
IMR 8208 XBR	44.5C	2870	60,800	PSI
IMR 3031	43.5C	2881	59,200	PSI
Benchmark	43.0	2752	49,900	CUP
H322	40.0	2702	50,500	CUP
Trail Boss	14.0	1417	27,100	PSI
168 GR. SIE HPBT				
IMR 4007 SSC	45.8C	2606	52,000	PSI
CFE 223	49.0	2828	60,400	PSI
Varget	46.0C	2731	50,600	CUP
IMR 4320	46.0	2733	59,300	PSI
IMR 4064	45.9C	2766	58,800	PSI
IMR 4166	43.5C	2704	60,800	PSI
BL-C(2)	47.0	2754	50,200	CUP
IMR 4895	45.4C	2758	58,000	PSI
H335	42.0	2631	49,300	CUP
H4895	43.5	2703	49,500	CUP
IMR 8208 XBR	43.3	2707	61,500	PSI
IMR 3031	42.0	2710	58,900	PSI
Benchmark	42.0	2630	49,300	CUP
Titegroup	8.0	1080	25,000	CUP
Clays	8.0	1060	26,800	CUP
175 GR. SIE HPBT				
H414	49.0	2629	50,100	CUP
760	49.0	2629	50,100	CUP
IMR 4007 SSC	48.0C	2666	56,500	PSI
CFE 223	47.5	2752	60,400	PSI
Varget	45.0C	2690	48,600	CUP
IMR 4320	45.7C	2687	57,600	PSI
IMR 4064	45.6C	2728	59,500	PSI
IMR 4166	43.1	2652	60,100	PSI
BL-C(2)	46.0	2706	50,300	CUP
IMR 4895	45.0C	2704	57,800	PSI
H335	41.3	2592	50,100	CUP
H4895	42.7	2647	49,000	CUP

BULLET	POWDER	GR	VEL	CUP
IMR 8208 XBR	42.5	2664	61,800	PSI
IMR 3031	41.3	2653	59,100	PSI
Benchmark	41.5	2590	50,800	CUP
30-06				
BBL: 24" CASE: WINCHESTER PR: WINCHESTER LR				
150 GR. NOS BT				
H4350	62.0C	3068	48,400	CUP
H414	60.0	2992	48,600	CUP
IMR 4350	58.0C	2942	57,200	PSI
760	60.0	2992	48,600	CUP
IMR 4007 SSC	55.3	2972	58,000	PSI
H380	59.0	3005	45,900	CUP
CFE 223	54.2	2942	58,600	PSI
Varget	51.0	2975	50,000	CUP
IMR 4320	52.3	3016	58,000	PSI
IMR 4064	51.0	2928	58,200	PSI
748	48.0	2810	46,000	CUP
BL-C(2)	54.0	2962	48,600	CUP
IMR 4895	53.0	3009	56,700	PSI
H335	51.5	2982	49,200	CUP
H4895	51.0	2976	48,500	CUP
IMR 8208 XBR	50.0	2935	58,400	PSI
IMR 3031	46.7	2887	59,300	PSI
Benchmark	49.5	2944	49,300	CUP
Trail Boss	19.0	1477	26,400	PSI
165 GR. SIE SPBT				
Hybrid 100V	57.0C	2801	52,800	PSI
H4350	59.0	2938	49,400	CUP
H414	56.5	2877	49,700	CUP
IMR 4350	60.0C	2934	57,600	PSI
IMR 4451	57.4C	2858	59,200	PSI
760	56.5	2877	49,700	CUP
IMR 4007 SSC	55.9	2867	58,300	PSI
H380	56.5	2892	50,000	CUP
CFE 223	49.5	2731	58,700	PSI
Varget	50.5	2873	49,700	CUP
IMR 4320	51.2	2869	58,600	PSI
IMR 4064	52.5	2901	58,900	PSI
IMR 4166	49.1	2832	58,900	PSI
BL-C(2)	51.0	2805	49,800	CUP
IMR 4895	52.0	2888	57,200	PSI
H335	47.0	2749	49,300	CUP
H4895	47.5	2782	49,000	CUP
IMR 8208 XBR	46.5	2728	58,000	PSI
IMR 3031	48.0	2825	57,500	PSI
Benchmark	47.7	2795	49,300	CUP
180 GR. SIE SPBT				
Supreme 780	61.0	2673	54,100	PSI
H4831	60.0C	2710	44,300	CUP
Hybrid 100V	57.0C	2742	55,200	PSI
IMR 4831	56.8C	2749	57,100	PSI
H4350	57.5	2798	49,300	CUP
IMR 4451	55.6	2752	59,600	PSI

*Max loads that show an asterik following the "C" for compressed load will not fit with standard 7828. Reduce by 4%.

BULLET	POWDER	GR	VEL	CUP
H414	55.5	2743	48,700	CUP
IMR 4350	56.5C	2752	57,200	PSI
760	55.5	2743	48,700	CUP
IMR 4007 SSC	53.5	2732	58,100	PSI
H380	53.0	2682	48,700	CUP
Varget	47.0	2668	50,000	CUP
IMR 4320	47.8	2661	58,000	PSI
IMR 4064	48.7	2700	58,200	PSI
IMR 4166	48.8	2724	58,800	PSI
BL-C(2)	48.5	2634	48,100	CUP
IMR 4895	48.0	2680	56,800	PSI
H335	46.0	2621	49,200	CUP
H4895	46.0	2638	48,800	CUP
Benchmark	46.0	2660	49,000	CUP

300 WIN. SHORT MAGNUM		CASE: WINCHESTER	
BBL: 24"		PR: WINCHESTER WLRM	
150 GR. SPR GSSP		COL: 2.780"	
Supreme 780	74.0	3134	59,200 PSI
Suprform	74.0	3410	63,500 PSI
Hybrid 100V	67.0 C	3127	57,700 PSI
H4350	67.0	3187	63,200 PSI
H414	66.0	3204	63,300 PSI
IMR 4350	68.0	3221	62,100 PSI
IMR 4451	67.7	3248	63,300 PSI
760	66.0	3204	63,300 PSI
IMR 4007 SSC	63.7	3220	63,100 PSI
H380	64.0	3141	63,600 PSI
Varget	58.5	3140	63,800 PSI
H4895	54.5	3078	63,100 PSI
IMR 4320	61.0	3172	63,900 PSI
IMR 4064	61.0	3198	63,300 PSI
IMR 4166	59.5	3200	62,800 PSI
IMR 4895	60.5	3176	62,300 PSI
H4895	54.5	3078	63,100 PSI
IMR 8208 XBR	56.0	3115	62,300 PSI
Trail Boss	23.3	1758	31,600 PSI

180 GR. SFT SCIR		COL: 2.860"	
IMR 7828	69.5 C*	2943	62,600 PSI
Supreme 780	70.0	2923	60,800 PSI
Hybrid 100V	64.0 C	2918	59,800 PSI
IMR 4831	66.3 C	2980	62,900 PSI
H4831	70.0 C	2929	64,000 PSI
H4350	64.0	2950	63,900 PSI
IMR 4451	63.7C	2935	62,700 PSI
H414	62.5	2959	63,000 PSI
IMR 4350	65.0 C	2991	63,700 PSI
760	62.5	2959	63,000 PSI
IMR 4007 SSC	59.8	2927	63,000 PSI
H380	61.0	2884	63,400 PSI

BULLET	POWDER	GR	VEL	CUP
300 WINCHESTER MAGNUM				
BBL: 24"		CASE: WINCHESTER PR: WINCHESTER LR		
150 GR. SIE SP		COL: 3.340"		
H1000	85.0 C	3255	52,200	CUP
IMR 7977	82.2C	3269	59,300	PSI
IMR 7828	80.0C	3148	55,600	PSI
Supreme 780	81.0	3264	62,500	PSI
H4831	78.0	3207	52,700	CUP
Hybrid 100V	73.5	3289	62,700	PSI
IMR 4831	78.0C	3289	63,300	PSI
H4350	72.0	3205	52,500	CUP
H414	68.0	3145	52,500	CUP
IMR 4350	74.0	3254	61,500	PSI
IMR 4451	73.1	3261	61,900	PSI
760	68.0	3145	52,500	CUP
IMR 4007 SSC	71.0	3185	61,400	PSI
H380	65.0	3031	52,200	CUP
Varget	60.0	3108	51,400	CUP
IMR 4064	65.5	3205	62,200	PSI
IMR 4166	62.5	3178	62,300	PSI
IMR 4895	65.5	3196	62,300	PSI
H4895	61.0	3124	52,500	CUP
IMR 8208 XBR	61.5	3156	60,800	PSI
Trail Boss	25.5	1687	28,600	PSI
180 GR. SPR MT-SP		COL: 3.285"		
US869	88.0	2892	56,800	PSI
H1000	81.0 C	3042	52,900	CUP
IMR 7977	75.4	2969	60,400	PSI
IMR 7828	78.5C	3034	62,000	PSI
Supreme 780	72.5	2920	59,100	PSI
H4831	73.0 C	2966	53,200	CUP
Hybrid 100V	67.7	2998	62,400	PSI
IMR 4831	74.0C	3025	63,200	PSI
H4350	67.0	2918	53,100	CUP
H414	62.0	2845	52,300	CUP
IMR 4350	71.0	2974	61,200	PSI
IMR 4451	66.7	2944	62,500	PSI
760	62.0	2845	52,300	CUP

300 WEATHERBY MAGNUM		CASE: REMINGTON	
BBL: 24"		PR: FEDERAL 215 M	
150 GR. BAR TSX		COL: 3.570"	
H1000	88.0C	3220	49,900 CUP
IMR 7977	89.9C	3302	52,200 CUP
IMR 7828 SSC	86.5C*	3400	54,200 CUP
Supreme 780	85.5	3328	50,000 CUP
H4831	84.0C	3275	52,900 CUP
Hybrid 100V	76.5	3310	49,100 CUP
IMR 4831	82.7C	3437	54,100 CUP
H4350	76.5	3310	53,800 CUP
IMR 4451	77.6	3298	53,400 CUP
H414	72.5	3201	53,000 CUP

BULLET	POWDER	GR	VEL	CUP
IMR 4350	79.5	3396	54,300	CUP
IMR 4007 SSC	73.0	3197	52,800	CUP
H380	69.5	3142	53,800	CUP
Varget	64.5	3155	54,000	CUP
IMR 4064	67.0	3244	51,900	CUP
IMR 4895	66.0	3214	53,100	CUP
H4895	61.5	3112	54,100	CUP
Trail Boss	27.5	1656	28,900	CUP
180 GR. SPR BTSP		COL: 3.560"		
H1000	88.5C	3151	53,500	CUP
IMR 7977	87.0C	3098	53,200	CUP
IMR 7828	80.5	3064	53,400	CUP
Supreme 780	82.5	3127	53,100	CUP
H4831	81.5	3096	54,000	CUP
Hybrid 100V	77.0	3171	54,600	CUP
IMR 4831	75.5	2997	53,500	CUP
H4350	73.5	3022	54,000	CUP
IMR 4451	75.0	3041	53,900	CUP
H414	71.5	2984	53,000	CUP
IMR 4350	72.6	3018	53,000	CUP
760	71.5	2984	53,000	CUP
IMR 4007 SSC	71.0	2986	53,300	CUP
H380	67.0	2896	54,000	CUP

7.62 X 39mm RUSSIAN		CASE: MIDWAY	
BBL: 24"		PR: CCI 200	
125 GR. SPR SP		COL: 2.150"	
BL-C(2)	31.5	2349	38,800 CUP
H335	31.5	2408	40,900 CUP
H4895	29.0	2249	33,600 CUP
H322	29.0	2323	35,400 CUP
IMR 4198	24.0	2250	42,500 CUP
H4198	26.5	2378	40,400 CUP
IMR 4227	18.5	1995	44,100 CUP
150 GR. HDY SP		COL: 2.220"	
BL-C(2)	29.5	2090	40,400 CUP
H335	29.0	2132	42,500 CUP
H4895	28.0	2154	39,300 CUP
H322	28.5	2192	40,400 CUP
IMR 4198	22.5	2070	43,600 CUP
H4198	24.5	2122	39,800 CUP

303 BRITISH		CASE: REMINGTON	
BBL: 24"		PR: FEDERAL 210	
150 GR. HDY SP		COL: 2.995"	
Varget	43.0	2656	42,700 CUP
IMR 4064	44.7	2699	46,400 PSI
IMR 4166	43.9	2693	43,600 CUP
BL-C(2)	48.0	2756	39,200 CUP
IMR 4895	44.2	2689	46,600 PSI
H335	42.0	2706	43,100 CUP
H4895	40.0	2627	43,600 CUP
IMR 8208 XBR	36.7	2515	41,300 CUP
IMR 3031	41.0	2632	46,100 PSI

BULLET	POWDER	GR	VEL	CUP
180 GR. SIE SP				
BBL: 24"		CASE: REMINGTON PR: REMINGTON 9 1/2		
150 GR. HDY SP		COL: 2.950"		
Hybrid 100V	46.0C	2384	41,700	CUP
H4350	48.0C	2500	43,800	CUP
IMR 4451	49.2C	2556	43,900	CUP
H414	46.0	2435	42,500	CUP
760	46.0	2435	42,500	CUP
IMR 4007 SSC	46.0C	2430	40,900	CUP
Varget	41.0	2440	43,400	CUP
IMR 4064	41.1	2400	45,700	PSI
IMR 4166	40.8	2453	42,300	CUP
BL-C(2)	45.0	2563	43,000	CUP
IMR 4895	41.0	2399	46,100	PSI
H335	39.0	2449	42,700	CUP
H4895	38.0	2400	43,500	CUP
IMR 8208 XBR	35.0	2325	43,300	CUP
IMR 3031	38.3	2341	46,500	PSI

8 X 57mm MAUSER		CASE: REMINGTON	
BBL: 24"		PR: REMINGTON 9 1/2	
150 GR. HDY SP		COL: 2.950"	
IMR 4007 SSC	54.5	2791	40,800 CUP
CFE 223	57.0	3054	46,900 CUP
Varget	52.4C	2896	49,000 CUP
IMR 4320	50.5	2818	48,800 CUP
IMR 4064	49.5	2839	46,200 CUP
IMR 4166	49.9	2869	49,700 CUP
BL-C(2)	55.0	2962	48,400 CUP
IMR 4895	49.5	2847	48,000 CUP
H335	50.8	2942	48,800 CUP
H4895	51.0	2987	49,500 CUP
IMR 8208 XBR	48.0	2861	48,300 CUP
IMR 3031	46.5	2815	47,300 CUP
Benchmark	47.5	2860	48,800 CUP

170 GR. HDY RN		COL: 2.825"	
IMR 4007 SSC	54.5C	2726	45,600 CUP
CFE 223	56.0	2854	44,200 CUP
Varget	50.5	2700	48,700 CUP
IMR 4320	49.8	2680	49,200 CUP
IMR 4064	48.7	2706	49,300 CUP
IMR 4166	47.7	2667	49,300 CUP
748	54.0	2832	48,500 CUP
BL-C(2)	53.5	2839	48,800 CUP
IMR 4895	48.0	2647	47,900 CUP
H335	49.2	2738	48,800 CUP
H4895	49.0	2769	48,700 CUP
IMR 8208 XBR	47.0	2696	48,000 CUP
IMR 3031	45.5	2640	47,500 CUP
Benchmark	46.6	2679	49,100 CUP

338 FEDERAL		CASE: FEDERAL	
BBL: 24"		PR: FEDERAL 210	
180 GR. NOS AB		COL: 2.810"	
748	51.0	2746	51,100 PSI
BL-C(2)	50.0	2648	47,500 PSI

*Max loads that show an asterik following the "C" for compressed load will not fit with standard 7828. Reduce by 4%.

BULLET	POWDER	GR	VEL	CUP
CFE 223	50.0	2620	42,100	PSI
IMR 4895	47.0 C	2624	50,900	PSI
H335	47.0	2712	53,900	PSI
H4895	47.0 C	2682	50,800	PSI
IMR 8208 XBR	48.5C	2811	59,900	PSI
IMR 3031	45.0 C	2705	55,200	PSI
Benchmark	47.0 C	2768	61,300	PSI
H322	45.5 C	2743	59,700	PSI
.....				
210 GR. SFT SCIR			COL: 2.820"	
LVR	49.0 C	2622	56,400	PSI
CFE 223	47.6	2549	57,100	PSI
Varget	46.0 C	2503	56,500	PSI
IMR 4064	43.0C	2394	48,800	PSI
IMR 4166	43.9C	2466	60,900	PSI
748	45.7	2534	56,300	PSI
BL-C(2)	47.0	2548	59,100	PSI
IMR 4895	45.0C	2482	53,900	PSI
H335	41.7	2469	57,400	PSI
H4895	45.0 C	2551	58,100	PSI
IMR 8208 XBR	43.3C	2508	59,400	PSI
IMR 3031	42.5C	2499	57,000	PSI
Benchmark	46.0 C	2514	60,800	PSI
H322	42.3 C	2511	59,200	PSI
.....				
338 WINCHESTER MAGNUM			CASE: WINCHESTER	
BBL: 24"			PR: WIN WLR MAG	
.....				
210 GR. NOS PART			COL: 3.280"	
IMR 7828	78.0C*	2895	52,600	CUP
H4831	75.5 C	2888	52,300	CUP
Hybrid 100V	72.0C	2887	48,400	CUP
IMR 4831	73.0C	2877	50,600	CUP
H4350	70.0	2855	51,800	CUP
H414	67.0	2848	51,800	CUP
IMR 4350	71.5C	2894	52,800	CUP
IMR 4451	68.9	2857	61,900	PSI
760	67.0	2848	51,800	CUP
H380	66.0	2797	53,000	CUP
Varget	58.5	2784	52,500	CUP
IMR 4064	62.0	2843	53,300	CUP
IMR 4895	62.0	2809	52,500	CUP
H4895	60.0	2788	53,000	CUP
.....				
250 GR. HDY SP			COL: 3.340"	
H1000	76.0 C	2622	46,500	CUP
IMR 7977	75.5C	2592	57,700	PSI
IMR 7828	75.0C*	2628	51,800	CUP
Supreme 780	73.0	2612	49,300	CUP
H4831	71.5 C	2655	52,300	CUP
Hybrid 100V	68.0C	2643	50,500	CUP
IMR 4831	71.6C	2632	52,400	CUP
H4350	67.5	2657	51,900	CUP
IMR 4451	66.8	2631	62,400	PSI
H414	65.0	2622	52,900	CUP
IMR 4350	69.5C	2634	52,400	CUP

BULLET	POWDER	GR	VEL	CUP
760	65.0	2622	52,900	CUP
IMR 4064	58.5	2518	52,700	CUP
IMR 4895	59.0	2529	53,200	CUP
.....				
338 LAPUA MAGNUM			CASE: NORMA	
BBL: 24"			PR: FEDERAL 215M	
.....				
250 GR. HDY SP			COL: 3.550"	
US869	108.0	2879	51,100	CUP
Retumbo	98.0 C	2853	52,000	CUP
H1000	98.0 C	2838	52,800	CUP
IMR 7977	97.0	2927	61,300	PSI
IMR 7828	88.5	2802	52,100	CUP
Supreme 780	90.0	2841	50,600	CUP
H4831	85.0	2740	52,200	CUP
Hybrid 100V	81.0	2765	52,200	CUP
IMR 4831	85.0	2801	52,900	CUP
H4350	78.0	2742	52,300	CUP
.....				
300 GR. SIE HPBT			COL: 3.600"	
US 869	104.0	2677	51,500	CUP
Retumbo	94.0 C	2654	53,400	CUP
H1000	92.0 C	2590	53,000	CUP
IMR 7977	93.0	2688	62,600	PSI
IMR 7828	81.0	2566	53,000	CUP
Supreme 780	84.0	2593	50,600	CUP
H4831	79.0	2511	53,100	CUP
IMR 4831	76.0	2541	53,300	CUP
.....				
375 H&H MAGNUM			CASE: WINCHESTER	
BBL: 24"			PR: FEDERAL 215 M	
.....				
270 GR. BAR TSX			COL: 3.550"	
Hybrid 100V	75.0C	2588	46,100	CUP
H4350	75.0C	2465	42,800	CUP
H414	79.0	2529	43,200	CUP
IMR 4350	76.0C	2464	46,700	CUP
H380	78.0	2632	50,100	CUP
Varget	65.0	2521	50,000	CUP
IMR 4064	68.0C	2530	49,700	CUP
IMR 4895	66.0	2474	49,500	CUP
.....				
300 GR. SIE SPBT			COL: 3.600"	
Hybrid 100V	72.0C	2400	47,400	CUP
IMR 4831	80.0C	2560	48,300	CUP
H4350	81.5 C	2645	49,500	CUP
H414	78.0	2548	46,800	CUP
IMR 4350	78.0C	2620	52,700	CUP
760	78.0	2548	46,800	CUP
Varget	62.0	2454	49,300	CUP
IMR 4064	67.0	2525	52,500	CUP
H4895	65.0	2505	50,400	CUP
SR 4759	39.0	1925	53,000	CUP
.....				
444 MARLIN			CASE: REMINGTON	
BBL: 24"			PR: REMINGTON 9 1/2	
.....				
265 GR. HDY JFP			COL: 2.550"	
H335	56.0	2187	39,700	CUP
H4895	53.0C	2080	34,800	CUP

BULLET	POWDER	GR	VEL	CUP
IMR 8208 XBR	53.5C	2135	39,100	CUP
Benchmark	53.0C	2139	40,700	CUP
H322	52.0C	2164	38,300	CUP
H4198	47.0	2273	41,100	CUP
.....				
300 GR. SFT HP			COL: 2.620"	
Varget	50.0C	1914	35,700	CUP
H335	52.0	2023	42,300	CUP
H4895	50.0C	1931	35,600	CUP
IMR 8208 XBR	49.0	2029	41,600	CUP
Benchmark	48.5	1993	41,900	CUP
H322	48.0	2038	42,600	CUP
H4198	42.5	2082	42,500	CUP
.....				
45-70 GOVERNMENT (TRAPDOOR RIFLE)*			CASE: WINCHESTER	
BBL: 24"			PR: CCI 200	
.....				
300 GR. SIE HP			COL: 2.525"	
Varget	63.0 C	2020	23,800	CUP
IMR 4064	60.5C	1992	25,100	CUP
IMR 4166	56.2	1957	26,700	PSI
IMR 4895	61.0C	1968	23,900	CUP
H335	63.5	2143	27,400	CUP
H4895	62.0 C	1974	21,000	CUP
IMR 8208 XBR	60.0	2023	25,400	CUP
IMR 3031	59.5C	2021	22,000	CUP
Benchmark	63.5 C	2113	27,400	CUP
H322	60.0	2142	28,000	CUP
IMR 4198	48.0	2138	27,800	CUP
H4198	55.0	2221	27,600	CUP
.....				
405 GR. CAST LFP			COL: 2.540"	
Varget	50.0	1718	20,900	CUP
IMR 4064	49.5	1660	23,200	CUP
IMR 4166	49.0	1700	27,400	PSI
IMR 4895	48.5	1598	23,000	CUP
H4895	48.0	1645	18,900	CUP
IMR 8208 XBR	51.0	1727	23,600	CUP
IMR 3031	48.5	1706	21,100	CUP
Benchmark	50.0	1695	22,600	CUP

BULLET	POWDER	GR	VEL	CUP
IMR 4198	32.0	1462	19,000	CUP
H4198	31.0	1459	17,100	CUP
Trail Boss	13.0	1007	25,600	CUP
.....				
458 WINCHESTER MAGNUM			CASE: WINCHESTER	
BBL: 24"			PR: CCI 250	
.....				
400 GR. SFT SP			COL: 3.220"	
Varget	77.0C	2310	38,800	CUP
H4895	77.0C	2349	42,500	CUP
IMR 8208 XBR	77.0C	2362	44,300	CUP
Benchmark	78.0C	2343	46,600	CUP
H322	76.0C	2407	51,100	CUP
H4198	67.0	2323	51,000	CUP
.....				
405 GR. CAST LFP			COL: 2.910"	
Trail Boss	21.0	1082	17,100	CUP
.....				
500 GR. HDY JRN			COL: 3.310"	
Varget	74.0C	2152	48,100	CUP
748	73.0	2040	39,000	CUP
H335	75.5	2163	50,300	CUP
H4895	74.0C	2161	50,300	CUP
IMR 8208 XBR	73.5C	2140	49,700	CUP
Benchmark	73.0C	2123	50,300	CUP
H322	69.5C	2109	52,000	CUP
H4198	58.5	1987	51,100	CUP
.....				
50 BROWNING MACHINE GUN			CASE: FNB	
BBL: 45"			PR: CCI 35	
.....				
650 GR. M-33			COL: 5.425"	
US869	265.0	3155		
.....				
655 GR. ADI FMJ			COL: 5.450"	
H50BMG	248.0	3029		
.....				
750 GR. HDY A-MAX			COL: 5.450"	
US869	250.0	2944		
H50BMG	233.0	2800		
.....				
800 GR. BAR SOLID			COL: 5.630"	
US869	250.0	2895		
H50BMG	225.0	2725		

BULLET POWDER GR VEL CUP

223 REMINGTON CASE: WINCHESTER
BBL: 15" PR: WINCHESTER SR

50 GR. SPR SP COL: 2.210"

VARGET	27.5 C	2959	44,800 CUP
BL-C(2)	28.0	2851	47,100 CUP
H335	26.0	2834	51,700 CUP
H4895	27.5 C	3024	51,300 CUP
BENCHMARK	26.5	2953	50,400 CUP
H322	24.0	2740	49,300 CUP
H4198	21.5	2824	45,900 CUP

55 GR. SPR SP COL: 2.200"

VARGET	27.5 C	2972	49,700 CUP
BL-C(2)	27.5	2816	48,500 CUP
H335	25.3	2799	49,300 CUP
H4895	26.0	2880	49,000 CUP
BENCHMARK	25.6	2840	50,000 CUP
H322	23.0	2638	48,900 CUP
H4198	21.0	2719	47,600 CUP

32 H&R MAGNUM CASE: FEDERAL
BBL: 5" PR: FEDERAL 100

85 GR. HDY HP COL: 1.290"

H4227	9.5	1151	21,000 CUP
LIL'GUN	12.0	1263	16,800 CUP
LONGSHOT	5.0	1167	20,200 CUP
HS-6	5.6	1146	20,200 CUP
AutoComp	4.6	1114	19,200 CUP
UNIVERSAL	4.3	1123	19,000 CUP
231	3.8	1003	20,700 CUP
HP-38	3.8	1003	20,700 CUP
TITEGROUP	3.7	1110	20,900 CUP

100 GR. SPR JHP COL: 1.345"

H4227	10.0	1060	19,300 CUP
LIL'GUN	11.0	1208	19,900 CUP
LONGSHOT	4.7	1056	19,300 CUP
HS-6	5.4	1023	20,200 CUP
AutoComp	4.2	964	18,900 CUP
UNIVERSAL	3.7	973	19,900 CUP
231	3.7	947	19,400 CUP
HP-38	3.7	947	19,400 CUP
TITEGROUP	3.3	956	19,900 CUP

327 FEDERAL MAGNUM CASE: FEDERAL
BBL: 5" PR: FEDERAL 200 PISTOL

85 GR. HDY XTP COL: 1.450"

Longshot	7.2	1549	41,800 PSI
800-X	7.5	1548	36,700 PSI
SR 4756	7.1	1451	37,800 PSI
HS-6	8.5	1561	41,600 PSI
CFE Pistol	7.5	1600	41,200 PSI
AutoComp	7.0	1518	42,100 PSI
Universal	6.0	1378	38,700 PSI
WSF	7.0	1475	38,200 PSI
231	6.0	1416	39,800 PSI
HP-38	6.0	1416	39,800 PSI
Titegroup	5.8	1438	37,600 PSI

100 GR. HDY XTP COL: 1.450"

IMR 4227	12.5C	1318	30,000 PSI
296	13.2	1525	38,500 PSI
H110	13.2	1525	38,500 PSI

BULLET POWDER GR VEL CUP

Lil'Gun	14.0	1431	27,900 PSI
Longshot	6.7	1400	43,500 PSI
800-X	6.9	1434	39,400 PSI
SR 4756	6.6	1352	41,500 PSI
HS-6	7.7	1384	42,000 PSI
CFE Pistol	7.0	1451	42,300 psi
AutoComp	6.2	1328	41,400 PSI
Universal	5.4	1250	40,800 PSI
HP-38	5.4	1261	39,800 PSI
Titegroup	5.2	1261	42,800 PSI

380 AUTO CASE: REMINGTON
BBL: 3.75" PR: CCI 500

90 GR. HDY JHP COL: .955"

800-X	4.1	870	15,500 CUP
SR 4756	3.6	880	15,500 CUP
CFE Pistol	4.2	1010	19,500 PSI
AutoComp	4.5	1012	15,000 CUP
Universal	3.6	955	15,000 CUP
231	3.5	957	15,400 CUP
HP-38	3.5	957	15,400 CUP
SR 7625	3.2	880	14,700 CUP
PB	3.0	890	15,700 CUP
Titegroup	3.2	970	15,600 CUP
700-X	2.9	895	15,900 CUP

100 GR. HDY FMJ COL: .980"

800-X	4.0	840	14,700 CUP
SR 4756	3.5	875	15,900 CUP
CFE Pistol	4.0	955	19,800 PSI
AutoComp	4.2	934	14,400 CUP
Universal	3.4	889	16,100 CUP
231	3.1	843	15,400 CUP
HP-38	3.1	843	15,400 CUP
SR 7625	3.0	855	15,500 CUP
PB	2.8	835	15,400 CUP
Titegroup	3.0	912	14,700 CUP
700-X	2.7	840	15,200 CUP

9MM LUGER CASE: WINCHESTER
BBL: 4" PR: CCI 500

115 GR. SPR GDHP COL: 1.125"

700-X	4.2	1091	31,900 PSI
Longshot	6.0	1203	32,300 PSI
HS-6	7.0	1234	29,400 CUP
CFE Pistol	5.9	1185	31,800 PSI
AutoComp	5.6	1161	32,500 PSI
Universal	5.0	1149	31,200 CUP
231	5.1	1167	28,100 CUP
HP-38	5.1	1167	28,100 CUP
SR 7625	4.9	1113	32,300 PSI
PB	4.0	1038	32,000 PSI
Titegroup	4.8	1158	30,500 CUP
Clays	3.9	1095	32,600 CUP

125 GR. SIE FMJ COL: 1.090"

Longshot	5.7	1162	33,400 PSI
SR 4756	4.9	1037	28,700 PSI
HS-6	6.8	1169	27,100 CUP
CFE Pistol	5.1	1118	33,000 PSI
AutoComp	5.2	1120	33,300 PSI
Universal	4.9	1118	30,600 CUP
231	4.8	1088	28,800 CUP
HP-38	4.8	1088	28,800 CUP

BULLET POWDER GR VEL CUP

SR 7625	4.6	1074	33,700 PSI
PB	3.6	974	33,500 PSI
Titegroup	4.4	1136	30,600 CUP
700-X	3.6	1007	31,000 PSI
Clays	3.7	1056	32,500 CUP

147 GR. HDY XTP COL: 1.100"

Longshot	4.7	1004	33,800 PSI
800-X	4.0	883	28,900 PSI
SR 4756	3.6	834	29,900 PSI
HS-6	5.0	885	27,900 CUP
CFE Pistol	4.2	963	33,000 PSI
AutoComp	4.0	916	32,800 PSI
Universal	3.3	869	31,000 CUP
SR 7625	3.3	844	32,900 PSI
Titegroup	3.6	929	27,500 CUP
700-X	2.9	838	32,000 PSI

38 SPECIAL CASE: WINCHESTER
BBL: 7.7" PR: WINCHESTER SP

125 GR. HDY XTP COL: 1.455"

SR 4756	6.0	1046	16,400 PSI
HS-6	7.2	1048	16,600 CUP
CFE Pistol	6.3	1133	16,000 PSI
AutoComp	6.2	1068	16,500 PSI
Universal	5.2	1019	17,000 CUP
231	4.9	934	16,300 CUP
HP-38	4.9	934	16,300 CUP
SR 7625	5.1	999	16,300 PSI
PB	4.1	926	15,700 PSI
TITEGROUP	4.6	1010	15,600 CUP
700-X	4.2	969	17,000 PSI
CLAYS	3.9	937	16,100 CUP

158 GR. HDY XTP COL: 1.455"

H4227	10.0	864	15,500 CUP
SR 4756	5.3	888	16,400 PSI
HS-6	6.2	862	16,300 CUP
CFE Pistol	5.0	914	16,200 PSI
AutoComp	4.9	865	16,800 PSI
Universal	4.4	778	16,200 CUP
231	4.3	779	15,900 CUP
HP-38	4.3	779	15,900 CUP
SR 7625	4.5	825	16,300 PSI
PB	3.9	793	16,500 PSI
Titegroup	3.9	798	15,900 CUP
700-X	3.7	798	15,900 PSI
Clays	3.1	721	16,600 CUP

38 SPECIAL +P CASE: WINCHESTER
BBL: 7.7" PR: WINCHESTER SP

NOTE: +P marked guns only

125 GR. HDY XTP COL: 1.455"

LONGSHOT	7.0	1228	18,300 PSI
SR 4756	6.1	1129	18,300 PSI
HS-6	7.8	1138	19,500 CUP
CFE Pistol	6.4	1199	18,600 PSI

BULLET POWDER GR VEL CUP

AutoComp	6.4	1073	17,600 PSI
Universal	5.4	1072	18,900 CUP
HP-38	5.3	1018	19,800 CUP
SR 7625	5.2	1043	18,500 PSI
PB	4.4	985	17,600 PSI
Titegroup	5.0	1069	18,700 CUP
700-X	4.4	1023	18,100 PSI

158 GR. HDY XTP COL: 1.455"

H4227	11.0	964	17,600 CUP
LONGSHOT	5.5	965	17,000 PSI
SR 4756	5.5	928	17,900 PSI
HS-6	6.6	926	18,700 CUP
CFE Pistol	5.4	986	18,500 PSI
AutoComp	5.0	885	17,000 PSI
Universal	4.7	837	19,200 CUP
HP-38	4.6	807	18,100 CUP
SR 7625	4.7	881	17,800 PSI
PB	4.1	836	17,900 PSI
TITEGROUP	4.3	905	19,300 CUP
700-X	4.0	866	18,500 PSI

357 MAGNUM CASE: WINCHESTER
BBL: 10" PR: WINCHESTER SPM

125 GR. HDY XTP COL: 1.590"

H4227	20.0	1839	42,000 CUP
296	22.0	1966	41,400 CUP
H110	22.0	1966	41,400 CUP
Longshot	9.7	1647	42,000 CUP
SR 4756	7.8	1427	30,600 PSI
HS-6	10.9	1629	42,100 CUP
CFE Pistol	8.0	1480	32,500 PSI
AutoComp	8.2	1455	31,700 PSI
Universal	7.6	1453	39,600 CUP
231	8.5	1514	42,700 CUP
HP-38	8.5	1514	42,700 CUP
SR 7625	7.5	1401	33,800 PSI
Titegroup	7.5	1497	41,200 CUP
700-X	6.4	1399	30,400 PSI

158 GR. HDY XTP COL: 1.580"

H4227	16.0	1520	42,600 CUP
296	16.7	1591	40,700 CUP
H110	16.7	1591	40,700 CUP
Lil'Gun	18.0	1577	25,800 CUP
Longshot	8.4	1394	43,200 CUP
SR 4756	6.5	1146	29,900 PSI
HS-6	9.5	1375	41,900 CUP
CFE Pistol	6.9	1233	33,700 PSI
AutoComp	7.0	1181	33,200 PSI
Universal	6.3	1133	39,300 CUP
231	6.9	1220	40,000 CUP
HP-38	6.9	1220	40,000 CUP
SR 7625	5.8	1075	29,600 PSI
PB	4.9	984	31,700 PSI
Titegroup	6.1	1229	41,900 CUP
700-X	5.7	1149	31,200 PSI

BULLET POWDER GR VEL CUP

**40 S&W CASE: HORNADY
BBL: 4" PR: WINCHESTER SP**

WARNING: This data is intended for use in firearms with barrels which fully support the cartridge in the chamber. Use of this data in firearms which do not fully support the cartridge may result in bulged cases, ruptured cases, case head separation, or other condition which may result in damage to the firearm and/or result in injury or death of the shooter and/or bystanders. Check with your firearm manufacturer if in doubt.

		COL: 1.125"
Longshot	8.0	1159 32,300 PSI
SR 4756	6.6	1018 28,800 PSI
HS-6	6.9	976 32,500 PSI
CFE Pistol	6.0	1051 32,200 PSI
AutoComp	6.3	1053 33,200 PSI
Universal	5.8	1046 33,400 PSI
WSF	5.8	1013 32,900 PSI
231	5.0	947 32,900 PSI
HP-38	5.0	947 32,900 PSI
SR 7625	5.7	999 31,700 PSI
PB	4.5	917 30,400 PSI
WST	4.3	888 32,400 PSI
Titegroup	4.7	978 33,300 PSI
700-X	4.8	966 32,500 PSI
Clays	3.5	847 34,300 PSI

		COL: 1.125"
Longshot	6.0	954 32,500 PSI
800-X	6.1	951 31,000 PSI
SR 4756	5.5	910 32,900 PSI
HS-6	6.3	900 32,800 PSI
CFE Pistol	4.8	897 33,500 PSI
AutoComp	5.2	894 32,100 PSI
Universal	4.7	903 33,600 PSI
WSF	4.8	867 33,100 PSI
231	4.7	857 33,400 PSI
HP-38	4.7	857 33,400 PSI
SR 7625	4.8	872 32,800 PSI
PB	3.7	782 32,200 PSI
WST	3.4	733 31,100 PSI
Titegroup	3.8	822 31,700 PSI
700-X	3.9	810 30,700 PSI

**41 REMINGTON MAGNUM CASE: REMINGTON
BBL: 10.125" PR: WINCHESTER LP**

		COL: 1.575"
H4227	24.9	1745 35,600 CUP
296	26.5	1887 37,400 CUP
H110	26.5	1887 37,400 CUP
Longshot	12.5	1646 38,700 CUP
HS-6	13.7	1597 37,200 CUP
Universal	10.3	1488 38,700 CUP
HP-38	9.8	1440 38,300 CUP
Titegroup	9.2	1470 37,700 CUP
700-X	8.4	1375 39,800 CUP

		COL: 1.580"
H4227	20.0	1433 37,500 CUP
296	20.0	1529 34,000 CUP
H110	20.0	1529 34,000 CUP
Lil'Gun	20.5	1563 31,200 CUP

BULLET POWDER GR VEL CUP

Longshot	10.1	1311 37,700 CUP
HS-6	11.3	1271 36,700 CUP
AutoComp	9.1	1221 38,300 CUP
Universal	8.5	1178 38,600 CUP
HP-38	8.0	1125 36,700 CUP
Titegroup	7.3	1127 33,700 CUP

**44 S&W SPECIAL CASE: STARLINE
BBL: 8" PR: WINCHESTER LP**

		COL: 1.400"
800-X	7.1	1031 12,700 CUP
SR 4756	7.9	1050 14,000 CUP
Universal	6.4	1031 13,900 CUP
HP-38	5.6	953 12,500 CUP
SR 7625	7.2	1043 13,600 CUP
PB	6.1	1002 13,200 CUP
Trail Boss	6.6	944 12,600 CUP
Titegroup	5.5	1025 11,600 CUP
700-X	5.4	1013 13,500 CUP
Clays	4.2	930 13,200 CUP

		COL: 1.450"
800-X	7.0	945 13,600 CUP
SR 4756	7.4	921 13,300 CUP
HS-6	8.0	917 13,000 CUP
CFE Pistol	6.6	898 13,800 CUP
AutoComp	6.5	903 13,400 CUP
Universal	5.6	873 13,300 CUP
HP-38	5.2	858 13,200 CUP
SR 7625	6.5	892 13,400 CUP
PB	5.3	863 13,400 CUP
Trail Boss	5.2	763 11,700 CUP
Titegroup	4.8	862 13,100 CUP
700-X	4.9	869 13,800 CUP
Clays	4.0	771 13,500 CUP

**44 REMINGTON MAGNUM CASE: WINCHESTER
BBL: 8.275" PR: REMINGTON 2 1/2**

		COL: 1.600"
IMR 4227	24.0	1458 36,100 CUP
296	24.0	1522 36,200 CUP
H110	24.0	1522 36,200 CUP
Lil'Gun	24.5	1582 38,100 CUP
Longshot	12.1	1331 34,500 PSI
800-X	14.2	1415 39,600 CUP
SR 4756	13.3	1260 39,800 CUP
HS-6	15.1	1417 38,200 CUP
CFE Pistol	12.0	1304 35,000 PSI
AutoComp	11.5	1250 34,100 PSI
Universal	10.2	1246 38,200 CUP
231	11.0	1272 37,800 CUP
HP-38	11.0	1272 37,800 CUP
Titegroup	10.0	1292 37,700 CUP

		COL: 1.600"
IMR 4227	20.0	1312 38,600 CUP
296	19.0	1325 38,800 CUP
H110	19.0	1325 38,800 CUP
Lil'Gun	17.7	1280 37,600 CUP
Longshot	9.5	1071 34,700 PSI
HS-6	13.0	1214 37,900 CUP
CFE Pistol	8.7	987 34,800 PSI
AutoComp	9.0	927 33,500 PSI
Universal	9.6	1113 38,200 CUP

BULLET POWDER GR VEL CUP

231	10.0	1149 38,100 CUP
HP-38	10.0	1149 38,100 CUP
Titegroup	9.6	1186 38,400 CUP

**45 ACP CASE: WINCHESTER
BBL: 5" PR: FEDERAL 150**

		COL: 1.195"
Longshot	8.2	1044 17,000 CUP
800-X	7.9	991 16,700 CUP
SR 4756	8.2	991 16,700 CUP
HS-6	9.5	996 16,800 CUP
CFE Pistol	8.1	1139 19,700 PSI
AutoComp	7.4	958 16,200 CUP
Universal	6.4	977 16,800 CUP
WSF	7.5	981 17,400 CUP
231	5.9	906 15,800 CUP
HP-38	5.9	906 15,800 CUP
SR 7625	7.3	970 16,500 CUP
PB	5.8	935 16,200 CUP
WST	4.9	866 16,500 CUP
Titegroup	5.5	956 17,000 CUP
700-X	5.5	959 17,100 CUP
Clays	4.9	981 17,400 CUP

		COL: 1.155"
Longshot	7.8	1013 16,900 CUP
800-X	7.4	954 16,600 CUP
SR 4756	7.6	941 14,200 CUP
HS-6	9.0	948 16,400 CUP
CFE Pistol	7.2	1010 20,200 PSI
AutoComp	7.0	930 16,000 CUP
Universal	6.2	949 17,200 CUP
WSF	6.8	929 16,700 CUP
231	5.9	906 16,700 CUP
HP-38	5.9	906 16,700 CUP
SR 7625	6.6	941 17,100 CUP
PB	5.5	873 16,100 CUP
WST	5.1	898 17,500 CUP
Titegroup	5.2	884 16,900 CUP
700-X	5.3	911 16,700 CUP
Clays	4.3	785 17,700 CUP

		COL: 1.200"
Longshot	6.8	908 17,200 CUP
800-X	7.0	900 16,900 CUP
SR 4756	7.0	867 16,500 CUP
HS-6	8.2	825 15,400 CUP
CFE Pistol	6.8	934 19,800 PSI
AutoComp	6.6	871 17,100 CUP
Universal	5.6	844 16,800 CUP
WSF	6.4	851 15,700 CUP
231	5.3	832 16,800 CUP
HP-38	5.3	832 16,800 CUP
SR 7625	6.0	848 16,600 CUP
PB	5.0	807 16,500 CUP
Titegroup	4.8	818 16,700 CUP
700-X	4.9	842 16,600 CUP
Clays	4.0	732 17,000 CUP

**45 COLT CASE: WINCHESTER
BBL: 7.25" PR: WINCHESTER LP**

		COL: 1.595"
800-X	7.6	803 13,600 PSI
SR 4756	8.6	772 12,900 PSI

BULLET POWDER GR VEL CUP

HS-6	10.7	865 14,000 CUP
CFE Pistol	8.8	916 13,200 PSI
AutoComp	8.0	770 13,500 PSI
UNIVERSAL	8.0	813 14,000 CUP
SR 7625	7.5	759 13,500 PSI
PB	6.3	723 13,400 PSI
TITEGROUP	6.3	797 12,500 CUP
231	7.1	787 14,000 CUP
HP-38	7.1	787 14,000 CUP
700-X	5.2	714 12,500 PSI

**300 GR. SIE JFP CASE: WINCHESTER
BBL: 9.375" PR: WINCHESTER SR**

		COL: 1.670"
HS-6	10.0	730 13,700 CUP
UNIVERSAL	7.3	700 13,700 CUP
TITEGROUP	5.8	682 12,900 CUP

**454 CASULL CASE: FREEDOM ARMS
BBL: 9.375" PR: WINCHESTER SR**

		COL: 1.765"
H4227	33.0 C	1762 42,100 CUP
H110	36.0	1954 51,600 CUP
LIL'GUN	35.5	1895 37,900 CUP
296	36.0	1954 51,600 CUP

**300 GR. FA JFP CASE: WINCHESTER
BBL: 9.375" PR: WINCHESTER SR**

		COL: 1.775"
H4227	31.0 C	1702 52,400 CUP
H110	30.0	1716 53,700 CUP
LIL'GUN	31.0	1746 45,000 CUP
296	30.0	1716 53,700 CUP

**460 S&W MAGNUM CASE: STARLINE
BBL: 10.743" PR: WINCHESTER LR**

		COL: 2.175"
H4227	43.0 C	2098 51,300 PSI
H110	46.0	2178 54,000 PSI
LIL'GUN	46.0	2080 43,400 PSI
296	46.0	2178 54,000 PSI

**300 GR. HDY XTP MAG. CASE: WINCHESTER
BBL: 10.743" PR: WINCHESTER LR**

		COL: 2.160"
H4227	40.0 C	1988 57,000 PSI
H110	42.5	2034 56,100 PSI
LIL'GUN	44.0	2067 53,600 PSI
296	42.5	2034 56,100 PSI

**500 S&W MAGNUM CASE: STARLINE
BBL: 10" PR: WINCHESTER LR**

		COL: 1.985"
H4227	42.5	1863 49,900 PSI
H110	43.0	1877 50,600 PSI
LIL'GUN	42.0	1912 48,100 PSI
296	43.0	1877 50,600 PSI
LONGSHOT	23.0	1602 50,000 PSI
TITEGROUP	18.5	1461 50,000 PSI

**400 GR. SIE JSP CASE: WINCHESTER
BBL: 10" PR: WINCHESTER LR**

		COL: 2.050"
H4227	39.5	1698 49,100 PSI
H110	40.0	1721 49,700 PSI
LIL'GUN	37.0	1725 49,300 PSI
296	40.0	1721 49,700 PSI
LONGSHOT	22.0	1458 49,000 PSI
TITEGROUP	17.5	1335 49,900 PSI

SHOTSHELL data

Shotshell loading data is shown in a format that provides convenient indexing of the load components and performance. Loads are listed in the following sequence:

- Gauge – largest to smallest
- Length – shortest to longest hull length
- Alphabetical order listing by hull manufacturer
- Shot Weight – lightest to heaviest
- Alphabetical order listing by primer manufacturer

For every load component set, multiple velocity levels are shown. Factory standard velocities are given to allow the handloader to duplicate their favorite offerings. Additional velocity levels may also be listed so the handloader can adjust load performance faster or slower than the standard factory loads.

A common concern with shotshell is recoil. Recoil can be controlled significantly through the use of lower shot weights and lower velocity levels. This shotshell loading data contains a number of such loads for those who want reduced recoil. Note that lower recoil loads may not function semi-automatic shotguns.

Primarily, the data for this edition was developed through the use of pressure barrels. All loads for standard U.S. cartridges adhere to the guidelines provided by the Sporting Arms and Ammunition Manufacturers' Institute (S.A.A.M.I.).

Wad chart

The following chart shows wads designed to perform as replacements for current popular models as listed in the ensuing data.

BP/SPTG16: BPG/BP, BPG/BP, G/BP16, SG16

Federal 12C1: CB3118-12AR

Federal 12S0: CB2100-12, DR XXL Orange, DR HFO, DR FO, MEC100S4

Federal 12S3: CB2118-12, DRF3, DR HF3, MEC118T8

Hor. Versalite: DRV-12

Hor. Versalite 20: DRV-20

Pattern Control Red: PC-12-Post

Remington TGT 12: CB8100-12, DR RT 12, DR RHT 12

Remington FIG 8: CB8118-12, DR RF8, DR HRF8, CB3118-12A, MEC118T8

Remington SP 20: Remington SP20S

WAA12R: CB1138-12

WAA12F114: CB1114-12, DRA 12 Yellow

WAA12: CB1118-12, CB0118-12, WT12, Blue Duster, DRA12, DR XL 1 1/8 Blue, MEC118T4, MEC118BIOT4

Remington TGT12: DRT12

WAA12SL: CB1100-12, Green Duster, Jammer XL-1, DR XL1 Green, SG-1, DRA 12 PINK, MEC100T4, MEC100BIOT4

WAA12L: CB0178-12, DR XXL Pink, MEC78T4

WAA12F114: CB1114-12, DRA-12 Yellow

WAA20: CB1078-20, Yellow Duster

WAA28: CB1034-28, Red Duster

WAA28HS: CB5034-28HS

WAA41, WAA410HS, SP410, 410SC: CB5050-410 HS

WAA16: CB0100-16

Windjammer: CB4118-12B, DR WJRPL, SG-12

Notes on Recoil

In physics we learned that for every force there is an equal and opposite force. In a firearm, the gases generated by burning powder push the ejecta (shot and wad) down the barrel and in turn push the shotgun in the opposite direction creating what we call recoil. According to physics, the momentum of a free recoiling firearm is equal and opposite in direction to the momentum of the ejecta and powder charge. The formula for free recoil of a firearm is:

$$\text{Recoil Energy in ft. lbs.} = \frac{(Bw Mv + 4700 Pw)^2}{64.348 Gw}$$

Where Gw = the weight of the gun in pounds

Bw = weight of the ejecta (shot and wad) in pounds

Pw = powder weight in pounds

Mv = muzzle velocity in feet per second

Example: Our shooter has an 8 lb. target gun with a load using 18.0 grs. of Clays, a wad weighing 33.0 gr., shot charge of 1 1/8 oz. and giving 1200 f/s muzzle velocity. First, we must convert the ejecta weight to lbs. (1 1/8 oz. = 492.0 gr.) Dividing grains by 7000 converts to pounds.

Gw = 8 lb.

Bw = $\frac{492.0 + 33.0}{7000} = \frac{525}{7000} = .075 \text{ lb.}$

Pw = $\frac{18}{7000} = .003 \text{ lb.}$

Mv = 1200 ft/sec

Substituting the numbers in the formula we find the

$$\text{Recoil energy of the shooters load} = \frac{[(.075 \times 1200) + (4700 \times .003)]^2}{64.348 \times 8} = 21.05 \text{ ft/lbs}$$

Unfortunately, too many shooters think that pressure has an effect on recoil. In truth, it doesn't. It is not included in the formula for calculating recoil as noted in our example. However, there are factors that effect our perception of recoil. A major factor is muzzle blast. Clean burning powders help limit muzzle blast, are quieter, and therefore seem lower in recoil.

Some people think slow burning powders produce less recoil. What they are perceiving is the longer time it takes the powder to reach peak pressure, which gives the same recoil as a faster burning powder, just over a longer period of time. Others like the faster burning powders which peak quicker, although still the same recoil, just a shorter period of recoil. Perception can be everything to a shooter, so he should shoot what he "feels" is the most comfortable. That is why Hodgdon has a complete range of powders to cover all perceptions and needs.

The only real way to lessen recoil is to lower velocities, or lessen shot charge, or both.

Lee

BUSHING #	CLAYS	INTER	UNIV	HS-6	H110	TITE WAD	LIL' GUN	LGSH	TITE GRP	700-X	800-X	PB	7625	4756	WST	WSF	WAA LITE	SUPER HCP
.095	10.7	12.3	15.2	21.9	22.5	12.4	23.5	19.1	18.4	10.9	11.0	12.1	14.4	14.7	12.1	18.1	12.0	17.4
.100	11.3	13.0	16.0	23.0	23.7	13.0	24.7	20.1	19.2	11.5	11.6	12.7	15.2	15.5	12.7	19.0	12.6	18.3
.105	11.8	13.7	16.8	24.2	24.9	13.7	26.0	21.1	20.0	12.0	13.0	13.4	15.9	16.3	13.4	20.0	13.3	19.2
.110	12.4	14.3	17.6	25.3	26.1	14.3	27.2	22.1	20.8	12.6	13.7	14.0	16.7	17.0	14.0	21.0	13.9	20.1
.116	13.0	15.1	18.5	26.7	27.5	15.1	28.7	23.3	21.7	13.3	15.9	14.7	17.3	17.9	14.8	22.1	14.6	21.3
.122	13.7	15.9	19.5	28.1	28.9	15.9	30.2	24.5	22.9	14.0	16.7	15.5	18.5	18.9	15.6	23.2	15.4	22.4
.128	14.4	16.6	20.4	29.4	30.3	16.7	31.7	25.7	24.1	14.7	17.5	16.3	19.4	19.8	16.3	24.4	16.1	23.5
.134	15.0	17.5	21.4	30.8	31.8	17.5	33.1	26.9	25.3	15.4	18.3	17.1	20.3	20.7	17.1	25.5	16.9	24.6
.141	15.8	18.4	22.5	32.4	33.4	18.4	34.9	28.3	26.5	16.0	19.2	17.9	21.3	21.8	18.1	26.9	17.8	25.9
.148	16.6	19.3	23.6	34.0	35.1	19.3	36.5	29.8	-	16.7	20.3	18.9	22.4	22.9	19.0	28.2	18.7	27.2
.151	16.7	19.6	24.0	-	-	19.7	37.2	30.4	-	17.1	20.7	19.2	22.9	23.4	19.4	28.8	19.1	27.7
.155	17.3	20.1	24.7	35.7	36.7	20.4	38.2	31.1	-	17.5	21.2	19.7	23.5	24.0	19.9	29.6	19.6	28.5
.163	18.2	21.1	25.9	37.5	38.6	21.4	40.2	32.7	-	18.4	22.3	20.7	24.7	25.2	21.0	31.2	20.5	30.0
.171	19.1	22.0	27.1	39.3	40.5	22.5	42.1	34.3	-	19.3	23.4	21.8	25.9	26.5	22.0	32.9	21.5	31.5
.180	20.1	23.1	28.5	41.4	42.7	23.6	44.4	36.1	-	20.4	24.6	22.8	27.3	27.8	23.2	34.4	22.7	33.2
.189	21.2	24.1	29.9	43.5	44.8	-	46.6	37.9	-	21.4	25.9	24.0	28.6	29.2	24.3	36.2	23.9	34.8
.198	22.1	25.2	31.3	45.5	46.9	26.0	48.8	39.7	-	22.4	27.1	25.1	30.0	30.6	25.5	37.7	25.0	36.5

INTERNATIONAL – INTER
UNIVERSAL – UNIV
LONGSHOT – LGSH

Ponsness
Warren

BUSHING #	CLAYS	INTER	UNIV	HS-6	H110	TITE WAD	LIL' GUN	LGSH	TITE GRP	700-X	800-X	PB	7625	4756	WST	WSF	WAA LITE	SUPER HCP
1AX									12.0									
2AX									12.7									
3AX									13.1									
1A					13.7													
2A					14.8													
3A				15.3	15.6		15.0	13.0										11.8
A				16.8	17.5		17.8	15.0										13.5
B				17.6			18.1	15.5	14.5									13.8
C			12.5	18.5			19.6	16.5	15.0				12.5	12.7				14.8
C1			13.0	19.6			20.1	17.0	16.0				13.2	13.3		16.4	11.4	15.5
D			13.2	20.4			21.4	17.3	16.3				13.5	13.6		16.6	11.6	15.7
D1			14.0	21.3			22.4	18.2	17.0		11.8	14.3	14.3	12.6	17.7	12.0	17.0	
E			15.7	23.5			25.2	20.7	19.4		13.3	13.2	16.0	15.9	14.1	20.1	14.0	19.0
E1			16.2	24.0			26.5	21.6	20.0		14.0	13.7	16.6	16.6	14.6	20.8	14.3	19.8
E2			17.2	26.1		14.7	27.0	22.8	21.3	12.9	14.9	14.5	17.5	17.6	15.2	21.9	15.0	20.9
F			18.1	27.5		15.6	27.9	24.2	22.7	13.9	16.0	15.5	18.4	18.7	16.4	23.2	16.1	22.1
F1			18.3	28.3		15.8	24.4	22.9	14.0	16.2	15.6	18.5	18.8	16.5	23.4	16.2	22.2	
F2						16.4	25.3	23.5	14.6	16.6	16.0	19.2	19.5	16.9	24.2	16.5	23.1	
F6				18.9														
G			20.2	31.2		17.4	26.8	24.7	15.6	17.6	17.1	20.5	20.7	18.1	25.7	17.2	23.3	
G1			20.6	32.7		17.7	27.1		15.9	17.8	17.4	20.8	21.0	18.5	26.0	17.3	24.0	
H	16.0	18.5	22.0	34.0		18.9	29.0		17.1	19.0	18.7	22.2	22.4	19.7	28.0	18.8		
I	16.7	19.3	22.8	34.4		19.6	30.0		17.6	19.6	19.2	22.9	23.1	20.3	29.0			
J	17.2	19.8	23.9	35.5		20.3	31.2		18.4	20.4	20.0	23.8	24.0	20.9	30.2			
J1	17.6	20.3	24.5	36.9		21.0	32.0		19.2	20.9	20.5	24.6	24.8	21.7	31.1			
K	17.8	20.6	24.8	37.1		21.3	32.5		19.5	21.2	20.8	24.9	25.1	22.0	31.8			
L	18.7	21.6	25.7	39.5		22.2	34.0		20.1	22.1	21.8	26.1	26.3	23.1				
M	19.7	22.5	26.8	41.2		23.4	35.7		21.5	23.7	23.1	27.6	27.8	24.6				
N	20.8	23.7	28.2			25.2	38.0		22.9	25.3	24.6	29.4	29.7					
O	21.0	24.0	28.5				38.5			25.8	25.1	29.8	30.1					
P	21.5	24.5					39.9			26.2	25.5	30.7	31.0					
Q	21.9	25.0					40.1			26.4	25.7	30.8	31.2					
R							41.8			27.5	26.7	32.1	32.5					
S							42.5			28.0	27.2	32.6	33.1					
T							45.4			29.4	27.8	34.7	35.2					
U										31.7			37.3					
V										32.3			38.0					
W										34.9			40.1					
X													40.9					
Y													42.2					

INTERNATIONAL – INTER
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LONGSHOT – LGSH

Hornady/ Spolar

GRS	CLAYS	INTER	UNIV	HS-6	H110	BUSHING NUMBERS										WAA LITE	SUPER HCP	
						TITE WAD	LIL' GUN	LGSH	TITE GRP	700-X	800-X	PB	7625	4756	WST			WSF
11.0	333																321	
12.0	348																342	300
13.0	363	330			256												351	
13.5																	354	309
14.0	375	342			266												363	318
14.7																	372	321
15.0	390	354															378	324
16.0	429	402	366			384		309	324	408	381						390	336
16.5	435	408	372			402	300	327	336	423	396						393	330
17.0	441	414	378	300		408		330	342	429		414					399	336
17.4	447	417	384			414	303	336	345	435	414	420	381	381	405	339	414	348
18.0	456	423	390	309		420	309	339	351	441	420	423					411	345
18.5	462	429	393			426		345	357	447	426	429	390	3*90	417	348	426	360
19.0	468	435	402	318		432		348	360	450	429	435	396	396	423	354	432	363
19.4	474	438	405			435	318	354	363	459	435	441					426	357
20.0	483	447	411	327		441		357	369	465	441	444	408	408	432	363		372
20.6	489	453	417			450	330	363	375	468	447	453	414	414	441	369		375
21.0	495	459	420	336		453		366	378	471	453	456					444	372
21.5	501	465	423			459	333	369	381	474	459	459	420	420	450	378		384
22.0	507	471	429	345		462		372	387	486	462	468					426	456
22.5	477	432				468	345	378	390		468	474					429	459
23.0	483	438	351			474		381	396		471	480	435	435	465	390		399
23.5	489	441						351	384	399		474	486	444	438	468		396
24.0	495	447	360			486	354	390	405			450	441	474	399			408
24.5	501	450				489		393				486		453	444	477		402
25.0	507	456	366			492	366	396				498	456	453	483			408
26.0		468	375					372	405			507	462	459				417
27.0		480	381					381	414			516	471	471				423
28.0		489	387						423			525	525	480	480			429
29.0			501	393					429			486	486	486				438
30.0				402					435			534		498	498			444
31.0				408					444					507				450
32.0				414					450					516				456
33.0				423					459									459
34.0				429					465					525				
35.0				435					471					534				
36.0				441					480									
37.0				444					486					549				
38.0				450					492					558				
39.0									498									

INTERNATIONAL - INTER
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LONGSHOT - LGSH

Mec

BUSHING #	CLAYS	INTER	UNIV	HS-6	H110	TITE WAD	LIL' GUN	LGSH	TITE GRP	700-X	800-X	PB	7625	4756	WST	WSF	WAA LITE	SUPER HCP		
																			7	
8																			12.5	
9																			12.9	
10																			13.4	11.0
11																			14.4	11.7
12																			15.4	12.4
A12																			15.5	16.4
13																			16.1	17.0
14																			16.4	13.9
15																			17.9	
16																			18.6	15.4
17																			19.4	16.1
18																			19.4	14.5
19																			20.7	17.0
20																			20.7	15.4
21																			21.4	17.8
22																			21.4	16.2
23																			22.6	18.7
24																			22.6	17.1
25																			23.6	19.5
26																			23.6	18.1
27																			23.6	19.5
28																			23.6	19.5
29																			23.6	19.5
30																			23.6	19.5
31																			23.6	19.5
32																			23.6	19.5
33																			23.6	19.5
34																			23.6	19.5
35																			23.6	19.5
36																			23.6	19.5
37																			23.6	19.5
38																			23.6	19.5
38A																			23.6	19.5
39																			23.6	19.5
39A																			23.6	19.5
40																			23.6	19.5
41																			23.6	19.5
41A																			23.6	19.5
42																			23.6	19.5
42A																			23.6	19.5
43																			23.6	19.5
43A																			23.6	19.5

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LONGSHOT - LGSH

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
				*Velocity is measured in feet per second (fps). Pressure is measured in Pounds per Square Inch (PSI).			
12 GA., 2 3/4", FEDERAL GOLD MEDAL PLASTIC SHELLS							
				1250 fps	1300 fps	1350 fps	1400 fps
7/8 oz	Titewad	Fed. 209A	Fed. 12S0	19.5 gr/ 6,400 PSI	20.5 gr/ 7,500 PSI	21.6 gr/ 8,800 PSI	22.7 gr/ 9,800 PSI
7/8 oz	Titewad	Win. 209	WAA12L	18.4 gr/ 6,800 PSI	19.3 gr/ 7,400 PSI	20.6 gr/ 8,700 PSI	21.9 gr/ 9,300 PSI
7/8 oz	Clays	Fed. 209A	WAA12L	19.2 gr/ 7,400 PSI	20.0 gr/ 8,000 PSI	21.5 gr/ 9,700 PSI	22.5 gr/11,500 PSI
7/8 oz	Clays	Win. 209	WAA12L	19.0 gr/ 7,000 PSI	20.3 gr/ 8,000 PSI	22.0 gr/ 8,800 PSI	23.0 gr/10,500 PSI
7/8 oz	Internat'l	Fed. 209A	WAA12L	22.3 gr/ 7,500 PSI	23.2 gr/ 8,300 PSI	24.5 gr/ 9,300 PSI	25.7 gr/10,000 PSI
7/8 oz	Internat'l	Win. 209	WAA12L	23.5 gr/ 7,500 PSI	24.3 gr/ 7,900 PSI	25.5 gr/ 9,100 PSI	27.0 gr/10,600 PSI
				1325 fps	1400 fps		
7/8 oz	WST	Fed. 209A	WAA12L	—	—	21.0 gr/ 8,300 PSI	23.0 gr/ 9,700 PSI
7/8 oz	WST	Win. 209	WAA12L	—	—	21.0 gr/ 8,200 PSI	23.0 gr/10,300 PSI
				1150 fps	1200 fps	1250 fps	1300 fps
24 gm	700-X	Fed. 209A	Fed. 12S0	16.0 gr/ 5,500 PSI	17.0 gr/ 6,200 PSI	18.0 gr/ 6,800 PSI	19.5 gr/ 7,800 PSI
24 gm	700-X	Fed. 209A	WAA12SL	15.5 gr/ 5,300 PSI	16.5 gr/ 5,900 PSI	17.5 gr/ 6,600 PSI	19.0 gr/ 7,800 PSI
24 gm	700-X	Rem. 209P	WAA12SL	16.0 gr/ 4,700 PSI	17.0 gr/ 5,400 PSI	18.0 gr/ 5,900 PSI	20.5 gr/ 6,600 PSI
24 gm	700-X	Win. 209	Fed. 12S0	15.5 gr/ 5,400 PSI	16.5 gr/ 6,100 PSI	17.5 gr/ 6,700 PSI	19.5 gr/ 7,800 PSI
24 gm	700-X	Win. 209	WAA12SL	15.5 gr/ 5,100 PSI	16.5 gr/ 5,700 PSI	17.5 gr/ 6,400 PSI	19.0 gr/ 7,500 PSI
24 gm	PB	Fed. 209A	Fed. 12S3	20.0 gr/ 5,200 PSI	21.0 gr/ 5,600 PSI	22.5 gr/ 6,300 PSI	24.0 gr/ 7,000 PSI
				1150 fps	1200 fps	1250 fps	1325 fps
24 gm	PB	Rem. 209P	Rem. TGT12	21.0 gr/ 3,900 PSI	22.5 gr/ 4,500 PS	24.0 gr/ 5,200 PSI	25.5 gr/ 6,000 PSI
24 gm	PB	Win. 209	Fed. 12S3	20.5 gr/ 4,800 PSI	22.0 gr/ 5,600 PSI	23.0 gr/ 6,100 PSI	24.5 gr/ 6,900 PSI
24 gm	PB	Win. 209	WAA12SL	20.5 gr/ 4,300 PSI	21.5 gr/ 4,800 PSI	23.0 gr/ 5,400 PSI	25.0 gr/ 6,200 PSI
				1180 fps	1235 fps	1290 fps	1345 fps
1 oz	Titewad	Fed. 209A	Fed. 12S0	17.8 gr/ 7,100 PSI	19.3 gr/ 8,500 PSI	20.8 gr/ 9,600 PSI	21.7 gr/11,300 PSI
1 oz	Titewad	Fed. 209A	Rem. TGT 12	17.0 gr/ 7,500 PSI	18.4 gr/ 8,700 PSI	19.7 gr/ 9,800 PSI	21.0 gr/11,000 PSI
1 oz	Titewad	Win. 209	Fed. 12S0	18.0 gr/ 7,100 PSI	19.1 gr/ 8,600 PSI	20.3 gr/ 10,300 PSI	22.0 gr/11,300 PSI
1 oz	Titewad	Win. 209	WAA12L	17.4 gr/ 7,500 PSI	18.7 gr/ 8,400 PSI	20.2 gr/ 9,700 PSI	21.7 gr/11,300 PSI
				1125 fps	1180 fps	1235 fps	1290 fps
1 oz	Clays	Fed. 209A	Fed. 12S0	16.8 gr/ 6,700 PSI	17.9 gr/ 7,700 PSI	19.3 gr/ 9,200 PSI	20.3 gr/10,800 PSI
1 oz	Clays	Rem. 209P	Rem. TGT 12	18.2 gr/ 5,900 LUP	19.2 gr/ 6,300 LUP	20.2 gr/ 6,800 LUP	21.2 gr/ 7,300 LUP
1 oz	Clays	Win. 209	WAA12SL	17.2 gr/ 6,200 LUP	18.2 gr/ 7,000 LUP	19.1 gr/ 7,600 LUP	20.0 gr/ 8,300 LUP
				1235 fps	1290 fps	1345 fps	1400 fps
1 oz	Internat'l	Fed. 209A	Fed. 12S0	19.9 gr/ 8,300 PSI	21.3 gr/ 9,900 PSI	22.5 gr/ 11,200 PSI	—
1 oz	Internat'l	Rem. 209P	Rem. TGT 12	20.8 gr/ 7,200 PSI	21.2 gr/ 7,500 PSI	23.3 gr/ 9,400 PSI	24.5 gr/10,400 PSI
1 oz	Internat'l	Win. 209P	WAA12SL	20.5 gr/ 7,200 PSI	22.0 gr/ 8,400 PSI	23.4 gr/ 9,400 PSI	24.7 gr/10,400 PSI
				1100 fps	1150 fps	1200 fps	1250 fps
1 oz	700-X	Fed. 209A	Fed. 12S0	15.0 gr/ 6,100 PSI	16.0 gr/ 6,700 PSI	17.0 gr/ 7,300 PSI	18.5 gr/ 8,200 PSI
1 oz	700-X	Rem. 209P	Fed. 12S0	15.0 gr/ 5,700 PSI	16.0 gr/ 6,300 PSI	18.0 gr/ 7,300 PSI	19.5 gr/ 8,000 PSI
1 oz	700-X	Rem. 209P	Rem. TGT12	16.0 gr/ 5,700 PSI	17.0 gr/ 6,200 PSI	18.0 gr/ 6,600 PSI	19.5 gr/ 7,300 PSI
1 oz	700-X	Rem. 209P	WAA12SL	15.5 gr/ 5,800 PSI	16.5 gr/ 6,600 PSI	17.5 gr/ 7,300 PSI	19.0 gr/ 8,400 PSI
1 oz	700-X	Win. 209	Fed. 12S0	15.5 gr/ 5,900 PSI	16.5 gr/ 6,700 PSI	17.5 gr/ 7,300 PSI	18.5 gr/ 7,800 PSI
1 oz	700-X	Win. 209	Rem. TGT12	15.5 gr/ 5,900 PSI	16.5 gr/ 6,600 PSI	17.5 gr/ 7,200 PSI	18.5 gr/ 7,800 PSI
1 oz	700-X	Win. 209	WAA12SL	15.5 gr/ 6,000 PSI	16.5 gr/ 6,700 PSI	17.5 gr/ 7,600 PSI	18.5 gr/ 8,500 PSI

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", FEDERAL GOLD MEDAL PLASTIC SHELLS (CONT.)							
				1100 fps	1150 fps	1200 fps	1250 fps
1 oz	PB	Fed. 209A	Fed. 12S3	19.5 gr/ 5,400 PSI	20.5 gr/ 5,900 PSI	22.0 gr/ 6,700 PSI	23.0 gr/ 7,100 PSI
1 oz	PB	Rem. 209P	Fed. 12S3	20.0 gr/ 5,200 PSI	21.0 gr/ 5,700 PSI	22.5 gr/ 6,600 PSI	23.5 gr/ 7,200 PSI
1 oz	PB	Rem. 209P	Rem. TGT12	20.5 gr/ 4,300 PSI	22.0 gr/ 5,200 PSI	23.0 gr/ 5,700 PSI	24.0 gr/ 6,300 PSI
1 oz	PB	Rem. 209P	WAA12SL	20.0 gr/ 4,700 PSI	21.5 gr/ 5,300 PSI	22.5 gr/ 5,800 PSI	24.0 gr/ 6,600 PSI
1 oz	PB	Win. 209	Fed. 12S3	19.5 gr/ 5,100 PSI	21.0 gr/ 5,800 PSI	22.5 gr/ 6,500 PSI	23.5 gr/ 6,900 PSI
1 oz	PB	Win. 209	Rem. TGT12	20.0 gr/ 5,300 PSI	21.0 gr/ 5,900 PSI	22.0 gr/ 6,500 PSI	23.5 gr/ 7,000 PSI
1 oz	PB	Win. 209	WAA12SL	19.5 gr/ 4,900 PSI	21.0 gr/ 5,400 PSI	22.5 gr/ 6,000 PSI	24.0 gr/ 6,700 PSI
				1180 fps	1235 fps	1290 fps	
1 oz	WST	CCI 209	Fed. 12S0	—	21.0 gr/ 8,500 PSI	22.5 gr/ 9,500 PSI	
1 oz	WST	Win. 209	Fed. 12S0	20.5 gr/ 7,400 PSI	22.0 gr/ 8,500 PSI	23.0 gr/ 9,300 PSI	
				1180 fps	1235 fps	1290 fps	1345 fps
1 oz	Super Hcp	Ched. 209	WAA12L	19.6 gr/ 5,500 PSI	20.8 gr/ 6,500 PSI	22.0 gr/ 7,500 PSI	23.3 gr/ 8,500 PSI
1 oz	Super Hcp	Fed. 209A	WAA12L	19.5 gr/ 5,700 PSI	20.9 gr/ 6,600 PSI	22.3 gr/ 7,500 PSI	23.8 gr/ 8,600 PSI
1 oz	Super Hcp	Rem. 209P	WAA12L	20.4 gr/ 5,200 PSI	21.6 gr/ 6,100 PSI	22.8 gr/ 7,100 PSI	24.0 gr/ 8,000 PSI
1 oz	Super Hcp	Win. 209	WAA12L	20.6 gr/ 4,800 PSI	21.7 gr/ 5,900 PSI	22.8 gr/ 7,000 PSI	23.9 gr/ 8,100 PSI
				1090 fps	1145 fps	1200 fps	1255 fps
1 1/8 oz	Titewad	Fed. 209A	Fed. 12S3	16.3 gr/ 8,300 PSI	17.3 gr/ 8,900 PSI	18.8 gr/ 10,300 PSI	—
1 1/8 oz	Titewad	Fed. 209A	Rem. Fig. 8	15.8 gr/ 8,000 PSI	16.9 gr/ 9,600 PSI	18.1 gr/ 11,300 PSI	—
1 1/8 oz	Titewad	Fed. 209A	WAA12	15.4 gr/ 8,200 PSI	16.8 gr/ 9,800 PSI	18.0 gr/ 11,100 PSI	—
1 1/8 oz	Titewad	Rem. 209P	Rem. Fig. 8	16.0 gr/ 7,500 PSI	17.0 gr/ 8,600 PSI	18.0 gr/ 9,500 PSI	—
1 1/8 oz	Titewad	Win. 209	WAA12SL	16.5 gr/ 7,900 PSI	17.5 gr/ 9,100 PSI	18.2 gr/ 9,800 PSI	—
1 1/8 oz	Clays	Fed. 209A	Fed. 12S3	16.8 gr/ 7,900 PSI	17.1 gr/ 8,600 PSI	19.0 gr/ 10,400 PSI	—
1 1/8 oz	Clays	Fed. 209A	Rem. Fig. 8	17.0 gr/ 7,400 PSI	17.5 gr/ 7,900 PSI	19.0 gr/ 9,600 PSI	—
1 1/8 oz	Clays	Fed. 209A	WAA12	16.5 gr/ 7,700 PSI	17.0 gr/ 8,100 PSI	18.5 gr/ 10,300 PSI	—
1 1/8 oz	Clays	Rem. 209P	Rem. Fig. 8	16.6 gr/ 7,200 PSI	17.8 gr/ 8,600 PSI	18.9 gr/ 9,900 PSI	20.1 gr/11,300 PSI
1 1/8 oz	Internat'l	Fed. 209A	Fed. 12S3	18.5 gr/ 7,000 PSI	19.0 gr/ 7,200 PSI	20.5 gr/ 8,800 PSI	22.2 gr/10,600 PSI
1 1/8 oz	Internat'l	Fed. 209A	WAA12	—	18.4 gr/ 8,200 PSI	19.6 gr/ 9,500 PSI	20.7 gr/10,700 PSI
1 1/8 oz	Internat'l	Win. 209	WAA12SL	19.1 gr/ 6,600 LUP	20.1 gr/ 7,100 LUP	21.0 gr/ 7,500 LUP	22.4 gr/ 8,900 LUP
				1200 fps	1255 fps	1310 fps	
1 1/8 oz	Universal	Fed. 209A	Fed. 12S3	23.0 gr/ 8,700 PSI	24.4 gr/ 9,600 PSI	25.7 gr/ 10,500 PSI	
1 1/8 oz	Universal	Win. 209	Rem. Fig. 8	24.0 gr/ 8,000 PSI	25.0 gr/ 8,700 PSI	26.8 gr/ 9,500 PSI	
1 1/8 oz	Universal	Win. 209	WAA12	23.2 gr/ 8,800 PSI	24.5 gr/ 9,700 PSI	25.0 gr/ 10,400 PSI	
				1420 fps	1475 fps	1530 fps	1585 fps
1 1/8 oz	Longshot	Fed. 209A	Fed. 12S3	32.0 gr/ 9,000 PSI	33.3 gr/ 10,000 PSI	34.6 gr/ 11,500 PSI	—
1 1/8 oz	Longshot	Fed. 209A	Rem. Fig. 8	32.2 gr/ 8,600 PSI	33.6 gr/ 9,500 PSI	35.0 gr/ 10,500 PSI	36.4 gr/ 11,400 PSI
1 1/8 oz	Longshot	Fed. 209A	WAA12	31.7 gr/ 8,900 PSI	33.1 gr/ 9,700 PSI	34.6 gr/ 10,700 PSI	36.0 gr/ 11,500 PSI
1 1/8 oz	Longshot	Rem. 209P	Fed. 12S3	32.9 gr/ 8,400 PSI	34.1 gr/ 9,300 PSI	35.3 gr/ 10,200 PSI	—
1 1/8 oz	Longshot	Rem. 209P	Rem. Fig. 8	32.1 gr/ 8,200 PSI	33.9 gr/ 9,100 PSI	35.6 gr/ 10,000 PSI	37.4 gr/ 10,900 PSI
1 1/8 oz	Longshot	Rem. 209P	WAA12	32.4 gr/ 8,200 PSI	33.9 gr/ 9,100 PSI	35.4 gr/ 10,000 PSI	36.9 gr/ 10,900 PSI
1 1/8 oz	Longshot	Win. 209	Fed. 12S3	34.2 gr/ 7,100 PSI	35.5 gr/ 8,200 PSI	36.8 gr/ 9,400 PSI	38.1 gr/ 10,600 PSI
1 1/8 oz	Longshot	Win. 209	Rem. Fig. 8	34.9 gr/ 7,100 PSI	36.0 gr/ 8,100 PSI	37.1 gr/ 9,100 PSI	38.2 gr/ 10,000 PSI
1 1/8 oz	Longshot	Win. 209	WAA12	34.0 gr/ 7,600 PSI	35.2 gr/ 8,500 PSI	36.4 gr/ 9,400 PSI	37.8 gr/ 10,400 PSI

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", FEDERAL GOLD MEDAL PLASTIC SHELLS (CONT.)							
				1100 fps	1150 fps	1200 fps	1250 fps
1 1/8 oz	700-X	Fed. 209A	Fed. 12S3	16.0 gr / 7,900 PSI	17.0 gr / 8,600 PSI	18.5 gr / 9,500 PSI	20.0 gr / 10,400 PSI
1 1/8 oz	700-X	Rem. 209P	Fed. 12S3	16.0 gr / 7,500 PSI	17.5 gr / 8,300 PSI	18.5 gr / 8,900 PSI	20.0 gr / 9,800 PSI
1 1/8 oz	700-X	Win. 209	Fed. 12S3	16.0 gr / 7,800 PSI	17.0 gr / 8,500 PSI	18.0 gr / 9,400 PSI	19.5 gr / 10,700 PSI
1 1/8 oz	700-X	Win. 209	Rem. TGT12	16.0 gr / 6,800 PSI	17.0 gr / 7,500 PSI	18.5 gr / 8,600 PSI	20.0 gr / 9,600 PSI
1 1/8 oz	PB	Fed. 209A	Fed. 12S3	19.5 gr / 6,600 PSI	21.0 gr / 7,100 PSI	22.5 gr / 7,600 PSI	24.0 gr / 8,700 PSI
1 1/8 oz	PB	Fed. 209A	Rem. FIG. 8	20.0 gr / 6,000 PSI	21.5 gr / 6,600 PSI	23.0 gr / 7,300 PSI	24.5 gr / 8,000 PSI
1 1/8 oz	PB	Fed. 209A	WAA12	19.5 gr / 6,100 PSI	21.0 gr / 7,000 PSI	22.5 gr / 7,900 PSI	24.0 gr / 8,800 PSI
1 1/8 oz	PB	Rem. 209P	Fed. 12S3	20.5 gr / 6,000 PSI	22.0 gr / 6,500 PSI	23.0 gr / 7,000 PSI	25.0 gr / 8,400 PSI
1 1/8 oz	PB	Rem. 209P	Rem. FIG. 8	21.0 gr / 5,500 PSI	22.5 gr / 6,100 PSI	23.5 gr / 6,600 PSI	25.0 gr / 7,500 PSI
1 1/8 oz	PB	Win. 209	Fed. 12S3	20.5 gr / 6,100 PSI	22.0 gr / 7,000 PSI	23.0 gr / 7,600 PSI	24.5 gr / 8,400 PSI
1 1/8 oz	PB	Win. 209	Windjammer	21.0 gr / 5,500 PSI	22.0 gr / 6,000 PSI	23.5 gr / 7,000 PSI	24.5 gr / 7,700 PSI
1 1/8 oz	SR 7625	Win. 209	WAA12	22.5 gr / 5,600 PSI	24.0 gr / 6,200 PSI	25.0 gr / 6,600 PSI	26.5 gr / 7,400 PSI
1 1/8 oz	SR 7625	Fed. 209A	Fed. 12S3	22.0 gr / 5,600 PSI	23.5 gr / 6,400 PSI	24.5 gr / 6,900 PSI	26.5 gr / 7,700 PSI
1 1/8 oz	SR 7625	Fed. 209A	Rem. FIG. 8	22.5 gr / 5,300 PSI	24.0 gr / 5,700 PSI	25.5 gr / 6,600 PSI	26.5 gr / 7,100 PSI
1 1/8 oz	SR 7625	Fed. 209A	WAA12	21.5 gr / 6,100 PSI	23.0 gr / 6,700 PSI	24.5 gr / 7,400 PSI	26.0 gr / 8,200 PSI
1 1/8 oz	SR 7625	Rem. 209P	Fed. 12S3	23.0 gr / 5,200 PSI	24.5 gr / 6,000 PSI	25.5 gr / 6,400 PSI	27.0 gr / 7,400 PSI
1 1/8 oz	SR 7625	Rem. 209P	Rem. FIG. 8	24.0 gr / 5,000 PSI	25.5 gr / 5,700 PSI	27.0 gr / 6,000 PSI	28.5 gr / 6,300 PSI
1 1/8 oz	SR 7625	Rem. 209P	WAA12	22.0 gr / 5,600 PSI	23.5 gr / 6,000 PSI	25.5 gr / 6,600 PSI	27.5 gr / 7,200 PSI
1 1/8 oz	SR 7625	Win. 209	Fed. 12S3	23.0 gr / 5,400 PSI	24.5 gr / 6,200 PSI	25.5 gr / 6,700 PSI	27.0 gr / 7,500 PSI
1 1/8 oz	800-X	Fed. 209A	Fed. 12S3	20.5 gr / 5,700 PSI	22.0 gr / 6,400 PSI	23.0 gr / 6,900 PSI	25.0 gr / 7,700 PSI
1 1/8 oz	800-X	Fed. 209A	Rem. FIG. 8	21.0 gr / 5,400 PSI	22.5 gr / 6,000 PSI	24.0 gr / 6,600 PSI	25.5 gr / 7,100 PSI
1 1/8 oz	800-X	Win. 209	Fed. 12S3	20.5 gr / 5,700 PSI	22.0 gr / 6,300 PSI	23.0 gr / 6,800 PSI	24.5 gr / 7,500 PSI
1 1/8 oz	800-X	Win. 209	Rem. FIG. 8	21.0 gr / 5,400 PSI	22.0 gr / 5,900 PSI	23.5 gr / 6,500 PSI	25.0 gr / 7,100 PSI
1 1/8 oz	800-X	Win. 209	WAA12	20.5 gr / 5,800 PSI	21.5 gr / 6,300 PSI	23.0 gr / 7,000 PSI	25.0 gr / 7,700 PSI
				1145 fps	1200 fps	1255 fps	1310 fps
1 1/8 oz	WST	CCI 209	Fed. 12S3	19.5 gr / 8,500 PSI	21.0 gr / 10,300 PSI	—	—
1 1/8 oz	WST	Win. 209	Fed. 12S3	—	21.0 gr / 9,500 PSI	—	—
1 1/8 oz	Super Hcp	Fed. 209A	Fed. 12SO	18.8 gr / 6,600 PSI	20.5 gr / 7,800 PSI	21.3 gr / 8,400 PSI	23.9 gr / 10,400 PSI
1 1/8 oz	Super Hcp	Fed. 209A	J-XL-1	—	20.7 gr / 7,500 PSI	22.3 gr / 8,600 PSI	24.0 gr / 9,800 PSI
1 1/8 oz	Super Hcp	Rem. 209P	Fed. 12SO	19.9 gr / 6,100 PSI	21.3 gr / 7,700 PSI	22.7 gr / 9,000 PSI	24.1 gr / 10,400 PSI
1 1/8 oz	Super Hcp	Rem. 209P	J-XL-1	—	21.6 gr / 7,000 PSI	22.8 gr / 8,200 PSI	24.2 gr / 9,500 PSI
1 1/8 oz	Super Hcp	Rem. 209P	Rem. TGT12	—	21.2 gr / 6,900 PSI	22.7 gr / 8,200 PSI	24.1 gr / 9,500 PSI
1 1/8 oz	Super Hcp	Win. 209	Fed. 12SO	20.5 gr / 5,700 PSI	21.9 gr / 7,200 PSI	23.3 gr / 8,700 PSI	24.6 gr / 10,100 PSI
1 1/8 oz	Super Hcp	Win. 209	Rem. TGT12	—	21.6 gr / 7,100 PSI	23.0 gr / 8,100 PSI	24.5 gr / 9,400 PSI
				1220 fps	1330 fps		
1 1/4 oz	Universal	CCI 209	Fed. 12S4	25.0 gr / 10,100 PSI	—		
1 1/4 oz	Universal	Fed. 209A	Fed. 12S4	23.3 gr / 10,400 PSI	—		
1 1/4 oz	Universal	Win. 209	WAA12 F114	24.5 gr / 10,300 PSI	—		
1 1/4 oz	HS-6	Win. 209	WAA12F114	32.0 gr / 9,600 LUP	34.5 gr / 10,100 LUP		
				1330 fps	1385 fps	1440 fps	1495 fps
1 1/4 oz	Longshot	Fed. 209A	Fed. 12S4	28.4 gr / 9,800 PSI	30.2 gr / 10,800 PSI	—	—
1 1/4 oz	Longshot	Fed. 209A	Rem. R12L	29.2 gr / 9,400 PSI	30.7 gr / 10,400 PSI	32.1 gr / 11,400 PSI	—
1 1/4 oz	Longshot	Rem. 209P	Fed. 12S4	28.4 gr / 9,400 PSI	30.1 gr / 10,300 PSI	31.8 gr / 11,300 PSI	—

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", FEDERAL GOLD MEDAL PLASTIC SHELLS (CONT.)							
				1330 fps	1385 fps	1440 fps	1495 fps
1 1/4 oz	Longshot	Win. 209	Fed. 12S4	29.7 gr / 8,000 PSI	31.3 gr / 9,300 PSI	32.9 gr / 10,600 PSI	—
1 1/4 oz	Longshot	Win. 209	Rem. R12L	30.7 gr / 7,700 PSI	32.2 gr / 8,700 PSI	33.6 gr / 9,700 PSI	35.0 gr / 10,800 PSI
1 1/4 oz	Longshot	Win. 209	WAA12F114	—	33.4 gr / 7,200 PSI	34.4 gr / 9,200 PSI	35.4 gr / 11,300 PSI
				1250 fps	1275 fps	1300 fps	1325 fps
1 1/4 oz	SR 7625	Fed. 209A	Fed. 12S3	—	27.0 gr / 10,100 PSI	—	29.0 gr / 11,000 PSI
1 1/4 oz	SR 7625	Rem. 209P	Fed. 12S3	—	28.0 gr / 8,900 PSI	—	30.0 gr / 9,700 PSI
1 1/4 oz	SR 7625	Rem. 209P	Rem. SP12	—	29.0 gr / 8,200 PSI	—	30.5 gr / 8,900 PSI
1 1/4 oz	SR 7625	Win. 209	Fed. 12S3	—	28.0 gr / 9,200 PSI	—	30.0 gr / 10,300 PSI
1 1/4 oz	SR 4756	Fed. 209A	Fed. 12S4	—	30.0 gr / 9,700 PSI	—	31.5 gr / 10,400 PSI
1 1/4 oz	SR 4756	Fed. 209A	Rem. SP12	—	30.0 gr / 9,000 PSI	—	31.5 gr / 9,800 PSI
1 1/4 oz	SR 4756	Win. 209	Fed. 12S4	—	31.0 gr / 9,100 PSI	—	32.0 gr / 9,800 PSI
1 1/4 oz	SR 4756	Win. 209	Rem. RP12	—	32.0 gr / 8,800 PSI	—	33.0 gr / 9,400 PSI
1 1/4 oz	SR 4756	Win. 209	WAA12R	—	30.5 gr / 8,400 PSI	—	32.0 gr / 8,900 PSI
1 1/4 oz	800-X	Fed. 209A	Fed. 12S4	—	25.0 gr / 9,500 PSI	—	26.5 gr / 10,400 PSI
1 1/4 oz	800-X	Fed. 209A	Rem. SP12	—	25.5 gr / 9,100 PSI	—	27.0 gr / 9,900 PSI
1 1/4 oz	800-X	Rem. 209P	Rem. SP12	—	27.0 gr / 7,700 PSI	—	29.0 gr / 8,500 PSI
1 1/4 oz	800-X	Win. 209	Fed. 12S3	—	26.0 gr / 8,800 PSI	—	27.5 gr / 9,700 PSI
1 1/4 oz	800-X	Win. 209	Rem. SP12	—	26.0 gr / 8,200 PSI	—	27.5 gr / 9,700 PSI
				1275 fps	1330 fps		
1 1/4 oz	WSF	CCI 209	Fed. 12S4	27.0 gr / 9,200 PSI	29.5 gr / 10,600 PSI	—	—
1 1/4 oz	WSF	Win. 209	Fed. 12S4	—	31.5 gr / 9,500 PSI	—	—
12 GA., 2 3/4", FEDERAL PAPER SHELLS							
				1250 fps	1325 fps	1400 fps	1475 fps
7/8 oz	Titewad	Fed. 209A	WAA12SL	19.1 gr / 6,900 PSI	20.9 gr / 8,100 PSI	22.7 gr / 9,400 PSI	24.6 gr / 10,600 PSI
7/8 oz	Titewad	Rem. 209P	G/BP SF12	18.4 gr / 8,000 PSI	20.0 gr / 9,400 PSI	21.5 gr / 11,100 PSI	—
7/8 oz	Titewad	Win. 209	WAA12SL	—	21.0 gr / 7,600 PSI	22.9 gr / 8,900 PSI	24.8 gr / 10,200 PSI
7/8 oz	Clays	Fed. 209A	WAA12SL	18.4 gr / 7,200 PSI	20.2 gr / 8,800 PSI	21.9 gr / 10,300 PSI	—
7/8 oz	Clays	Rem. 209P	Rem. Fig. 8	—	20.9 gr / 8,100 PSI	22.5 gr / 9,300 PSI	—
7/8 oz	Clays	Win. 209	WAA12	—	21.2 gr / 7,600 PSI	22.6 gr / 9,300 PSI	24.0 gr / 10,600 PSI
7/8 oz	Internat'l	Fed. 209A	Fed. 12S3	—	22.0 gr / 8,100 PSI	23.5 gr / 9,500 PSI	25.0 gr / 11,300 PSI
7/8 oz	Internat'l	Win. 209	WAA12	—	23.1 gr / 7,400 PSI	24.6 gr / 8,100 PSI	—
				1180 fps	1235 fps	1290 fps	1345 fps
1 oz	Titewad	Fed. 209A	Fed. 12S3	18.1 gr / 7,500 PSI	19.5 gr / 8,400 PSI	20.6 gr / 9,700 PSI	22.0 gr / 11,100 PSI
1 oz	Titewad	Rem. 209P	Rem. Fig. 8	17.9 gr / 7,000 PSI	19.2 gr / 8,000 PSI	20.5 gr / 9,000 PSI	21.9 gr / 10,300 PSI
1 oz	Titewad	Win. 209	WAA12	17.4 gr / 7,200 PSI	18.7 gr / 8,900 PSI	20.0 gr / 9,800 PSI	21.3 gr / 10,900 PSI
1 oz	Clays	Fed. 209A	Fed. 12SO	18.0 gr / 7,100 PSI	19.5 gr / 8,700 PSI	21.0 gr / 10,900 PSI	—
1 oz	Clays	Rem. 209P	Rem. TGT 12	18.5 gr / 6,000 PSI	20.0 gr / 6,400 PSI	22.0 gr / 7,700 PSI	—
1 oz	Clays	Win. 209	WAA12SL	17.5 gr / 6,400 PSI	19.0 gr / 8,300 PSI	21.0 gr / 10,800 PSI	—
1 oz	Internat'l	Fed. 209A	Fed. 12C1	—	20.7 gr / 8,100 PSI	22.0 gr / 9,400 PSI	23.2 gr / 10,600 PSI
1 oz	Internat'l	Rem. 209P	Fed. 12C1	—	—	23.2 gr / 7,900 PSI	24.2 gr / 9,300 PSI
1 oz	Internat'l	Win. 209	Fed. 12C1	—	—	23.2 gr / 7,700 PSI	24.4 gr / 9,100 PSI

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", FEDERAL PAPER SHELLS (CONT.)							
				1090 fps	1145 fps	1200 fps	1255 fps
1 1/8 oz	Titewad	Fed. 209A	Fed. 12C1	16.6 gr / 7,700 PSI	17.9 gr / 8,800 PSI	19.3 gr / 10,100 PSI	—
1 1/8 oz	Titewad	Win. 209	WAA12	16.4 gr / 7,500 PSI	17.4 gr / 8,400 PSI	18.8 gr / 10,000 PSI	—
1 1/8 oz	Clays	Ched. 209	Rem. Fig. 8	16.8 gr / 5,800 PSI	18.4 gr / 8,100 PSI	19.8 gr / 10,300 PSI	—
1 1/8 oz	Clays	Fed. 209A	Fed. 12C1	17.3 gr / 7,500 PSI	18.3 gr / 8,600 PSI	19.3 gr / 9,700 PSI	—
1 1/8 oz	Clays	Rem. 209P	Rem. Fig. 8	18.0 gr / 5,900 PSI	18.5 gr / 7,000 PSI	19.5 gr / 9,200 PSI	—
1 1/8 oz	Clays	Win. 209	Fed. 12C1	—	19.3 gr / 7,600 PSI	20.0 gr / 8,300 PSI	—
1 1/8 oz	Clays	Win. 209	WAA12	17.0 gr / 7,600 PSI	18.0 gr / 8,800 PSI	19.0 gr / 10,900 PSI	—
1 1/8 oz	Internat'l	Ched. 209	Fed. 12C1	18.1 gr / 6,900 PSI	19.3 gr / 8,200 PSI	20.5 gr / 9,500 PSI	21.6 gr / 10,700 PSI
1 1/8 oz	Internat'l	Fed. 209A	Fed. 12C1	19.6 gr / 7,800 PSI	20.9 gr / 9,000 PSI	22.1 gr / 10,200 PSI	—
1 1/8 oz	Internat'l	Win. 209	WAA12	20.0 gr / 6,400 LUP	20.6 gr / 7,000 LUP	21.6 gr / 7,500 LUP	23.2 gr / 8,600 LUP
1 1/8 oz	Internat'l	Rem. 209P	Fed. 12C1	—	21.8 gr / 7,800 PSI	22.9 gr / 9,000 PSI	—
				1365 fps	1420 fps	1475 fps	1530 fps
1 1/8 oz	Longshot	Fed. 209A	Fed. 12C1	—	33.1 gr / 8,500 PSI	34.0 gr / 9,800 PSI	34.9 gr / 11,200 PSI
1 1/8 oz	Longshot	Win. 209	WAA12 F114	—	—	35.7 gr / 8,700 PSI	36.5 gr / 10,100 PSI

12 GA., 2 3/4", REMINGTON STS, OR NITRO 27, OR GUN CLUB PLASTIC SHELLS							
				1250 fps	1300 fps	1350 fps	1400 fps
7/8 oz	Titewad	Fed. 209A	Rem. TGT 12	16.8 gr / 9,100 PSI	18.0 gr / 10,100 PSI	19.1 gr / 11,000 PSI	20.2 gr / 11,500 PSI
7/8 oz	Titewad	Rem. 209P	Rem. TGT 12	17.4 gr / 8,200 PSI	18.7 gr / 9,100 PSI	19.8 gr / 9,500 PSI	21.0 gr / 10,500 PSI
7/8 oz	Titewad	Rem. 209P	WAA12L	16.9 gr / 8,200 PSI	18.4 gr / 9,400 PSI	19.7 gr / 10,100 PSI	20.9 gr / 11,300 PSI
7/8 oz	Titewad	Win. 209	Rem. TGT 12	17.0 gr / 8,500 PSI	18.0 gr / 9,900 PSI	19.2 gr / 10,900 PSI	—
7/8 oz	Titewad	Win. 209	WAA12L	17.3 gr / 8,300 PSI	18.6 gr / 9,200 PSI	19.8 gr / 10,600 PSI	21.1 gr / 11,300 PSI
				1200 fps	1250 fps	1300 fps	1350 fps
7/8 oz	Clays	Fed. 209A	Fed. 12SO	16.3 gr / 8,900 PSI	17.3 gr / 9,600 PSI	18.5 gr / 11,500 PSI	—
7/8 oz	Clays	Rem. 209P	Rem. TGT 12	16.4 gr / 6,300 PSI	17.5 gr / 7,100 PSI	18.9 gr / 7,400 PSI	—
7/8 oz	Clays	Rem. 209P	WAA12L	16.8 gr / 6,700 PSI	18.0 gr / 7,300 PSI	19.3 gr / 9,000 PSI	20.3 gr / 9,700 PSI
7/8 oz	Clays	Win. 209	Rem. TGT 12	16.8 gr / 7,500 PSI	18.0 gr / 8,400 PSI	19.0 gr / 9,100 PSI	20.0 gr / 10,100 PSI
7/8 oz	Clays	Win. 209	WAA12SL	15.9 gr / 7,100 PSI	17.1 gr / 8,900 PSI	18.2 gr / 10,000 PSI	—
7/8 oz	Clays	Win. 209	WAA12L	17.1 gr / 8,100 PSI	18.0 gr / 8,900 PSI	19.3 gr / 10,100 PSI	20.1 gr / 11,400 PSI
				1250 fps	1300 fps	1350 fps	1400 fps
7/8 oz	Internat'l	Fed. 209A	WAA12L	19.4 gr / 7,200 PSI	20.4 gr / 8,000 PSI	21.5 gr / 9,000 PSI	22.6 gr / 10,000 PSI
7/8 oz	Internat'l	Rem. 209P	Rem. TGT 12	20.0 gr / 6,600 PSI	21.0 gr / 7,500 PSI	21.9 gr / 8,300 PSI	22.9 gr / 9,200 PSI
7/8 oz	Internat'l	Rem. 209P	WAA12L	20.5 gr / 6,900 PSI	21.3 gr / 7,600 PSI	22.2 gr / 8,400 PSI	23.1 gr / 9,300 PSI
7/8 oz	Internat'l	Win. 209	Rem. TGT 12	20.2 gr / 6,500 PSI	21.3 gr / 7,300 PSI	22.3 gr / 8,100 PSI	23.4 gr / 8,900 PSI
7/8 oz	Internat'l	Win. 209	WAA12L	20.7 gr / 6,500 PSI	21.5 gr / 7,400 PSI	22.3 gr / 8,200 PSI	23.1 gr / 9,100 PSI
				1150 fps	1200 fps	1250 fps	1325 fps
24 gm	700-X	Fed. 209A	Rem. TGT12	15.0 gr / 6,500 PSI	16.0 gr / 7,400 PSI	17.0 gr / 8,300 PSI	18.5 gr / 9,600 PSI
24 gm	700-X	Fed. 209A	WAA12SL	14.5 gr / 6,500 PSI	15.5 gr / 7,300 PSI	16.5 gr / 8,200 PSI	18.5 gr / 10,000 PSI
24 gm	700-X	Rem. 209P	Rem. TGT12	15.0 gr / 5,800 PSI	16.0 gr / 6,600 PSI	17.0 gr / 7,300 PSI	19.0 gr / 8,700 PSI
24 gm	700-X	Rem. 209P	WAA12SL	15.0 gr / 6,400 PSI	16.0 gr / 7,200 PSI	17.0 gr / 7,900 PSI	18.5 gr / 8,900 PSI
24 gm	700-X	Win. 209	Rem. TGT12	15.0 gr / 6,300 PSI	16.0 gr / 7,200 PSI	17.0 gr / 8,000 PSI	18.5 gr / 9,200 PSI
24 gm	700-X	Win. 209	WAA12SL	15.0 gr / 6,700 PSI	16.0 gr / 7,600 PSI	17.0 gr / 8,400 PSI	18.5 gr / 9,700 PSI
24 gm	PB	Fed. 209A	Rem. TGT12	18.0 gr / 5,500 PSI	19.5 gr / 6,300 PSI	20.5 gr / 6,700 PSI	22.5 gr / 7,800 PSI
24 gm	PB	Fed. 209A	WAA12SL	17.5 gr / 6,400 PSI	18.5 gr / 7,100 PSI	20.0 gr / 8,100 PSI	21.5 gr / 9,000 PSI

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", REMINGTON STS, OR NITRO 27, OR GUN CLUB PLASTIC SHELLS (CONT.)							
				1150 fps	1200fps	1250 fps	
24 gm	PB	Rem. 209P	Rem. TGT12	19.5 gr / 4,800 PSI	20.5 gr / 5,200 PSI	22.0 gr / 6,000 PSI	23.5 gr / 6,900 PSI
24 gm	PB	Rem. 209P	WAA12SL	18.5 gr / 5,400 PSI	19.5 gr / 6,200 PSI	21.0 gr / 7,300 PSI	22.5 gr / 8,000 PSI
24 gm	PB	Win. 209	Rem. TGT12	19.0 gr / 5,200 PSI	20.0 gr / 5,700 PSI	21.0 gr / 6,200 PSI	23.0 gr / 7,300 PSI
24 gm	PB	Win. 209	WAA12SL	18.0 gr / 5,600 PSI	19.5 gr / 6,400 PSI	20.5 gr / 7,000 PSI	22.5 gr / 8,100 PSI
				1325 fps	1400 fps		
7/8 oz	WST	CCI 209	WAA12L	21.5 gr / 8,100 PSI	23.0 gr / 9,000 PSI		
7/8 oz	WST	Fed. 209A	WAA12L	21.0 gr / 8,300 PSI	23.0 gr / 9,700 PSI		
7/8 oz	WST	Win. 209	WAA12L	21.0 gr / 8,200 PSI	23.0 gr / 10,300 PSI		
				1125 fps	1180 fps	1235 fps	1290 fps
1 oz	Titewad	Fed. 209A	Rem. TGT 12	15.5 gr / 7,500 PSI	16.5 gr / 8,800 PSI	17.8 gr / 10,000 PSI	—
1 oz	Titewad	Rem. 209P	WAA12SL	15.5 gr / 7,900 PSI	16.7 gr / 9,200 PSI	18.0 gr / 10,000 PSI	19.0 gr / 11,300 PSI
1 oz	Titewad	Rem. 209P	Rem. TGT 12	—	16.7 gr / 7,800 PSI	18.2 gr / 9,600 PSI	19.4 gr / 11,300PSI
1 oz	Titewad	Win. 209	Rem. TGT 12	15.3 gr / 7,400 PSI	16.6 gr / 8,600 PSI	17.9 gr / 9,800 PSI	19.2 gr / 11,000 PSI
1 oz	Titewad	Win. 209	WAA12SL	15.5 gr / 7,900 PSI	16.5 gr / 8,900 PSI	18.0 gr / 11,000 PSI	—
1 oz	Clays	Rem. 209P	Rem. TGT 12	16.8 gr / 6,600 LUP	17.9 gr / 7,400 LUP	18.9 gr / 8,100 LUP	19.9 gr / 8,800 LUP
1 oz	Clays	Rem. 209P	WAA12SL	16.4 gr / 6,700 PSI	17.6 gr / 8,100 PSI	18.7 gr / 9,400 PSI	19.9 gr / 10,900 PSI
1 oz	Clays	Win. 209	Rem. TGT 12	16.3 gr / 6,500 PSI	17.6 gr / 7,900 PSI	18.8 gr / 9,200 PSI	20.1 gr / 10,500 PSI
1 oz	Clays	Win. 209	WAA12SL	15.7 gr / 7,100 LUP	17.0 gr / 8,200 LUP	18.4 gr / 9,500 LUP	19.8 gr / 10,700 LUP
				1180 fps	1235 fps	1290 fps	1345 fps
1 oz	Internat'l	Rem. 209P	Rem. TGT 12	20.2 gr / 6,800 LUP	20.9 gr / 7,700 LUP	21.4 gr / 8,900 LUP	—
1 oz	Internat'l	Rem. 209P	WAA12SL	19.0 gr / 6,800 PSI	20.2 gr / 8,100 PSI	21.3 gr / 9,300 PSI	22.4 gr / 10,500 PSI
1 oz	Internat'l	Win. 209	Rem. TGT 12	18.9 gr / 7,100 PSI	20.2 gr / 8,200 PSI	21.5 gr / 9,300 PSI	22.8 gr / 10,300 PSI
1 oz	Internat'l	Win. 209	WAA12SL	18.4 gr / 7,100 LUP	20.1 gr / 8,600 LUP	21.0 gr / 10,000 LUP	—
1 oz	Titegroup	Rem. 209P	Rem. TGT 12	16.1 gr / 7,900 PSI	17.3 gr / 8,900 PSI	18.6 gr / 10,100 PSI	19.9 gr / 11,200 PSI
1 oz	Titegroup	Rem. 209P	WAA12SL	16.4 gr / 7,700 PSI	17.6 gr / 9,100 PSI	18.8 gr / 10,400 PSI	—
1 oz	Titegroup	Win. 209	Rem. TGT 12	16.0 gr / 7,700 PSI	17.5 gr / 8,900 PSI	18.9 gr / 10,000 PSI	20.3 gr / 11,000 PSI
1 oz	Titegroup	Win. 209	WAA12SL	16.3 gr / 8,100 PSI	17.6 gr / 9,100 PSI	18.9 gr / 10,200 PSI	20.5 gr / 11,300 PSI
				1100 fps	1150 fps	1200 fps	1250 fps
1 oz	700-X	Rem. 209P	Rem. TGT12	14.5 gr / 6,600 PSI	15.5 gr / 7,500 PSI	16.5 gr / 8,400 PSI	18.0 gr / 9,500 PSI
1 oz	700-X	Rem. 209P	WAA12SL	14.5 gr / 7,300 PSI	15.5 gr / 8,100 PSI	16.5 gr / 9,000 PSI	18.0 gr / 10,500 PSI
1 oz	700-X	Win. 209	Rem. TGT12	15.0 gr / 7,300 PSI	15.5 gr / 7,700 PSI	16.5 gr / 8,700 PSI	18.0 gr / 9,800 PSI
1 oz	700-X	Win. 209	WAA12SL	15.0 gr / 7,400 PSI	16.0 gr / 8,300 PSI	17.0 gr / 9,300 PSI	18.0 gr / 10,300 PSI
1 oz	PB	Rem. 209P	Rem. TGT12	19.0 gr / 5,700 PSI	20.0 gr / 6,300 PSI	21.5 gr / 7,100 PSI	22.5 gr / 7,600 PSI
1 oz	PB	Rem. 209P	WAA12SL	18.0 gr / 6,500 PSI	19.5 gr / 7,200 PSI	20.5 gr / 7,700 PSI	22.5 gr / 8,700 PSI
1 oz	PB	Win. 209	Rem. TGT12	19.0 gr / 5,700 PSI	20.0 gr / 6,300 PSI	21.0 gr / 6,800 PSI	22.5 gr / 7,700 PSI
1 oz	PB	Win. 209	WAA12	18.5 gr / 5,900 PSI	19.5 gr / 6,500 PSI	21.0 gr / 7,300 PSI	22.5 gr / 8,100 PSI
				1180 fps	1235 fps	1290 fps	
1 oz	WST	Win. 209	Fed. 12SO	19.0 gr / 8,200 PSI	20.0 gr / 8,900 PSI	21.0 gr / 9,700 PSI	—
1 oz	WST	Win. 209	WAA12SL	—	19.5 gr / 8,000 PSI	21.0 gr / 10,000 PSI	—
				1180 fps	1235 fps	1290 fps	1345 fps
1 oz	Super Hcp	Rem. 209P	J-XL-1	18.4 gr / 6,700 PSI	19.5 gr / 7,600 PSI	20.8 gr / 8,600 PSI	22.3 gr / 9,900 PSI
1 oz	Super Hcp	Rem. 209P	Rem. TGT12	18.7 gr / 6,500 PSI	19.9 gr / 7,500 PSI	21.0 gr / 8,400 PSI	22.6 gr / 9,700 PSI
1 oz	Super Hcp	Rem. 209P	WAA12SL	18.7 gr / 6,200 PSI	20.0 gr / 7,400 PSI	21.2 gr / 8,500 PSI	22.5 gr / 9,700 PSI

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", REMINGTON STS, OR NITRO 27, OR GUN CLUB PLASTIC SHELLS (CONT.)							
				1180 fps	1235 fps	1290 fps	1345 fps
1 oz	Super Hcp	Win. 209	J-XL-1	19.0 gr/ 6,200 PSI	20.3 gr/ 7,500 PSI	21.5 gr/ 8,700 PSI	22.8 gr/10,000 PSI
1 oz	Super Hcp	Win. 209	Rem. TGT12	20.0 gr/ 6,400 PSI	20.7 gr/ 7,300 PSI	21.7 gr/ 8,500 PSI	22.9 gr/ 9,900 PSI
1 oz	Super Hcp	Win. 209	WAA12SL	19.2 gr/ 6,100 PSI	20.5 gr/ 7,400 PSI	21.7 gr/ 8,600 PSI	23.0 gr/ 9,900 PSI
				1090 fps	1145 fps	1200 fps	1255 fps
1 1/8 oz	Titewad	Fed. 209A	Rem. Fig. 8	15.2 gr/ 9,600 PSI	16.3 gr/ 10,700 PSI	—	—
1 1/8 oz	Titewad	Fed. 209A	WAA12	15.2 gr/ 9,800 PSI	16.0 gr/ 10,500 PSI	—	—
1 1/8 oz	Titewad	Rem. 209P	Rem. Fig. 8	15.2 gr/ 9,100 PSI	16.5 gr/ 10,100 PSI	17.9 gr/ 10,900 PSI	—
1 1/8 oz	Titewad	Rem. 209P	WAA12	15.1 gr/ 9,700 PSI	16.1 gr/ 10,900 PSI	—	—
1 1/8 oz	Titewad	Win. 209	Rem. Fig. 8	15.8 gr/ 9,200 PSI	16.8 gr/ 10,400 PSI	17.8 gr/ 11,300 PSI	—
1 1/8 oz	Titewad	Win. 209	WAA12	15.4 gr/ 8,700 PSI	16.7 gr/ 10,000 PSI	17.9 gr/ 11,400 PSI	—
1 1/8 oz	Clays	Rem. 209P	Rem. Fig. 8	16.9 gr/ 6,900 LUP	18.0 gr/ 7,900 LUP	19.2 gr/ 9,000 LUP	—
1 1/8 oz	Clays	Rem. 209P	WAA12	16.6 gr/ 7,700 LUP	17.7 gr/ 9,000 LUP	18.8 gr/ 10,300 LUP	—
1 1/8 oz	Clays	Win. 209	Hor Versalite	15.8 gr/ 7,600 LUP	17.2 gr/ 9,100 LUP	18.6 gr/ 10,500 LUP	—
1 1/8 oz	Clays	Win. 209	Rem. Fig. 8	16.4 gr/ 8,400 PSI	17.5 gr/ 9,700 PSI	18.6 gr/ 11,000 PSI	—
1 1/8 oz	Clays	Win. 209	WAA12	16.2 gr/ 8,100 PSI	17.3 gr/ 9,700 PSI	18.4 gr/ 11,300 PSI	—
1 1/8 oz	Internat'l	Rem. 209P	Hor. Vers.	17.2 gr/ 7,700 PSI	18.4 gr/ 8,900 PSI	19.6 gr/ 10,100 PSI	20.8 gr/ 11,300 PSI
1 1/8 oz	Internat'l	Rem. 209P	Rem. Fig. 8	18.6 gr/ 6,400 LUP	19.6 gr/ 7,000 LUP	20.9 gr/ 7,500 LUP	21.7 gr/ 9,100 LUP
1 1/8 oz	Internat'l	Rem. 209P	WAA12	18.3 gr/ 7,000 LUP	18.8 gr/ 7,600 LUP	19.7 gr/ 8,700 LUP	20.9 gr/10,400 LUP
1 1/8 oz	Internat'l	Win. 209	Hor. Versalite	17.8 gr/ 6,900 LUP	18.4 gr/ 7,800 LUP	19.5 gr/ 9,100 LUP	20.6 gr/10,400 LUP
1 1/8 oz	Internat'l	Win. 209	Rem. Fig. 8	17.5 gr/ 7,900 PSI	18.6 gr/ 9,000 PSI	19.7 gr/ 10,200 PSI	20.8 gr/ 11,300 PSI
1 1/8 oz	Internat'l	Win. 209	WAA12	17.0 gr/ 7,100 PSI	18.4 gr/ 8,600 PSI	19.8 gr/ 10,100 PSI	21.1 gr/ 11,500 PSI
1 1/8 oz	Titigroup	Rem. 209P	Rem. Fig. 8	14.9 gr/ 8,200 PSI	16.0 gr/ 9,100 PSI	17.1 gr/ 10,000 PSI	18.5 gr/ 11,500 PSI
1 1/8 oz	Titigroup	Rem. 209P	WAA12	14.9 gr/ 8,000 PSI	15.8 gr/ 9,200 PSI	16.7 gr/ 10,300 PSI	—
1 1/8 oz	Titigroup	Win. 209	Rem. Fig. 8	15.1 gr/ 8,000 PSI	16.1 gr/ 8,900 PSI	17.1 gr/ 9,900 PSI	—
1 1/8 oz	Titigroup	Win. 209	WAA12	14.7 gr/ 8,300 PSI	15.8 gr/ 9,400 PSI	16.8 gr/ 10,500 PSI	—
				1200 fps	1255 fps	1310 fps	
1 1/8 oz	Universal	Win. 209	Rem. Fig. 8	22.5 gr/ 8,900 PSI	23.7 gr/ 9,900 PSI	25.0 gr/ 10,800 PSI	
1 1/8 oz	Universal	Win. 209	WAA12	21.5 gr/ 9,800 PSI	23.0 gr/ 10,700 PSI	—	
				1420 fps	1475 fps	1530 fps	1585 fps
1 1/8 oz	Longshot	Rem. 209P	Hor. Vers.	31.0 gr/ 9,100 PSI	32.4 gr/ 10,000 PSI	33.7 gr/ 10,900 PSI	—
1 1/8 oz	Longshot	Rem. 209P	Rem. R12L	31.1 gr/ 9,400 PSI	32.5 gr/ 10,400 PSI	33.9 gr/ 11,400 PSI	—
1 1/8 oz	Longshot	Rem. 209P	WAA12	30.6 gr/ 9,300 PSI	31.7 gr/ 10,400 PSI	32.7 gr/ 11,500 PSI	—
1 1/8 oz	Longshot	Win. 209	Rem. R12L	31.5 gr/ 8,800 PSI	32.0 gr/ 10,100 PSI	34.5 gr/ 11,400 PSI	—
1 1/8 oz	Longshot	Win. 209	WAA12	31.7 gr/ 9,100 PSI	32.8 gr/ 10,100 PSI	33.5 gr/ 11,200 PSI	—
				1100 fps	1150 fps	1200 fps	1250 fps
1 1/8 oz	700-X	Fed. 209A	Rem. FIG. 8	15.5 gr/ 8,900 PSI	16.5 gr/ 10,000 PSI	17.5 gr/ 11,000 PSI	—
1 1/8 oz	700-X	Fed. 209A	WAA12	15.0 gr/ 9,500 PSI	16.5 gr/ 10,900 PSI	—	—
1 1/8 oz	700-X	Rem. 209P	Rem. FIG. 8	15.5 gr/ 8,100 PSI	16.5 gr/ 9,000 PSI	18.0 gr/ 10,400 PSI	19.0 gr/ 11,300 PSI
1 1/8 oz	700-X	Rem. 209P	WAA12	15.0 gr/ 8,500 PSI	16.0 gr/ 9,600 PSI	17.5 gr/ 11,200 PSI	—
1 1/8 oz	700-X	Win. 209	Rem. FIG. 8	15.5 gr/ 8,500 PSI	16.5 gr/ 9,400 PSI	18.0 gr/ 10,800 PSI	—
1 1/8 oz	700-X	Win. 209	WAA12	15.5 gr/ 9,300 PSI	16.5 gr/ 10,200 PSI	17.5 gr/ 11,200 PSI	—
1 1/8 oz	PB	Fed. 209A	WAA12	18.5 gr/ 8,200 PSI	20.0 gr/ 9,200 PSI	21.0 gr/ 9,900 PSI	23.0 gr/ 11,000 PSI
1 1/8 oz	PB	Rem. 209P	Rem. FIG. 8	20.0 gr/ 6,800 PS	21.5 gr/ 7,500 PSI	23.0 gr/ 8,400 PSI	24.5 gr/ 9,300 PSI
1 1/8 oz	PB	Rem. 209P	WAA12	19.5 gr/ 7,300 PSI	20.5 gr/ 8,000 PSI	22.0 gr/ 8,700 PSI	23.5 gr/ 9,500 PSI
1 1/8 oz	PB	Win. 209	Rem. FIG. 8	19.5 gr/ 6,900 PSI	21.0 gr/ 7,900 PSI	22.0 gr/ 8,400 PSI	23.5 gr/ 9,300 PSI

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", REMINGTON STS, OR NITRO 27, OR GUN CLUB PLASTIC SHELLS (CONT.)							
				1100 fps	1150 fps	1200 fps	1250 fps
1 1/8 oz	PB	Win. 209	WAA12	19.0 gr/ 7,700 PSI	20.0 gr/ 8,400 PSI	22.0 gr/ 9,400 PSI	23.5 gr/ 10,200 PSI
1 1/8 oz	SR 7625	Fed. 209A	Rem. RXP12	20.5 gr/ 7,200 PSI	22.0 gr/ 8,000 PSI	23.0 gr/ 8,600 PSI	24.5 gr/ 9,400 PSI
1 1/8 oz	SR 7625	Fed. 209A	WAA12	19.5 gr/ 7,900 PSI	20.5 gr/ 8,500 PSI	22.0 gr/ 9,700 PSI	23.0 gr/ 10,500 PSI
1 1/8 oz	SR 7625	Rem. 209P	Rem. RXP12	21.0 gr/ 6,500 PSI	22.5 gr/ 7,400 PSI	24.0 gr/ 8,200 PSI	25.5 gr/ 9,000 PSI
1 1/8 oz	SR 7625	Rem. 209P	WAA12	20.0 gr/ 7,100 PSI	21.5 gr/ 8,000 PSI	23.0 gr/ 8,700 PSI	24.5 gr/ 9,400 PSI
1 1/8 oz	SR 7625	Win. 209	Rem. RXP12	21.0 gr/ 6,200 PSI	22.5 gr/ 7,400 PSI	23.5 gr/ 7,900 PSI	25.0 gr/ 8,800 PSI
1 1/8 oz	SR 7625	Win. 209	WAA12	20.5 gr/ 7,000 PSI	22.0 gr/ 7,900 PSI	23.0 gr/ 8,600 PSI	24.5 gr/ 9,500 PSI
1 1/8 oz	800-X	Win. 209	Rem. FIG. 8	19.5 gr/ 6,500 PSI	20.5 gr/ 7,200 PSI	22.0 gr/ 8,100 PSI	23.5 gr/ 8,900 PSI
1 1/8 oz	800-X	Win. 209	WAA12	19.0 gr/ 6,900 PSI	20.0 gr/ 7,800 PSI	21.0 gr/ 8,600 PSI	22.5 gr/ 9,600 PSI
				1145 fps	1200 fps	1255 fps	1310 fps
1 1/8 oz	WST	Win. 209	Rem. FIG. 8	19.0 gr/ 10,400 PSI	—	—	—
1 1/8 oz	WST	Win. 209	Rem. RXP12	19.0 gr/ 10,500 PSI	—	—	—
1 1/8 oz	Super Hcp	Rem. 209P	DRV-12	18.3 gr/ 8,700 PSI	19.6 gr/ 10,000 PSI	20.9 gr/ 11,200 PSI	—
1 1/8 oz	Super Hcp	Rem. 209P	Rem. FIG. 8	18.4 gr/ 8,400 PSI	19.6 gr/ 9,700 PSI	20.9 gr/ 11,100 PSI	—
1 1/8 oz	Super Hcp	Rem. 209P	WAA12	18.5 gr/ 8,700 PSI	19.8 gr/ 10,000 PSI	21.0 gr/ 11,400 PSI	—
1 1/8 oz	Super Hcp	Rem. 209P	WJ-12-RPL	18.0 gr/ 6,800 PSI	19.8 gr/ 8,100 PSI	21.5 gr/ 9,400 PSI	23.0 gr/ 10,500 PSI
1 1/8 oz	Super Hcp	Win. 209	DRV-12	18.5 gr/ 8,600 PSI	19.8 gr/ 10,000 PSI	21.0 gr/ 11,300 PSI	—
1 1/8 oz	Super Hcp	Win. 209	Rem. FIG. 8	18.2 gr/ 8,200 PSI	19.6 gr/ 9,700 PSI	20.9 gr/ 11,100 PSI	—
1 1/8 oz	Super Hcp	Win. 209	WAA12	18.4 gr/ 8,100 PSI	19.7 gr/ 9,600 PSI	21.0 gr/ 11,200 PSI	—
1 1/8 oz	Super Hcp	Win. 209	WJ-12-RPL	18.0 gr/ 6,700 PSI	19.8 gr/ 8,100 PSI	21.5 gr/ 9,500 PSI	23.0 gr/ 11,100 PSI
				1145 fps	1310 fps	1365 fps	1400 fps
1 1/8 oz	WSF	Win. 209	Fed. 12S3	—	—	28.0 gr/ 8,900 PSI	29.0 gr/ 9,500 PSI
1 1/8 oz	WSF	Win. 209	WAA12	—	27.0 gr/ 9,700 PSI	28.5 gr/ 10,700 PSI	—
				1220 fps	1330 fps		
1 1/4 oz	Universal	Rem. 209P	Rem. SP12	24.0 gr/ 9,600 PSI	—		
1 1/4 oz	Universal	Rem. 209P	WAA12F114	23.7 gr/ 10,600 PSI	—		
1 1/4 oz	Universal	Win. 209	Rem. SP12	24.0 gr/ 10,000 PSI	—		
1 1/4 oz	Universal	Win. 209	WAA12F114	23.5 gr/ 10,900 PSI	—		
1 1/4 oz	HS-6	Win. 209	WAA12F114	32.0 gr/ 9,200 LUP	34.0 gr/ 10,400 LUP		
1 1/4 oz	HS-6	Win. 209	Rem. R12H	32.0 gr/ 9,100 LUP	34.0 gr/ 10,200 LUP		
				1330 fps	1385 fps	1440 fps	1495 fps
1 1/4 oz	Longshot	Rem. 209P	Rem. R12L	28.5 gr/ 9,900 PSI	29.9 gr/ 10,700 PSI	—	—
1 1/4 oz	Longshot	Rem. 209P	WAA12F114	27.1 gr/ 10,600 PSI	28.2 gr/ 11,500 PSI	—	—
1 1/4 oz	Longshot	Win. 209	Rem. R12L	28.5 gr/ 9,300 PSI	30.2 gr/ 10,300 PSI	31.8 gr/ 11,200 PSI	—
1 1/4 oz	Longshot	Win. 209	WAA12F114	28.2 gr/ 9,100 PSI	30.1 gr/ 10,400 PSI	—	—
				1225 fps	1275 fps	1325 fps	
1 1/4 oz	SR 7625	Rem. 209P	Rem. SP12	—	27.5 gr/ 10,600 PSI	28.5 gr/ 11,500 PSI	
1 1/4 oz	SR 7625	Rem. 209P	WAA12R	—	27.0 gr/ 10,300 PSI	28.5 gr/ 11,400 PSI	
1 1/4 oz	SR 7625	Win. 209	Rem. SP12	—	26.5 gr/ 10,800 PSI	27.5 gr/ 11,500 PSI	
1 1/4 oz	SR 7625	Win. 209	WAA12R	—	27.0 gr/ 10,200 PSI	29.0 gr/ 11,500 PSI	
1 1/4 oz	SR 4756	Fed. 209A	WAA12R	—	28.0 gr/ 10,600 PSI	29.0 gr/ 11,400 PSI	
1 1/4 oz	SR 4756	Rem. 209P	Rem. SP12	—	30.0 gr/ 9,300 PSI	31.5 gr/ 10,400 PSI	
1 1/4 oz	800-X	Rem. 209P	Rem. SP12	—	24.5 gr/ 9,500 PSI	26.0 gr/ 10,200 PSI	
1 1/4 oz	800-X	Win. 209	Fed. 12S4	—	24.5 gr/ 10,600 PSI	26.0 gr/ 11,500 PSI	

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*				
12 GA., 2 3/4", REMINGTON STS, OR NITRO 27, OR GUN CLUB PLASTIC SHELLS (CONT.)								
1 1/4 oz	800-X	Win. 209	Rem. SP12	1225 fps	1275 fps	1325 fps		
				—	24.5 gr / 10,100 PSI	26.0 gr / 11,000 PSI		
1 1/4 oz	WSF	CCI 209	WAA12F114	1220 fps	1275 fps	1330 fps		
				25.5 gr / 9,100 PSI	27.0 gr / 10,200 PSI	28.5 gr / 10,900 PSI	—	
1 1/4 oz	WSF	Win. 209	WAA12F114	—	27.5 gr / 9,700 PSI	29.5 gr / 10,400 PSI	—	
12 GA., 2 3/4", WINCHESTER COMPRESSION-FORMED AA AND HS PLASTIC SHELLS								
7/8 oz	Titewad	Fed. 209A	WAA12L	1250 fps	1300 fps	1350 fps	1400 fps	
				17.8 gr / 8,600 PSI	18.8 gr / 9,100 PSI	19.8 gr / 10,700 PSI	—	
				17.2 gr / 8,300 PSI	18.2 gr / 9,400 PSI	19.5 gr / 10,300 PSI	—	
				18.0 gr / 8,500 PSI	19.0 gr / 9,100 PSI	19.9 gr / 10,000 PSI	—	
				17.1 gr / 9,300 PSI	18.1 gr / 9,900 PSI	19.5 gr / 10,800 PSI	—	
7/8 oz	Titewad	Win. 209	WAA12L	17.8 gr / 8,600 PSI	19.1 gr / 9,500 PSI	20.2 gr / 10,300 PSI	21.4 gr / 10,800 PSI	
7/8 oz	Clays	Fed. 209A	WAA12L	1200 fps	1250 fps	1300 fps	1350 fps	
				—	18.0 gr / 8,400 PSI	19.1 gr / 9,300 PSI	20.5 gr / 10,800 PSI	
				18.2 gr / 6,000 LUP	18.9 gr / 6,800 LUP	—	—	
				16.8 gr / 6,800 PSI	18.1 gr / 7,500 PSI	19.1 gr / 8,600 PSI	20.5 gr / 10,700 PSI	
				15.8 gr / 7,100 PSI	17.4 gr / 8,000 PSI	18.4 gr / 9,000 PSI	19.4 gr / 11,300 PSI	
7/8 oz	Clays	Win. 209	WAA12L	—	18.3 gr / 8,300 PSI	19.2 gr / 9,400 PSI	20.5 gr / 10,000 PSI	
7/8 oz	Internat'l	Rem. 209P	Rem.TGT12	1250 fps	1300 fps	1350 fps	1400 fps	
				20.5 gr / 6,800 PSI	21.5 gr / 7,300 PSI	22.5 gr / 8,300 PSI	23.0 gr / 9,300 PSI	
				20.0 gr / 7,500 PSI	20.8 gr / 8,300 PSI	22.2 gr / 8,900 PSI	22.7 gr / 10,200 PSI	
				19.2 gr / 7,100 PSI	20.2 gr / 7,800 PSI	21.2 gr / 8,700 PSI	22.5 gr / 9,300 PSI	
				20.5 gr / 7,900 PSI	21.0 gr / 8,600 PSI	21.5 gr / 9,100 PSI	22.5 gr / 10,200 PSI	
7/8 oz	Internat'l	Win. 209	WAA12SL	20.5 gr / 7,900 PSI	21.0 gr / 8,600 PSI	21.5 gr / 9,100 PSI	22.5 gr / 10,200 PSI	
24 gm	700-X	Fed. 209A	Rem. TGT12	1150 fps	1200 fps	1250 fps	1325 fps	
				14.5 gr / 6,000 PSI	16.0 gr / 7,000 PSI	17.0 gr / 7,800 PSI	18.5 gr / 8,600 PSI	
				14.5 gr / 6,400 PSI	15.5 gr / 7,000 PSI	17.0 gr / 8,100 PSI	18.5 gr / 9,100 PSI	
	700-X	Rem. 209P	Rem. TGT12	WAA12SL	15.5 gr / 5,000 PSI	16.5 gr / 5,500 PSI	18.0 gr / 6,100 PSI	20.5 gr / 6,800 PSI
					15.0 gr / 5,300 PSI	16.5 gr / 6,000 PSI	18.0 gr / 6,800 PSI	19.5 gr / 7,600 PSI
					14.5 gr / 6,000 PSI	16.0 gr / 6,900 PSI	17.0 gr / 7,600 PSI	18.5 gr / 8,700 PSI
	700-X	Win. 209	WAA12SL	Rem. TGT12	14.5 gr / 6,300 PSI	15.5 gr / 7,100 PSI	17.0 gr / 8,200 PSI	18.5 gr / 9,100 PSI
					19.5 gr / 4,500 PSI	20.5 gr / 5,000 PSI	22.0 gr / 5,800 PSI	23.5 gr / 6,700 PSI
					18.5 gr / 4,800 PSI	20.0 gr / 5,400 PSI	21.5 gr / 6,100 PSI	23.5 gr / 7,200 PSI
	PB	Rem. 209P	Rem. FIG. 8	WAA12SL	19.0 gr / 4,900 PSI	20.5 gr / 5,400 PSI	22.0 gr / 6,100 PSI	23.5 gr / 6,800 PSI
					19.0 gr / 4,900 PSI	20.5 gr / 5,400 PSI	22.0 gr / 6,100 PSI	23.5 gr / 6,800 PSI
					18.0 gr / 4,500 PSI	19.5 gr / 6,000 PSI	21.0 gr / 6,500 PSI	22.5 gr / 7,500 PSI
	24 gm	PB	Win. 209	WAA12SL	1325 fps	1355 fps	1400 fps	
					—	—	23.5 gr / 7,400 PSI	—
					—	22.0 gr / 7,900 PSI	—	23.5 gr / 8,200 PSI
1 oz	Titewad	Fed. 209A	Rem.TGT12	1125 fps	1180 fps	1235 fps	1290 fps	
				15.7 gr / 7,600 PSI	17.3 gr / 8,800 PSI	18.1 gr / 10,000 PSI	19.4 gr / 11,200 PSI	
				16.4 gr / 7,300 PSI	17.4 gr / 7,700 PSI	18.4 gr / 9,600 PSI	20.1 gr / 10,600 PSI	
				15.9 gr / 6,900 PSI	16.8 gr / 7,800 PSI	18.4 gr / 8,900 PSI	20.2 gr / 10,600 PSI	
				15.5 gr / 7,300 PSI	17.1 gr / 8,000 PSI	18.5 gr / 9,600 PSI	19.5 gr / 11,200 PSI	
				15.6 gr / 9,000 PSI	16.8 gr / 10,300 PSI	—	—	
				15.2 gr / 8,200 PSI	16.4 gr / 9,200 PSI	17.7 gr / 10,200 PSI	19.0 gr / 11,300 PSI	
				15.7 gr / 7,900 PSI	17.1 gr / 8,900 PSI	18.5 gr / 10,100 PSI	19.9 gr / 11,400 PSI	
				16.5 gr / 7,500 PSI	17.7 gr / 8,800 PSI	18.9 gr / 10,100 PSI	20.1 gr / 11,400 PSI	
				16.5 gr / 7,900 PSI	17.7 gr / 8,800 PSI	18.9 gr / 10,100 PSI	20.1 gr / 11,400 PSI	

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", WINCHESTER COMPRESSION-FORMED AA AND HS PLASTIC SHELLS (CONT.)							
1 oz	Titewad	Win. 209	WAA12SL	1125 fps	1180 fps	1235 fps	1290 fps
				15.5 gr / 7,300 PSI	17.1 gr / 8,000 PSI	18.5 gr / 9,600 PSI	19.5 gr / 11,200 PSI
1 oz	Clays	Rem. 209P	Rem.TGT12	16.1 gr / 7,500 PSI	17.3 gr / 8,400 PSI	18.5 gr / 9,900 PSI	—
1 oz	Clays	Rem. 209P	WAA12SL	16.2 gr / 6,500 PSI	17.4 gr / 8,000 PSI	18.6 gr / 9,200 PSI	20.4 gr / 10,600 PSI
1 oz	Clays	Win. 209	Rem.TGT12	15.8 gr / 7,700 PSI	16.8 gr / 8,500 PSI	18.2 gr / 10,300 PSI	—
1 oz	Clays	Win. 209	WAA12SL	16.0 gr / 7,400 LUP	17.2 gr / 8,300 LUP	18.5 gr / 9,200 LUP	19.8 gr / 10,200 LUP
1 oz	Internat'l	Fed. 209A	WAA12SL	1180 fps	1235 fps	1290 fps	1345 fps
				18.0 gr / 8,700 PSI	19.0 gr / 10,400 PSI	20.0 gr / 11,300 PSI	—
				20.8 gr / 5,900 LUP	21.5 gr / 7,100 LUP	22.3 gr / 7,800 LUP	—
				19.0 gr / 7,700 PSI	20.0 gr / 9,200 PSI	21.2 gr / 9,700 PSI	22.5 gr / 11,100 PSI
				18.4 gr / 7,700 PSI	19.6 gr / 8,600 PSI	20.7 gr / 9,600 PSI	22.2 gr / 11,000 PSI
				18.9 gr / 6,900 LUP	20.4 gr / 8,300 LUP	21.3 gr / 8,900 LUP	—
				16.0 gr / 7,700 PSI	17.3 gr / 9,000 PSI	18.6 gr / 10,200 PSI	20.0 gr / 11,200 PSI
				16.2 gr / 7,800 PSI	17.4 gr / 9,100 PSI	18.6 gr / 10,400 PSI	20.0 gr / 11,500 PSI
				15.7 gr / 7,900 PSI	17.1 gr / 9,100 PSI	18.5 gr / 10,200 PSI	19.9 gr / 11,400 PSI
				16.5 gr / 7,500 PSI	17.7 gr / 8,800 PSI	18.9 gr / 10,100 PSI	20.1 gr / 11,400 PSI
1 oz	700-X	Fed. 209A	Fed. 12S3	1100 fps	1150 fps	1200 fps	1250 fps
				14.5 gr / 7,900 PSI	15.5 gr / 8,700 PSI	17.0 gr / 9,900 PSI	18.0 gr / 10,700 PSI
				15.5 gr / 5,800 PSI	16.5 gr / 6,200 PSI	18.0 gr / 7,100 PSI	19.0 gr / 7,700 PSI
				15.0 gr / 6,400 PSI	16.5 gr / 7,000 PSI	18.0 gr / 7,600 PSI	19.0 gr / 8,000 PSI
				14.5 gr / 6,700 PSI	15.5 gr / 7,400 PSI	16.5 gr / 8,200 PSI	18.0 gr / 9,400 PSI
				14.5 gr / 7,500 PSI	15.5 gr / 8,200 PSI	16.5 gr / 9,000 PSI	18.0 gr / 10,100 PSI
				18.0 gr / 6,100 PSI	19.5 gr / 7,200 PSI	20.5 gr / 7,900 PSI	22.0 gr / 8,900 PSI
				19.0 gr / 4,500 PSI	21.0 gr / 5,300 PSI	22.0 gr / 5,700 PSI	23.5 gr / 6,700 PSI
				19.0 gr / 5,700 PSI	20.0 gr / 6,200 PSI	21.5 gr / 7,100 PSI	22.5 gr / 7,700 PSI
				19.0 gr / 5,900 PSI	20.5 gr / 6,800 PSI	21.5 gr / 7,400 PSI	23.0 gr / 8,100 PSI
1 oz	PB	Win. 209	Rem. FIG. 8	19.0 gr / 5,400 PSI	20.0 gr / 5,800 PSI	21.5 gr / 6,500 PSI	23.0 gr / 7,200 PSI
				18.5 gr / 5,900 PSI	20.0 gr / 6,500 PSI	21.5 gr / 7,100 PSI	23.0 gr / 7,900 PSI
				19.5 gr / 8,500 PSI	21.0 gr / 9,600 PSI	22.5 gr / 11,100 PSI	—
1 oz	WST**	Win. 209	WAA12SL	19.5 gr / 7,400 PSI	21.0 gr / 8,100 PSI	22.0 gr / 9,000 PSI	—
1 oz	Super Hcp	Fed. 209A	WAA12SL	18.3 gr / 8,000 PSI	19.5 gr / 9,100 PSI	20.8 gr / 10,300 PSI	22.0 gr / 11,300 PSI
1 oz	Super Hcp	Rem. 209P	J-XL-1	19.0 gr / 7,200 PSI	20.0 gr / 8,300 PSI	21.0 gr / 9,400 PSI	22.1 gr / 10,700 PSI
1 oz	Super Hcp	Rem. 209P	Rem. TGT12	19.0 gr / 7,300 PSI	20.2 gr / 8,500 PSI	21.3 gr / 9,600 PSI	22.4 gr / 10,700 PSI
1 oz	Super Hcp	Rem. 209P	WAA12SL	18.6 gr / 7,300 PSI	19.8 gr / 8,600 PSI	20.9 gr / 9,800 PSI	22.0 gr / 10,600 PSI
1 oz	Super Hcp	Win. 209	J-XL-1	19.3 gr / 7,000 PSI	20.3 gr / 8,100 PSI	21.2 gr / 9,000 PSI	22.1 gr / 10,100 PSI
1 oz	Super Hcp	Win. 209	Rem. TGT12	18.2 gr / 7,100 PSI	19.6 gr / 8,500 PSI	20.9 gr / 9,900 PSI	22.2 gr / 11,200 PSI
1 oz	Super Hcp	Win. 209	WAA12SL	18.5 gr / 7,400 PSI	19.7 gr / 8,600 PSI	20.8 gr / 9,800 PSI	22.0 gr / 11,000 PSI
1 1/8 oz	Titewad	Fed. 209A	Fed. 12S3	1090 fps	1145 fps	1200 fps	1255 fps
				15.5 gr / 9,900 PSI	16.8 gr / 10,800 PSI	—	—
				15.7 gr / 8,500 PSI	16.8 gr / 9,300 PSI	18.3 gr / 10,400 PSI	—
				15.5 gr / 10,100 PSI	16.4 gr / 11,200 PSI	—	—
				15.2 gr / 9,000 PSI	16.2 gr / 9,700 PSI	17.5 gr / 11,100 PSI	—
				15.2 gr / 9,500 PSI	16.5 gr / 10,400 PSI	17.8 gr / 11,100 PSI	—
1 1/8 oz	Clays	Rem. 209P	Rem. FIG. 8	16.3 gr / 9,000 PSI	17.3 gr / 10,100 PSI	18.5 gr / 11,500 PSI	—

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", WINCHESTER COMPRESSION-FORMED AA AND HS PLASTIC SHELLS (CONT.)							
				1090 fps	1145 fps	1200 fps	1255 fps
1 1/8 oz	Clays	Rem. 209P	WAA12	15.9 gr/ 8,900 PSI	17.0 gr/ 9,400 PSI	—	—
1 1/8 oz	Clays	Win. 209	Hor. Versalite	16.4 gr/ 8,300 LUP	17.6 gr/ 9,400 LUP	18.8 gr/ 10,600 LUP	—
1 1/8 oz	Clays	Win. 209	Rem. Fig. 8	16.0 gr/ 7,700 LUP	17.0 gr/ 8,500 LUP	18.1 gr/ 9,400 LUP	—
1 1/8 oz	Clays	Win. 209	WAA12	16.1 gr/ 7,700 LUP	17.3 gr/ 8,800 LUP	18.2 gr/ 9,800 LUP	—
1 1/8 oz	Internat'l	Fed. 209A	Rem. Fig. 8	16.5 gr/ 9,700 PSI	17.0 gr/ 10,100 PSI	18.0 gr/ 10,900 PSI	—
1 1/8 oz	Internat'l	Fed. 209A	WAA12	16.0 gr/ 9,500 PSI	16.8 gr/ 10,300 PSI	17.5 gr/ 10,900 PSI	—
1 1/8 oz	Internat'l	Rem. 209P	Hor. Vers.	16.8 gr/ 9,000 PSI	17.8 gr/ 10,000 PSI	19.0 gr/ 11,300 PSI	—
1 1/8 oz	Internat'l	Rem. 209P	Rem. Fig. 8	—	20.1 gr/ 6,300 LUP	21.1 gr/ 7,700 LUP	22.1 gr/ 8,000 LUP
1 1/8 oz	Internat'l	Rem. 209P	WAA12	16.5 gr/ 8,900 PSI	17.8 gr/ 9,500 PSI	18.7 gr/ 11,100 PSI	—
1 1/8 oz	Internat'l	Win. 209	Hor. Versalite	17.4 gr/ 7,900 LUP	18.1 gr/ 8,600 LUP	19.2 gr/ 9,800 LUP	—
1 1/8 oz	Internat'l	Win. 209	Rem. Fig. 8	17.3 gr/ 8,100 PSI	18.3 gr/ 9,500 PSI	—	—
1 1/8 oz	Internat'l	Win. 209	WAA12	17.6 gr/ 7,400 LUP	18.1 gr/ 8,300 LUP	19.2 gr/ 9,600 LUP	21.3 gr/10,800 LUP
1 1/8 oz	Titegroup	Rem. 209P	Rem. Fig. 8	14.7 gr/ 8,500 PSI	15.9 gr/ 9,700 PSI	17.0 gr/ 10,700 PSI	—
1 1/8 oz	Titegroup	Rem. 209P	WAA12	14.6 gr/ 8,400 PSI	15.6 gr/ 9,600 PSI	16.5 gr/ 10,600 PSI	—
1 1/8 oz	Titegroup	Win. 209	Rem. Fig. 8	14.9 gr/ 8,200 PSI	15.9 gr/ 9,200 PSI	16.9 gr/ 10,200 PSI	—
1 1/8 oz	Titegroup	Win. 209	WAA12	14.9 gr/ 7,900 PSI	15.9 gr/ 9,000 PSI	17.4 gr/ 10,400 PSI	18.4 gr/ 11,400 PSI
				1200 fps	1255 fps	1310 fps	
1 1/8 oz	Universal	Fed. 209A	WAA12	21.5 gr/ 9,600 PSI	22.8 gr/ 10,700 PSI	23.6 gr/ 11,300 PSI	—
1 1/8 oz	Universal	Win. 209	Rem. Fig. 8	22.5 gr/ 9,000 PSI	23.5 gr/ 10,000 PSI	24.5 gr/ 10,700 PSI	—
1 1/8 oz	Universal	Win. 209	WAA12	22.0 gr/ 10,000 PSI	22.7 gr/ 10,600 PSI	—	—
				1420 fps	1475 fps	1530 fps	1585 fps
1 1/8 oz	Longshot	Fed. 209A	Fed. 12S3	31.1 gr/ 10,300 PSI	32.2 gr/ 11,300 PSI	—	—
1 1/8 oz	Longshot	Fed. 209A	WAA12	31.0 gr/ 9,800 PSI	32.3 gr/ 10,800 PSI	—	—
1 1/8 oz	Longshot	Rem. 209P	Rem. R12H	31.3 gr/ 9,200 PSI	32.5 gr/ 10,200 PSI	33.7 gr/ 11,300 PSI	—
1 1/8 oz	Longshot	Rem. 209P	WAA12	30.8 gr/ 9,500 PSI	32.1 gr/ 10,500 PSI	—	—
1 1/8 oz	Longshot	Win. 209	Hor. Vers.	32.2 gr/ 8,600 PSI	33.6 gr/ 9,500 PSI	34.9 gr/ 10,300 PSI	—
1 1/8 oz	Longshot	Win. 209	Rem. R12L	33.4 gr/ 8,100 PSI	34.6 gr/ 9,100 PSI	35.9 gr/ 10,200 PSI	37.1 gr/ 11,100 PSI
1 1/8 oz	Longshot	Win. 209	WAA12	32.1 gr/ 9,200 PSI	33.2 gr/ 10,100 PSI	34.4 gr/ 11,100 PSI	—
				1100 fps	1150 fps	1200 fps	1250 fps
1 1/8 oz	700-X	Fed. 209A	Rem. FIG. 8	15.5 gr/ 8,900 PSI	16.5 gr/ 9,600 PSI	18.0 gr/ 10,600 PSI	19.0 gr/ 11,200 PSI
1 1/8 oz	700-X	Fed. 209A	WAA12	15.0 gr/ 9,100 PSI	16.0 gr/ 10,000 PSI	17.5 gr/ 11,300 PSI	—
1 1/8 oz	700-X	Rem. 209P	Rem. FIG. 8	16.0 gr/ 7,900 PSI	17.0 gr/ 8,400 PSI	18.5 gr/ 9,500 PSI	19.5 gr/ 10,200 PSI
1 1/8 oz	700-X	Rem. 209P	WAA12	15.5 gr/ 8,200 PSI	17.0 gr/ 9,000 PSI	18.5 gr/ 9,800 PSI	20.0 gr/ 10,800 PSI
1 1/8 oz	700-X	Win. 209	Rem. FIG. 8	15.5 gr/ 8,300 PSI	16.5 gr/ 9,000 PSI	18.0 gr/ 10,200 PSI	19.5 gr/ 11,400 PSI
1 1/8 oz	700-X	Win. 209	WAA12	15.5 gr/ 9,200 PSI	16.5 gr/ 10,100 PSI	17.5 gr/ 10,800 PSI	—
1 1/8 oz	PB	Rem. 209P	Rem. RXP12	20.0 gr/ 6,400 PSI	21.0 gr/ 7,000 PSI	22.5 gr/ 8,000 PSI	24.0 gr/ 8,900 PSI
1 1/8 oz	PB	Rem. 209P	WAA12	20.0 gr/ 6,500 PSI	21.0 gr/ 7,100 PSI	23.0 gr/ 7,700 PSI	24.5 gr/ 8,800 PSI
1 1/8 oz	PB	Win. 209	Rem. RXP12	20.0 gr/ 6,900 PSI	21.0 gr/ 7,500 PSI	22.5 gr/ 8,500 PSI	24.0 gr/ 9,500 PSI
1 1/8 oz	PB	Win. 209	WAA12	19.5 gr/ 6,900 PSI	21.0 gr/ 7,700 PSI	22.5 gr/ 8,600 PSI	24.0 gr/ 9,400 PSI
1 1/8 oz	SR 7625	Rem. 209P	Rem. RXP12	22.0 gr/ 5,800 PSI	23.0 gr/ 6,300 PSI	24.5 gr/ 7,400 PSI	25.5 gr/ 8,200 PSI
1 1/8 oz	SR 7625	Rem. 209P	WAA12	22.0 gr/ 6,000 PSI	23.0 gr/ 6,400 PSI	24.5 gr/ 7,200 PSI	26.0 gr/ 8,000 PSI
1 1/8 oz	SR 7625	Win. 209	Rem. RXP12	22.0 gr/ 6,200 PSI	23.0 gr/ 6,600 PSI	24.5 gr/ 7,500 PSI	26.0 gr/ 8,300 PSI
1 1/8 oz	SR 7625	Win. 209	WAA12	21.0 gr/ 6,400 PSI	22.5 gr/ 7,300 PSI	23.5 gr/ 7,900 PSI	25.5 gr/ 9,600 PSI
1 1/8 oz	800-X	Fed. 209A	Rem. FIG. 8	20.5 gr/ 5,200 PSI	21.5 gr/ 5,700 PSI	23.0 gr/ 6,700 PSI	24.5 gr/ 7,700 PSI
1 1/8 oz	800-X	Fed. 209A	WAA12	20.0 gr/ 6,600 PSI	21.0 gr/ 7,000 PSI	22.5 gr/ 7,800 PSI	24.0 gr/ 8,600 PSI

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", WINCHESTER COMPRESSION-FORMED AA AND HS PLASTIC SHELLS (CONT.)							
				1100 fps	1150 fps	1200 fps	1250 fps
1 1/8 oz	800-X	Win. 209	Rem. FIG. 8	20.0 gr/ 6,100 PSI	21.0 gr/ 6,600 PSI	22.5 gr/ 7,000 PSI	24.5 gr/ 7,700 PSI
1 1/8 oz	800-X	Win. 209	WAA12	20.0 gr/ 6,600 PSI	21.0 gr/ 7,200 PSI	22.0 gr/ 7,800 PSI	24.0 gr/ 8,800 PSI
				1145 fps	1200 fps	1255 fps	1310 fps
1 1/8 oz	Super Hcp	Rem. 209P	DRV-12	18.2 gr/ 8,200 PSI	19.5 gr/ 9,600 PSI	20.8 gr/ 10,900 PSI	—
1 1/8 oz	Super Hcp	Rem. 209P	Rem. FIG. 8	18.1 gr/ 7,700 PSI	19.6 gr/ 9,400 PSI	21.0 gr/ 10,900 PSI	—
1 1/8 oz	Super Hcp	Rem. 209P	WAA12	18.4 gr/ 7,600 PSI	19.6 gr/ 9,100 PSI	20.8 gr/ 10,700 PSI	—
1 1/8 oz	Super Hcp	Win. 209	DRV-12	18.0 gr/ 8,500 PSI	19.4 gr/ 9,900 PSI	20.8 gr/ 11,400 PSI	—
1 1/8 oz	Super Hcp	Win. 209	Rem. FIG. 8	18.4 gr/ 7,200 PSI	19.7 gr/ 8,800 PSI	21.0 gr/ 10,400 PSI	—
1 1/8 oz	Super Hcp	Win. 209	WAA12	18.1 gr/ 8,200 PSI	19.5 gr/ 9,700 PSI	20.9 gr/ 11,300 PSI	—
1 1/8 oz	WSF	Fed. 209A	WAA12SL	21.5 gr/ 7,200 PSI	23.0 gr/ 8,400 PSI	24.0 gr/ 9,100 PSI	25.5 gr/ 9,800 PSI
				1145 fps	1310 fps	1365 fps	1400 fps
1 1/8 oz	WSF	Win. 209	Fed. 12S3	—	27.5 gr/ 8,500 PSI	28.5 gr/ 9,500 PSI	29.5 gr/ 10,800 PSI
1 1/8 oz	WSF	Win. 209	WAA12	—	27.5 gr/ 8,700 PSI	29.0 gr/ 9,900 PSI	30.0 gr/ 10,600 PSI
				1220 fps	1250 fps		
1 1/4 oz	Universal	Fed. 209A	WAA12F114	22.6 gr/ 11,500 PSI	—	—	—
1 1/4 oz	Universal	Rem. 209P	Rem. SP12	23.3 gr/ 10,600 PSI	24.2 gr/ 11,200 PSI	—	—
1 1/4 oz	Universal	Rem. 209P	WAA12F114	23.0 gr/ 11,500 PSI	—	—	—
1 1/4 oz	Universal	Win. 209	Rem. SP12	22.8 gr/ 10,700 PSI	23.3 gr/ 11,400 PSI	—	—
1 1/4 oz	Universal	Win. 209	WAA12 F114	23.0 gr/ 10,900 PSI	—	—	—
				1220 fps	1330 fps		
1 1/4 oz	HS-6	Win. 209	WAA12F114	30.0 gr/ 8,800 LUP	33.0 gr/ 10,500 LUP	—	—
1 1/4 oz	HS-6	Win. 209	Rem. R12H	31.5 gr/ 9,000 LUP	35.0 gr/ 10,600 LUP	—	—
1 1/4 oz	HS-6	Win. 209	Fed. 12C1	32.0 gr/ 8,700 LUP	35.0 gr/ 10,400 LUP	—	—
				1330 fps	1385 fps	1440 fps	
1 1/4 oz	Longshot	Fed. 209A	Rem. SP12	28.6 gr/ 9,400 PSI	30.0 gr/ 10,600 PSI	—	—
1 1/4 oz	Longshot	Fed. 209A	WAA12F114	27.7 gr/ 10,800 PSI	—	—	—
1 1/4 oz	Longshot	Rem. 209P	Rem. SP12	29.1 gr/ 9,400 PSI	30.9 gr/ 9,800 PSI	32.2 gr/ 11,200 PSI	—
1 1/4 oz	Longshot	Rem. 209P	WAA12F114	27.9 gr/ 10,500 PSI	29.5 gr/ 11,300 PSI	—	—
1 1/4 oz	Longshot	Win. 209	Rem. SP12	30.0 gr/ 8,300 PSI	31.5 gr/ 9,300 PSI	33.0 gr/ 10,400 PSI	—
1 1/4 oz	Longshot	Win. 209	WAA12F114	28.7 gr/ 9,800 PSI	30.4 gr/ 10,800 PSI	—	—
				1225 fps	1275 fps	1325 fps	
1 1/4 oz	SR 7625	Rem. 209P	Fed. 12S4	—	26.5 gr/ 10,700 PSI	28.0 gr/ 11,500 PSI	—
1 1/4 oz	SR 7625	Rem. 209P	Rem. SP12	—	28.0 gr/ 10,200 PSI	29.0 gr/ 10,900 PSI	—
1 1/4 oz	SR 7625	Rem. 209P	WAA12R	—	28.0 gr/ 9,100 PSI	29.5 gr/ 10,300 PSI	—
1 1/4 oz	SR 7625	Win. 209	Fed. 12S4	25.0 gr/ 10,200 PSI	26.5 gr/ 11,400 PSI	—	—
1 1/4 oz	SR 7625	Win. 209	Rem. SP12	—	27.5 gr/ 10,300 PSI	29.0 gr/ 11,400 PSI	—
1 1/4 oz	SR 4756	Fed. 209A	Fed. 12S4	26.0 gr/ 10,700 PSI	27.5 gr/ 11,500 PSI	—	—
1 1/4 oz	SR 4756	Rem. 209P	Rem. RP12	—	30.5 gr/ 9,600 PSI	31.5 gr/ 10,600 PSI	—
1 1/4 oz	SR 4756	Rem. 209P	WAA12R	—	31.5 gr/ 8,200 PSI	33.0 gr/ 9,000 PSI	—
1 1/4 oz	SR 4756	Win. 209	Rem. SP12	—	30.0 gr/ 10,000 PSI	31.5 gr/ 11,000 PSI	—
1 1/4 oz	SR 4756	Win. 209	WAA12R	—	30.5 gr/ 9,400 PSI	32.0 gr/ 10,300 PSI	—
1 1/4 oz	800-X	Rem. 209P	Fed. 12S4	—	26.0 gr/ 8,600 PSI	27.5 gr/ 9,600 PSI	—
1 1/4 oz	800-X	Rem. 209P	Rem. SP12	—	27.5 gr/ 7,800 PSI	29.0 gr/ 8,500 PSI	—

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
12 GA., 2 3/4", WINCHESTER COMPRESSION-FORMED AA AND HS PLASTIC SHELLS (CONT.)							
				1225 fps	1275 fps	1325 fps	
1 1/4 oz	800-X	Win. 209	Fed. 12S3	—	25.0 gr / 10,000 PSI	26.5 gr / 10,900 PSI	
1 1/4 oz	800-X	Win. 209	Rem. SP12	—	25.0 gr / 9,400 PSI	26.5 gr / 10,200 PSI	
				1220 fps	1275 fps	1310 fps	1330 fps
1 1/4 oz	WSF	Win. 209	Fed. 12S4	26.0 gr / 9,000 PSI	27.5 gr / 10,900 PSI	—	—
16 GA., 2 3/4", FEDERAL HI POWER PLASTIC PAPER BASE WAD SHELLS							
				1165 fps	1220 fps	1275 fps	
1 oz	Universal	CCI 209M	Activ G-28	21.5 gr / 7,500 PSI	22.5 gr / 8,200 PSI	24.2 gr / 9,000 PSI	
1 oz	Universal	Fed. 209A	BPG/BP	21.0 gr / 7,400 PSI	22.0 gr / 8,200 PSI	23.5 gr / 9,200 PSI	
1 oz	Universal	Win. 209	WAA16	20.7 gr / 7,600 PSI	22.3 gr / 8,200 PSI	23.5 gr / 8,900 PSI	
				1275 fps	1325 fps	1350 fps	1375 fps
1 oz	PB	Fed. 209A	WAA16	21.5 gr / 11,000 PSI	—	—	—
1 oz	PB	Rem. 209P	Rem. SP16	—	—	25.0 gr / 11,200 PSI	—
1 oz	PB	Win. 209	WAA16	—	23.5 gr / 11,200 PSI	—	—
1 oz	SR 7625	Fed. 209A	WAA16	—	—	24.5 gr / 11,000 PSI	—
1 oz	SR 7625	Rem. 209P	Rem. SP16	—	—	—	26.5 gr / 10,400 PSI
				1325 fps			
1 oz	SR 7625	Win. 209	WAA16	25.0 gr / 9,900 PSI	—	—	—
				1200 fps	1250 fps	1350 fps	1375 fps
1 oz	SR 4756	Fed. 209A	WAA16	—	25.0 gr / 8,500 PSI	—	—
1 oz	SR 4756	Rem. 209P	Rem. SP16	27.0 gr / 6,400 PSI	—	—	—
1 oz	SR 4756	Win. 209	WAA16	25.0 gr / 7,200 PSI	—	—	—
1 oz	800-X	Fed. 209A	Rem. SP16	—	—	—	24.0 gr / 10,400 PSI
1 oz	800-X	Rem. 209P	Rem. SP16	—	—	25.0 gr / 8,300 PSI	—
1 oz	800-X	Win. 209	WAA16	—	—	—	24.5 gr / 10,200 PSI
				1200 fps	1250 fps	1300 fps	
1 1/8 oz	PB	Rem. 209P	Rem. SP16	21.0 gr / 10,500 PSI	—	—	—
1 1/8 oz	PB	Win. 209	Rem. SP16	20.5 gr / 11,000 PSI	—	—	—
1 1/8 oz	SR 7625	Fed. 209A	Rem. SP16	22.0 gr / 11,000 PSI	—	—	—
1 1/8 oz	SR 7625	Rem. 209P	Rem. SP16	23.0 gr / 9,000 PSI	—	—	—
1 1/8 oz	SR 7625	Win. 209	Rem. SP16	—	23.0 gr / 10,800 PSI	—	—
1 1/8 oz	800-X	Fed. 209A	Rem. SP16	—	—	22.5 gr / 11,000 PSI	—
1 1/8 oz	800-X	Rem. 209P	Rem. SP16	—	—	24.5 gr / 10,100 PSI	—
1 1/8 oz	800-X	Win. 209	Rem. SP16	—	—	22.5 gr / 10,800 PSI	—
16 GA., 2 3/4", REMINGTON SP PLASTIC SHELLS							
				1165 fps	1220 fps	1275 fps	
1 oz	Universal	CCI 209M	BPG/BP	19.5 gr / 8,400 PSI	20.5 gr / 9,600 PSI	21.5 gr / 10,300 PSI	
1 oz	Universal	Win. 209	REM. SP16	18.5 gr / 8,800 PSI	19.8 gr / 9,900 PSI	20.5 gr / 10,400 PSI	
1 oz	Universal	Win. 209	WAA16	18.5 gr / 9,000 PSI	19.5 gr / 9,900 PSI	20.5 gr / 10,400 PSI	
				1200 fps	1250 fps	1300 fps	1350 fps
1 oz	PB	Fed. 209A	Rem. SP16	17.5 gr / 11,200 PSI	—	—	—
1 oz	PB	Rem. 209P	Rem. SP16	—	20.0 gr / 10,700 PSI	—	—
1 oz	PB	Win. 209	WAA16	19.0 gr / 11,000 PSI	—	—	—

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
16 GA., 2 3/4", REMINGTON SP PLASTIC SHELLS (CONT.)							
				1200 fps	1250 fps	1300 fps	1350 fps
1 oz	SR 7625	Fed. 209A	Rem. SP16	—	21.0 gr / 11,200 PSI	—	—
1 oz	SR 7625	Rem. 209P	Rem. SP16	—	—	23.5 gr / 11,200 PSI	—
1 oz	SR 7625	Win. 209	WAA16	—	—	22.5 gr / 11,200 PSI	—
1 oz	SR 4756	Fed. 209A	Rem. SP16	—	—	23.5 gr / 11,000 PSI	—
1 oz	SR 4756	Rem. 209P	Rem. SP16	—	—	—	29.0 gr / 10,100 PSI
1 oz	800-X	Fed. 209A	Rem. SP16	—	—	20.5 gr / 11,200 PSI	—
1 oz	800-X	Rem. 209P	Rem. SP16	—	—	—	24.0 gr / 11,100 PSI
1 oz	800-X	Win. 209	WAA16	—	—	21.5 gr / 11,000 PSI	—
				1175 fps	1200 fps	1225 fps	
1 1/8 oz	SR 7625	Rem. 209P	Rem. SP16	—	22.0 gr / 11,000 PSI	—	—
1 1/8 oz	SR 7625	Win. 209	Rem. SP16	21.0 gr / 10,900 PSI	—	—	—
1 1/8 oz	SR 4756	Fed. 209A	Rem. SP16	22.0 gr / 10,900 PSI	—	—	—
1 1/8 oz	SR 4756	Rem. 209P	Rem. SP16	24.0 gr / 9,500 PSI	—	—	—
1 1/8 oz	SR 4756	Win. 209	Rem. SP16	—	—	23.5 gr / 11,000 PSI	—
1 1/8 oz	800-X	Fed. 209A	Rem. SP16	—	19.0 gr / 10,800 PSI	—	—
1 1/8 oz	800-X	Rem. 209P	Rem. SP16	—	—	21.0 gr / 10,800 PSI	—
1 1/8 oz	800-X	Win. 209	Rem. SP16	—	—	19.5 gr / 10,900 PSI	—
16 GA., 2 3/4", WINCHESTER X-PERT PLASTIC SHELLS							
				1250 fps			
1 oz	PB	Fed. 209A	WAA16	19.5 gr / 11,200 PSI	—	—	—
1 oz	PB	Rem. 209P	Rem. SP16	21.0 gr / 10,800 PSI	—	—	—
				1200 fps	1250 fps	1300 fps	1350 fps
1 oz	PB	Win. 209	WAA16	19.0 gr / 10,900 PSI	—	—	—
1 oz	SR 7625	Fed. 209A	WAA16	—	20.5 gr / 10,900 PSI	—	—
1 oz	SR 7625	Rem. 209P	Rem. SP16	—	—	23.0 gr / 11,200 PSI	—
1 oz	SR 7625	Win. 209	WAA16	—	22.0 gr / 11,000 PSI	—	—
1 oz	SR 4756	Fed. 209A	Rem. SP16	—	22.5 gr / 10,900 PSI	—	—
1 oz	SR 4756	Rem. 209P	Rem. SP16	—	—	—	27.0 gr / 9,900 PSI
1 oz	800-X	Fed. 209A	WAA16	—	—	—	22.5 gr / 10,800 PSI
1 oz	800-X	Rem. 209P	Rem. SP16	—	—	—	24.0 gr / 9,000 PSI
1 oz	800-X	Win. 209	WAA16	—	—	—	23.0 gr / 11,200 PSI
				1150 fps	1200 fps	1250 fps	
1 1/8 oz	SR 7625	Rem. 209P	Rem. SP16	19.5 gr / 10,900 PSI	—	—	—
1 1/8 oz	SR 7625	Win. 209	Rem. SP16	19.0 gr / 10,900 PSI	—	—	—
1 1/8 oz	SR 4756	Fed. 209A	Rem. SP16	20.5 gr / 10,800 PSI	—	—	—
1 1/8 oz	SR 4756	Rem. 209P	Rem. SP16	23.0 gr / 8,900 PSI	—	—	—
1 1/8 oz	SR 4756	Win. 209	Rem. SP16	—	22.5 gr / 11,100 PSI	—	—
1 1/8 oz	800-X	Fed. 209A	Rem. SP16	—	19.0 gr / 10,900 PSI	—	—
1 1/8 oz	800-X	Rem. 209P	Rem. SP16	—	—	22.0 gr / 10,100 PSI	—
1 1/8 oz	800-X	Win. 209	Rem. SP16	—	20.0 gr / 11,000 PSI	—	—
20 GA., 2 3/4", REMINGTON RXP, PREMIER AND STS PLASTIC SHELLS							
				1150 fps	1200 fps	1250 fps	
3/4 oz	Internat'l	Rem. 209P	WAA20	12.5 gr / 8,600 PSI	13.6 gr / 10,600 PSI	—	—

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*		
20 GA., 2 3/4", REMINGTON RXP, PREMIER AND STS PLASTIC SHELLS						
				1150 fps	1200 fps	1250 fps
3/4 oz	Internat'l	Win. 209	WAA20	12.0 gr / 9,000 PSI	13.2 gr / 10,400 PSI	—
				1100 fps	1150 fps	
7/8 oz Lt.	Internat'l	Rem. 209P	Rem. RXP20	12.9 gr / 9,900 PSI	13.4 gr / 11,000 PSI	
7/8 oz Lt.	Internat'l	Win. 209	Rem. RXP20	—	13.4 gr / 10,900 PSI	
7/8 oz Lt.	Universal	Rem. 209P	DRV-20	15.0 gr / 9,200 PSI	15.7 gr / 9,900 PSI	
7/8 oz Lt.	Universal	Rem. 209P	Rem. RXP20	15.2 gr / 9,100 PSI	15.6 gr / 9,300 PSI	
7/8 oz Lt.	Universal	Rem. 209P	WAA20	14.5 gr / 9,700 PSI	—	
7/8 oz Lt.	Universal	Win. 209	DRV-20	14.8 gr / 9,500 PSI	15.3 gr / 10,100 PSI	
7/8 oz Lt.	Universal	Win. 209	Rem. RXP20	15.0 gr / 9,300 PSI	15.5 gr / 9,500 PSI	
7/8 oz Lt.	Universal	Win. 209	WAA20	14.5 gr / 9,100 PSI	—	
7/8 oz Lt.	PB	Rem. 209P	DRV-20	14.4 gr / 9,700 PSI	15.0 gr / 10,700 PSI	
7/8 oz Lt.	PB	Rem. 209P	Rem. RXP20	14.5 gr / 9,300 PSI	15.0 gr / 9,900 PSI	
7/8 oz Lt.	PB	Win. 209	DRV-20	14.5 gr / 10,200 PSI	15.0 gr / 10,800 PSI	
7/8 oz Lt.	PB	Win. 209	Rem. RXP20	14.5 gr / 9,200 PSI	15.0 gr / 10,100 PSI	
7/8 oz Lt.	Super Hcp	Rem. 209P	WAA20	12.4 gr / 10,600 PSI	12.9 gr / 11,800 PSI	
7/8 oz Lt.	Super Hcp	Win. 209	WAA20	12.4 gr / 10,300 PSI	12.9 gr / 11,400 PSI	
				1200 fps	1225 fps	1250 fps
7/8 oz	Universal	Fed. 209A	Rem. RXP 20	15.4 gr / 10,700 PSI	15.9 gr / 11,300 PSI	—
7/8 oz	Universal	Rem. 209P	Rem. RXP 20	15.8 gr / 9,900 PSI	16.7 gr / 10,700 PSI	—
7/8 oz	Universal	Rem. 209P	WAA20F1	15.6 gr / 10,500 PSI	16.0 gr / 11,000 PSI	16.5 gr / 11,200 PSI
7/8 oz	Universal	Win. 209	Rem. RXP 20	16.0 gr / 10,400 PSI	16.7 gr / 11,400 PSI	—
				1250 fps	1300 fps	1350 fps
7/8 oz	Longshot	Fed. 209A	Rem. RXP20	17.6 gr / 10,100 PSI	18.6 gr / 11,200 PSI	—
7/8 oz	Longshot	Fed. 209A	WAA20	17.1 gr / 10,600 PSI	18.3 gr / 11,700 PSI	—
7/8 oz	Longshot	Rem. 209P	Rem. RXP20	17.6 gr / 9,600 PSI	18.9 gr / 11,200 PSI	—
7/8 oz	Longshot	Rem. 209P	WAA20	17.3 gr / 10,300 PSI	18.5 gr / 11,800 PSI	—
7/8 oz	Longshot	Win. 209	Rem. RXP20	18.2 gr / 9,100 PSI	19.4 gr / 10,300 PSI	20.6 gr / 11,500 PSI
7/8 oz	Longshot	Win. 209	WAA20	17.9 gr / 9,900 PSI	19.0 gr / 11,200 PSI	—
				1200 fps		
7/8 oz	PB	Rem. 209P	CB 1078-20	16.0 gr / 11,800 PSI		
7/8 oz	PB	Rem. 209P	Rem. RXP20	16.0 gr / 11,000 PSI		
7/8 oz	PB	Rem. 209P	WAA20F1	16.0 gr / 11,400 PSI		
7/8 oz	PB	Win. 209	Rem. RXP20	16.0 gr / 11,100 PSI		
7/8 oz	PB	Win. 209	WAA20F1	16.0 gr / 11,100 PSI		
7/8 oz	SR 7625	Fed. 209A	Rem. RXP 20	17.0 gr / 11,000 PSI		
7/8 oz	SR 7625	Fed. 209A	WAA20	16.5 gr / 12,000 PSI		
7/8 oz	SR 7625	Rem. 209P	RXP20	17.0 gr / 10,100 PSI		
7/8 oz	SR 7625	Rem. 209P	WAA20	17.0 gr / 11,000 PSI		
7/8 oz	SR 7625	Win. 209	Rem. RXP20	17.0 gr / 10,300 PSI		
7/8 oz	SR 7625	Win. 209	WAA20	17.0 gr / 10,900 PSI		
7/8 oz	SR 4756	Rem. 209P	Rem. SP 20	18.5 gr / 10,200 PSI		
7/8 oz	SR 4756	Rem. 209P	WAA20F1	18.5 gr / 9,500 PSI		
7/8 oz	SR 4756	Win. 209	Rem. SP 20	18.5 gr / 10,300 PSI		
7/8 oz	SR 4756	Win. 209	WAA20F1	19.0 gr / 9,600 PSI		

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*		
20 GA., 2 3/4", REMINGTON RXP, PREMIER AND STS PLASTIC SHELLS						
				1200 fps		
7/8 oz	800-X	Fed. 209A	Rem. RXP 20	16.0 gr / 9,100 PSI		
7/8 oz	800-X	Fed. 209A	WAA20	16.0 gr / 9,300 PSI		
7/8 oz	800-X	Rem. 209P	Rem. RXP 20	16.5 gr / 9,100 PSI		
7/8 oz	800-X	Rem. 209P	WAA20	16.5 gr / 9,100 PSI		
7/8 oz	800-X	Win. 209	Rem. RXP20	16.5 gr / 9,500 PSI		
7/8 oz	800-X	Win. 209	WAA20	16.0 gr / 9,300 PSI		
7/8 oz	WSF	Win. 209	Fed. 20S1	17.0 gr / 11,300 PSI		
7/8 oz	WSF	Win. 209	Rem. RXP20	17.5 gr / 10,600 PSI		
7/8 oz	WSF	Win. 209	WAA20	17.0 gr / 10,500 PSI		
				1165 fps	1220 fps	
1 oz	HS-6	Rem. 209P	Fed. 20S1	20.0 gr / 10,900 PSI	—	
1 oz	HS-6	Rem. 209P	WAA20F1	20.4 gr / 10,900 PSI	21.6 gr / 11,700 PSI	
1 oz	HS-6	Win. 209	Rem. SP 20	20.0 gr / 11,200 PSI	—	
1 oz	HS-6	Win. 209	WAA20F1	20.3 gr / 11,200 PSI	—	
1 oz	Longshot	Rem. 209P	Rem. SP20	16.0 gr / 11,100 PSI	—	
1 oz	Longshot	Rem. 209P	WAA20F1	15.9 gr / 10,900 PSI	17.3 gr / 12,000 PSI	
1 oz	Longshot	Win. 209	Rem. SP20	16.0 gr / 10,400 PSI	17.8 gr / 12,000 PSI	
1 oz	Longshot	Win. 209	WAA20F1	16.3 gr / 9,900 PSI	18.0 gr / 12,000 PSI	
				1150 fps	1175 fps	1200 fps
1 oz	SR 4756	Rem. 209P	Rem. SP 20	—	—	19.5 gr / 11,500 PSI
1 oz	SR 4756	Win. 209	Rem. SP 20	18.5 gr / 11,700 PSI	—	—
1 oz	800-X	Fed. 209A	Rem. SP 20	—	16.0 gr / 11,800 PSI	—
1 oz	800-X	Rem. 209P	Rem. SP 20	—	—	17.5 gr / 11,900 PSI
1 oz	800-X	Rem. 209P	WAA20F1	—	—	17.0 gr / 11,700 PSI
1 oz	800-X	Win. 209	Rem. RXP 20	—	—	17.0 gr / 11,800 PSI
1 oz	800-X	Win. 209	WAA20F1	—	—	16.5 gr / 11,800 PSI
20 GA., 2 3/4", WINCHESTER COMPRESSION-FORMED AA AND HS TYPE SHELLS						
				1150 fps	1200 fps	1250 fps
3/4 oz	Internat'l	Rem. 209P	WAA20	12.1 gr / 9,000 PSI	13.2 gr / 10,500 PSI	—
3/4 oz	Internat'l	Win. 209	WAA20	12.0 gr / 10,100 PSI	13.0 gr / 11,700 PSI	—
				1100 fps	1150 fps	
7/8 oz Lt.	Universal	Rem. 209P	DRV-20	14.8 gr / 9,900 PSI	15.5 gr / 11,500 PSI	
7/8 oz Lt.	Universal	Rem. 209P	Rem. RXP20	14.7 gr / 9,100 PSI	15.0 gr / 9,700 PSI	
7/8 oz Lt.	Universal	Win. 209	DRV-20	14.5 gr / 10,500 PSI	15.0 gr / 11,400 PSI	
7/8 oz Lt.	Universal	Win. 209	Rem. RXP20	14.4 gr / 9,600 PSI	14.8 gr / 10,100 PSI	
7/8 oz Lt.	PB	Rem. 209P	DRV-20	14.2 gr / 10,500 PSI	14.8 gr / 11,600 PSI	
7/8 oz Lt.	PB	Rem. 209P	Rem. RXP20	14.3 gr / 9,400 PSI	14.8 gr / 10,300 PSI	
7/8 oz Lt.	PB	Win. 209	DRV-20	14.2 gr / 10,900 PSI	14.8 gr / 11,600 PSI	
7/8 oz Lt.	PB	Win. 209	Rem. RXP20	14.5 gr / 9,700 PSI	15.0 gr / 10,700 PSI	
7/8 oz Lt.	Super Hcp	Rem. 209P	WAA20	12.3 gr / 11,000 PSI	12.9 gr / 11,900 PSI	
7/8 oz Lt.	Super Hcp	Win. 209	WAA20	12.4 gr / 11,000 PSI	12.9 gr / 11,800 PSI	
				1200 fps		
7/8 oz	Universal	Fed. 209A	Fed. 20S1	14.3 gr / 12,000 PSI		
7/8 oz	Universal	Fed. 209A	Rem. RXP20	14.8 gr / 11,400 PSI		

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*		
20 GA., 2 3/4", WINCHESTER COMPRESSION-FORMED AA AND HS TYPE SHELLS (CONT.)						
1200 fps						
7/8 oz	Universal	Fed. 209A	WAA20F1	14.6 gr / 12,000 PSI		
7/8 oz	Universal	Rem. 209P	Rem. RXP20	15.8 gr / 9,800 PSI		
7/8 oz	Universal	Rem. 209P	WAA20F1	15.3 gr / 11,600 PSI		
7/8 oz	Universal	Win. 209	Rem. RXP20	15.0 gr / 11,000 PSI		
7/8 oz	Universal	Win. 209	WAA20	15.5 gr / 10,200 PSI		
1250 fps 1300 fps 1350 fps						
7/8 oz	Longshot	Fed. 209A	Fed. 20S1	17.5 gr / 11,800 PSI	—	—
7/8 oz	Longshot	Rem. 209P	Fed. 20S1	17.6 gr / 10,800 PSI	18.5 gr / 12,000 PSI	—
7/8 oz	Longshot	Rem. 209P	Rem. RXP20	17.7 gr / 10,400 PSI	18.7 gr / 11,400 PSI	—
7/8 oz	Longshot	Rem. 209P	WAA20	17.2 gr / 11,100 PSI	18.4 gr / 11,800 PSI	—
7/8 oz	Longshot	Win. 209	Rem. RXP20	18.4 gr / 9,800 PSI	19.3 gr / 10,700 PSI	—
7/8 oz	Longshot	Win. 209	WAA20	17.8 gr / 10,600 PSI	18.6 gr / 11,700 PSI	—
1200 fps						
7/8 oz	PB	Rem. 209P	Rem. RXP 20	16.0 gr / 10,900 PSI		
7/8 oz	PB	Rem. 209P	WAA20	16.0 gr / 11,600 PSI		
7/8 oz	PB	Win. 209	Rem. RXP 20	16.0 gr / 11,400 PSI		
7/8 oz	PB	Win. 209	WAA20	16.0 gr / 11,700 PSI		
7/8 oz	SR 7625	Rem. 209P	RXP20	17.0 gr / 10,100 PSI		
7/8 oz	SR 7625	Rem. 209P	WAA20	17.0 gr / 10,900 PSI		
7/8 oz	SR 7625	Win. 209	Rem. RXP 20	17.0 gr / 10,600 PSI		
7/8 oz	SR 7625	Win. 209	WAA20	17.0 gr / 10,600 PSI		
7/8 oz	SR 7625	Win. 209	Fed. 20S1	16.5 gr / 11,700 PSI		
7/8 oz	800-X	Rem. 209P	Rem. RXP 20	16.5 gr / 7,500 PSI		
7/8 oz	800-X	Rem. 209P	WAA20	16.5 gr / 9,300 PSI		
7/8 oz	WSF	CCI 209	Rem. RXP20	17.5 gr / 10,500 PSI		
7/8 oz	WSF	CCI 209	WAA20	16.5 gr / 11,300 PSI		
7/8 oz	WSF	Win. 209	Rem. RXP 20	17.0 gr / 10,700 PSI		
7/8 oz	WSF	Win. 209	WAA20	16.5 gr / 11,200 PSI		
1165 fps 1220 fps 1250 fps						
1 oz	HS-6	Rem. 209P	Rem. SP20	19.8 gr / 11,900 PSI		
1 oz	HS-6	Rem. 209P	WAA20F1	19.5 gr / 11,800 PSI		
1 oz	HS-6	Win. 209	WAA20F1	21.5 gr / 10,000 LUP	22.5 gr / 10,900 LUP	—
1 oz	HS-6	Win. 209	Rem. SP20	23.0 gr / 10,100 LUP	24.0 gr / 10,800 LUP	—
1 oz	Longshot	Rem. 209P	Rem. SP20	16.3 gr / 11,800 PSI		
1 oz	Longshot	Rem. 209P	WAA20F1	15.8 gr / 11,800 PSI		
1 oz	Longshot	Win. 209	Rem. SP20	16.5 gr / 10,700 PSI	18.1 gr / 12,000 PSI	—
1 oz	Longshot	Win. 209	WAA20F1	15.7 gr / 10,900 PSI		
1150 fps 1200 fps						
1 oz	800-X	Rem. 209P	Rem. RXP20	—	17.0 gr / 10,800 PSI	
1 oz	800-X	Rem. 209P	WAA20F1	—	17.0 gr / 11,500 PSI	
1 oz	800-X	Win. 209	Rem. RXP20	16.0 gr / 11,600 PSI		
1 oz	800-X	Win. 209	WAA20F1	15.5 gr / 11,500 PSI		

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
28 GA., 2 3/4", REMINGTON STS PLASTIC SHELLS							
1200 fps							
3/4 oz	Universal	Fed. 209A	WAA28	13.5 gr / 12,200 PSI			
3/4 oz	Universal	Rem. 209P	PC28	13.6 gr / 12,000 PSI			
3/4 oz	Universal	Rem. 209P	Rem. PT28	13.8 gr / 12,000 PSI			
3/4 oz	Universal	Rem. 209P	WAA28	13.9 gr / 11,700 PSI			
3/4 oz	Universal	Win. 209	PC28	13.5 gr / 12,400 PSI			
3/4 oz	Universal	Win. 209	Rem. PT28	13.8 gr / 12,100 PSI			
3/4 oz	Universal	Win. 209	WAA28	13.8 gr / 11,500 PSI			
3/4 oz	HS-6	Fed. 209A	Rem. PT28	16.7 gr / 11,700 PSI			
3/4 oz	HS-6	Rem. 209P	Rem. PT28	17.1 gr / 11,000 PSI			
3/4 oz	HS-6	Rem. 209P	WAA28	17.1 gr / 10,400 PSI			
3/4 oz	HS-6	Win. 209	Rem. PT28	17.0 gr / 11,500 PSI			
3/4 oz	HS-6	Win. 209	WAA28	17.0 gr / 10,700 PSI			
1225 fps 1250 fps 1275 fps 1300 fps							
3/4 oz	Longshot	Rem. 209P	PC 28	14.5 gr / 11,200 PSI	15.0 gr / 11,800 PSI	15.5 gr / 12,300 PSI	—
3/4 oz	Longshot	Rem. 209P	Rem. PT28	14.3 gr / 11,300 PSI	14.9 gr / 12,000 PSI	15.4 gr / 12,500 PSI	—
3/4 oz	Longshot	Rem. 209P	WAA28	14.3 gr / 11,000 PSI	14.8 gr / 11,600 PSI	15.2 gr / 12,000 PSI	15.6 gr / 12,400 PSI
3/4 oz	Longshot	Win. 209	PC 28	14.9 gr / 10,900 PSI	15.4 gr / 11,600 PSI	15.8 gr / 12,100 PSI	—
3/4 oz	Longshot	Win. 209	Rem. PT28	14.7 gr / 10,900 PSI	15.3 gr / 11,300 PSI	15.9 gr / 11,900 PSI	16.4 gr / 12,300 PSI
3/4 oz	Longshot	Win. 209	WAA28	14.5 gr / 10,700 PSI	15.1 gr / 11,200 PSI	15.6 gr / 11,600 PSI	16.2 gr / 12,200 PSI
1150 fps 1200 fps							
3/4 oz	PB	Rem. 209P	PC28	—	13.0 gr / 12,100 PSI		
3/4 oz	PB	Rem. 209P	Rem. PT28	13.0 gr / 12,500 PSI			
3/4 oz	PB	Rem. 209P	WAA28	—	13.5 gr / 12,300 PSI		
3/4 oz	SR 7625	Rem. 209P	Fed. 28S1	—	13.5 gr / 12,400 PSI		
3/4 oz	SR 7625	Rem. 209P	PC28	—	14.0 gr / 11,700 PSI		
3/4 oz	SR 7625	Rem. 209P	Rem. PT28	—	13.5 gr / 12,400 PSI		
3/4 oz	SR 7625	Rem. 209P	WAA28	—	14.0 gr / 11,800 PSI		
3/4 oz	SR 7625	Win. 209	PC28	—	14.0 gr / 12,200 PSI		
3/4 oz	SR 7625	Win. 209	Rem. PT28	—	14.0 gr / 12,500 PSI		
3/4 oz	SR 7625	Win. 209	WAA28	—	14.0 gr / 12,200 PSI		
3/4 oz	SR 4756	Fed. 209A	PC28	—	14.5 gr / 12,200 PSI		
3/4 oz	SR 4756	Fed. 209A	Rem. PT28	—	14.0 gr / 12,500 PSI		
3/4 oz	SR 4756	Rem. 209P	PC28	15.0 gr / 9,900 PSI			
3/4 oz	SR 4756	Win. 209	PC28	—	15.0 gr / 11,200 PSI		
3/4 oz	SR 4756	Win. 209	Rem. PT28	14.0 gr / 11,000 PSI			
28 GA., 2 3/4" WINCHESTER AA HS AND SUPER-X HS PLASTIC SHELLS							
1200 fps 1225 fps 1250 fps 1275 fps							
3/4 oz.	Universal	Rem. 209P	Fed. 28S1	13.8 gr / 11,600 PSI	14.5 / 12,000 PSI	—	—
3/4 oz.	Universal	Rem. 209P	Rem. PT28	14.5 gr / 10,500 PSI			
3/4 oz.	Universal	Rem. 209P	WAA28HS	14 gr / 11,300 PSI			
3/4 oz.	Universal	Win. 209	Fed. 28S1	14.1 gr / 11,500 PSI			
3/4 oz.	Universal	Win. 209	Rem. PT28	14.3 gr / 10,700 PSI			
3/4 oz.	Universal	Win. 209	WAA28HS	14.1 gr / 12,200 PSI			
3/4 oz.	HS-6	Fed. 209A	WAA28HS	17.5 gr / 11,000 PSI			

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*			
28 GA., 2 3/4" WINCHESTER AA HS AND SUPER-X HS PLASTIC SHELLS (CONT.)							
				1200 fps	1225 fps	1250 fps	1275 fps
3/4 oz.	HS-6	Rem. 209P	WAA28HS	18.0 gr / 10,600 PSI	—	—	—
3/4 oz.	HS-6	Win. 209	WAA28HS	18.0 gr / 10,600 PSI	—	—	—
3/4 oz.	Longshot	Fed. 209A	Fed. 28S1	14.1 gr / 10,000 PSI	14.6 gr / 10,900 PSI	15.0 gr / 11,000 PSI	—
3/4 oz.	Longshot	Fed. 209A	WAA28HS	13.9 gr / 10,500 PSI	14.4 gr / 11,200 PSI	14.9 gr / 12,000 PSI	—
3/4 oz.	Longshot	Rem. 209P	Fed. 28S1	14.4 gr / 9,500 PSI	14.9 gr / 10,200 PSI	15.4 gr / 10,800 PSI	15.9 gr / 11,400 PSI
3/4 oz.	Longshot	Rem. 209P	Rem. PT28	14.7 gr / 8,700 PSI	15.1 gr / 9,400 PSI	15.6 gr / 10,200 PSI	16.0 gr / 10,800 PSI
3/4 oz.	Longshot	Rem. 209P	WAA28HS	14.5 gr / 9,900 PSI	14.9 gr / 10,600 PSI	15.4 gr / 11,400 PSI	—
3/4 oz.	Longshot	Win. 209	Fed. 28S1	14.5 gr / 9,500 PSI	14.9 gr / 10,100 PSI	15.3 gr / 10,700 PSI	15.7 gr / 11,200 PSI
3/4 oz.	Longshot	Win. 209	Rem. PT28	14.6 gr / 8,900 PSI	15.1 gr / 9,600 PSI	15.6 gr / 10,300 PSI	16.0 gr / 10,800 PSI
3/4 oz.	Longshot	Win. 209	WAA28HS	14.6 gr / 9,800 PSI	14.9 gr / 10,100 PSI	15.5 gr / 11,100 PSI	—
3/4 oz.	SR 7625	Rem. 209P	Fed. 28S1	14.4 gr / 12,100 PSI	—	—	—
3/4 oz.	SR 7625	Rem. 209P	PC 28	14.7 gr / 11,800 PSI	15.2 gr / 12,200 PSI	—	—
3/4 oz.	SR 7625	Rem. 209P	Rem. PT28	14.7 gr / 11,300 PSI	15.2 gr / 11,900 PSI	—	—
3/4 oz.	SR 7625	Win. 209	Fed. 28S1	14.5 gr / 12,400 PSI	—	—	—
3/4 oz.	SR 7625	Win. 209	PC28	14.9 gr / 11,800 PSI	15.4 gr / 12,500 PSI	—	—
3/4 oz.	SR 7625	Win. 209	Rem. PT28	14.7 gr / 11,200 PSI	15.3 gr / 11,700 PSI	—	—
3/4 oz.	SR 4756	Fed. 209A	Fed. 28S1	15.3 gr / 11,600 PSI	15.7 gr / 12,200 PSI	—	—
3/4 oz.	SR 4756	Rem. 209P	PC28	16.1 gr / 10,400 PSI	16.4 gr / 10,800 PSI	16.8 gr / 11,300 PSI	—
3/4 oz.	SR 4756	Win. 209	Fed. 28S1	15.5 gr / 11,100 PSI	—	—	—
3/4 oz.	SR 4756	Win. 209	PC28	16.1 gr / 10,600 PSI	16.6 gr / 11,100 PSI	17.0 gr / 11,400 PSI	—
3/4 oz.	800-X	Fed. 209A	Fed. 28S1	13.2 gr / 11,500 PSI	13.8 gr / 12,200 PSI	—	—
3/4 oz.	800-X	Fed. 209A	WAA28HS	13.3 gr / 12,000 PSI	—	—	—
3/4 oz.	800-X	Rem. 209P	Fed. 28S1	13.7 gr / 11,200 PSI	14.2 gr / 11,900 PSI	—	—
3/4 oz.	800-X	Rem. 209P	PC 28	13.7 gr / 10,000 PSI	14.2 gr / 10,500 PSI	14.8 gr / 11,200 PSI	15.3 gr / 11,700 PSI
3/4 oz.	800-X	Rem. 209P	Rem. PT28	13.9 gr / 10,400 PSI	14.4 gr / 10,900 PSI	14.8 gr / 11,200 PSI	15.3 gr / 11,700 PSI
3/4 oz.	800-X	Rem. 209P	WAA28HS	13.7 gr / 11,500 PSI	14.1 gr / 11,900 PSI	14.5 gr / 12,300 PSI	—
3/4 oz.	800-X	Win. 209	Fed. 28S1	13.8 gr / 11,100 PSI	14.2 gr / 11,500 PSI	14.6 gr / 12,000 PSI	15.0 gr / 12,300 PSI
3/4 oz.	800-X	Win. 209	PC28	13.7 gr / 10,500 PSI	14.2 gr / 10,900 PSI	14.7 gr / 11,400 PSI	15.2 gr / 11,900 PSI
3/4 oz.	800-X	Win. 209	Rem. PT28	13.6 gr / 9,800 PSI	14.2 gr / 10,400 PSI	14.8 gr / 11,100 PSI	15.4 gr / 11,700 PSI
3/4 oz.	800-X	Win. 209	WAA28HS	13.5 gr / 11,700 PSI	14.0 gr / 12,200 PSI	—	—
410 BORE, 2 1/2", REMINGTON-PETERS "STS" PLASTIC SHELLS							
				1200 fps			
1/2 oz.	LIL'GUN	Fed. 209A	Rem. SP410	12.9 gr / 10,900 PSI	—	—	—
1/2 oz.	LIL'GUN	Rem. 209P	Fed. 410SC	13.0 gr / 11,000 PSI	—	—	—
1/2 oz.	LIL'GUN	Rem. 209P	Orange PC	13.3 gr / 10,400 PSI	—	—	—
1/2 oz.	LIL'GUN	Rem. 209P	Rem. SP410	13.2 gr / 10,800 PSI	—	—	—
1/2 oz.	LIL'GUN	Rem. 209P	WAA41	13.0 gr / 10,600 PSI	—	—	—
1/2 oz.	LIL'GUN	Win. 209	Fed. 410SC	12.6 gr / 11,800 PSI	—	—	—
1/2 oz.	LIL'GUN	Win. 209	Orange PC	12.9 gr / 11,100 PSI	—	—	—
1/2 oz.	LIL'GUN	Win. 209	Rem. SP410	12.6 gr / 11,600 PSI	—	—	—
1/2 oz.	LIL'GUN	Win. 209	WAA41	12.9 gr / 11,500 PSI	—	—	—
1/2 oz.	H110	Fed. 209A	Fed. 410SC	14.2 gr / 10,600 PSI	—	—	—
1/2 oz.	H110	Rem. 209P	Fed. 410SC	14.7 gr / 9,600 PSI	—	—	—
1/2 oz.	H110	Rem. 209P	Orange PC	15.2 gr / 9,300 PSI	—	—	—

SHOT	POWDER	PRIMER	WAD	CHARGE/PRESSURE*		
410 BORE, 2 1/2", REMINGTON-PETERS "STS" PLASTIC SHELLS (CONT.)						
				1200 fps		
1/2 oz.	H110	Rem. 209P	Rem. SP410	14.8 gr / 8,900 PSI	—	—
1/2 oz.	H110	Win. 209	WAA41	14.0 gr / 10,000 PSI	—	—
410 BORE, 2 1/2", WINCHESTER AA HS PLASTIC SHELLS						
				1200 fps	1250 fps	1300 fps
1/2 oz.	Lil'Gun	Fed. 209A	Fed. 410SC	13.3 gr / 11,900 PSI	—	—
1/2 oz.	Lil'Gun	Fed. 209A	Rem. SP410	13.3 gr / 11,600 PSI	—	—
1/2 oz.	Lil'Gun	Fed. 209A	WAA41HS	13.7 gr / 11,900 PSI	—	—
1/2 oz.	Lil'Gun	Rem. 209P	Orange PC	13.3 gr / 10,600 PSI	—	—
1/2 oz.	Lil'Gun	Rem. 209P	Rem. SP410	13.5 gr / 11,200 PSI	—	—
1/2 oz.	Lil'Gun	Rem. 209P	WAA41HS	13.8 gr / 11,600 PSI	—	—
1/2 oz.	Lil'Gun	Win. 209	Orange PC	13.3 gr / 10,900 PSI	—	—
1/2 oz.	Lil'Gun	Win. 209	Rem. SP410	13.3 gr / 11,100 PSI	—	—
1/2 oz.	Lil'Gun	Win. 209	WAA41HS	13.5 gr / 11,700 PSI	—	—
1/2 oz.	H110	Fed. 209A	Rem. SP410	14.6 gr / 8,600 PSI	15.3 gr / 9,400 PSI	16.3 gr / 10,400 PSI
1/2 oz.	H110	Fed. 209A	WAA41HS	14.6 gr / 9,600 PSI	15.3 gr / 10,200 PSI	16.5 gr / 10,800 PSI
1/2 oz.	H110	Rem. 209P	Rem. SP410	16.0 gr / 6,900 PSI	16.5 gr / 8,400 PSI	17.4 gr / 9,300 PSI
1/2 oz.	H110	Rem. 209P	WAA41HS	16.0 gr / 7,400 PSI	16.5 gr / 9,000 PSI	17.6 gr / 9,900 PSI
1/2 oz.	H110	Win. 209	Orange PC	15.5 gr / 8,100 PSI	16.1 gr / 8,600 PSI	17.0 gr / 9,800 PSI
1/2 oz.	H110	Win. 209	Rem. SP410	15.0 gr / 8,300 PSI	15.5 gr / 9,200 PSI	16.7 gr / 10,100 PSI
1/2 oz.	H110	Win. 209	WAA41HS	15.3 gr / 8,900 PSI	16.3 gr / 9,300 PSI	16.7 gr / 10,400 PSI
1/2 oz.	296	Win. 209	WAA41HS	15.3 gr / 8,900 PSI	—	—

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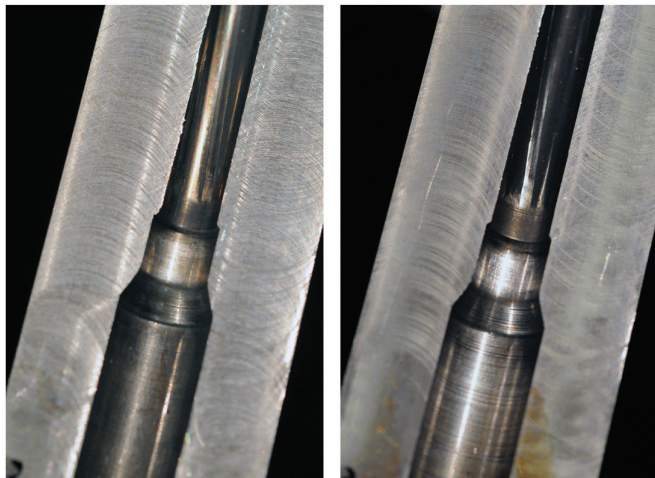


CFE™

Load Data

CALIBER	CHARGE	BULLET	VELOCITY
17 Remington	27.4 gr.	20 GR. HDY V-MAX	4466 fps
204 Ruger	30.9 gr.	32 GR. HDY V-MAX	4091 fps
5.56mm/223 Remington	28.5 gr.	53 GR. SIE HP	3415 fps
22-250 Remington	39.2 gr.	55 GR. SPR SP	3855 fps
7.62mm NATO/308 Winchester	49.0 gr.	168 GR. SIE HPBT	2828 fps

New Match AR-15 Barrels after 200 rounds



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