

The most comprehensive loading data available for .45 ACP containing:

.45 ACP

Volume One - Second Printing

Midway USA

LoadMAP™

(Maximum Average Pressure)

46 different jacketed, cast and swaged bullets from

BARNES
BULLETS

Hornady

Nosler

Remington

SIERRA

SPEER

WINCHESTER

18 different propellants from



Accurate Arms

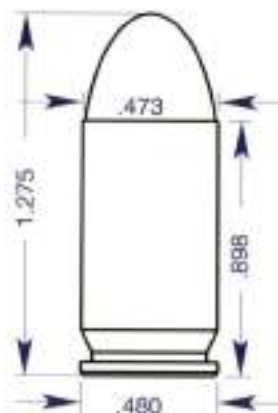
ALLIANT TECHNOLOGIES

*formerly Hercules

HODGDON

IMR

WINCHESTER



SAAMI Maximum Dimensions
Not actual size

Hornady HP/XTP
.45 ACP 230 grain

Winchester
231

Charge in grains psi fps

STOP		
6.5	21000	903
6.3	19500	874
6.1	18800	846
5.9	17700	818
5.7	16600	790
5.5	15600	762
5.3	14500	733
5.1	13400	705
4.9	12300	677
4.7	11200	649
4.5	10200	621
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi and C.U.P. See page 4.

start here

Read pages 2 - 11 before loading. Always watch for excessive pressure signs.

WARNING: Always begin loading in the 'start here' area of the green zone and work your loads up slowly. Loads listed in the yellow zone or the red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs; see pages 9-10.

“WARNINGS AND DISCLAIMER

THE USER OF THIS MANUAL RECOGNIZES, ACKNOWLEDGES, APPRECIATES AND ACCEPTS THE FACT THAT RELOADING CAN BE A DANGEROUS ACTIVITY WHICH CAN RESULT IN SERIOUS INJURY.

BEFORE YOU DO ANYTHING, READ THE FOLLOWING. FAILURE TO DO SO CAN RESULT IN SERIOUS PERSONAL INJURY AND/OR PROPERTY DAMAGE:

WARNING: This manual is not intended to be a comprehensive reloading reference book. It is intended to provide information about specific loads, for the particular caliber indicated on the cover, for use by knowledgeable and experienced reloaders.

THIS MANUAL IS FOR KNOWLEDGEABLE AND EXPERIENCED RELOADERS ONLY.

WARNING: The data contained in this manual was created under strictly controlled conditions in the laboratories of MidwayUSA (See the section entitled “About this Manual” for additional important information regarding the controlled laboratory conditions.) Exactly follow the specifications and procedures in the

LoadMAPs™. Exactly follow the precise combinations listed in this manual. Load recommendations should never be exceeded.

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Safe reloading practices are the responsibility of the reloader. Unsafe reloading may result in serious injury including death and/or damage to personal property. Safety precautions contained in this manual are only basic, not complete or comprehensive: there is no substitute for a complete understanding of reloading procedures and safeguards.

**UNDER ALL CIRCUMSTANCES,
ALWAYS BEAR IN MIND THE FOLLOWING:**

1. Give your undivided attention to reloading. If you can not do so, do not reload. Never reload while distracted, rushed or under the influence of alcohol or medication.
2. Follow reloading data precisely.
3. Always begin with the lowest loads and work up. Do not exceed the maximum loads as shown in the LoadMAPs™.
4. Only use components which are clearly labeled.
5. Do not substitute components.
6. Keep firearms and reloading materials out of reach of children.
7. No smoking, open flames, sparks or exposed heat sources while reloading.
8. Use extreme care and caution when handling primers. Primers may ignite and explode if not properly handled.
9. Examine every case to be reloaded and use only those cases which are in excellent condition.
10. Always wear safety glasses to protect your eyes.
11. Never mix propellants of different kinds. Store propellants and primers in their original packages. Do not repackage propellants and/or primers."

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About This Manual

This manual provides comprehensive information about the widest variety of specific bullet and propellant combinations available. Bullets available from all major bullet companies at the time of publication were fired for pressure and velocity. The information is incorporated into a unique chart we call a LoadMAP™, which displays pressure and velocity levels. The LoadMAP™ lists maximum loads that produce the ANSI/SAAMI* (American National Standards Institute/Sporting Arms

and Ammunition Manufacturers Institute) MAP** (Maximum Average Pressure) in our test gun under laboratory controlled conditions. The LoadMAP™ data was developed using ammunition loaded and fired in accordance with ANSI/SAAMI specifications and procedures from the *Voluntary Industry Performance Standards for Pressure and Velocity of Centerfire Pistol and Revolver Ammunition for the Use of Commercial Manufacturers*, ©1993. The ammunition was tested for pressure and velocity in a Universal Receiver Test Barrel using piezo-electric conformal transducers and the Oehler System 83 pressure recording system.

IMPORTANT: The current industry standard is to measure and list pressure in pounds per square inch (psi) using piezo-electric transducers. Before piezo-electric transducers, pressures were measured using the copper crusher method and expressed as Copper Units of Pressure, (C.U.P.). Many manuals list pressures in C.U.P. When comparing load data from other sources, it is important to note that there is no method of conversion from C.U.P. to psi.

*ANSI - ANSI is the agency responsible for the identification of a single, consistent set of voluntary standards called American National Standards. ANSI writes or approves the standards of quality and manufacture for products manufactured in the USA. Address: 11 West 42nd St, 13th Floor, New York, NY 10036.

*SAAMI - Founded in 1926 in its current form, SAAMI serves the mutual interests of the U.S. sporting firearms and ammunition industry with emphasis on activities to assure safe use of these products. SAAMI is a group of industry members that oversee and maintain the standards of quality and safety in the firearms and ammunition industry. Currently there are 21 SAAMI members. Address: 11 Mile Hill Road, Newtown, CT 06470-2359.

**MAP - The maximum average pressure considered safe in modern firearms as determined, for most popular cartridges, by SAAMI and its members.

All testing was done with new cartridge cases. Propellant charges were controlled to $\pm 1/10$ th grain. The test ammunition and components were loaded and stored in a temperature and humidity controlled room at 70° Fahrenheit $\pm 2^\circ$ and 60% relative humidity $\pm 5\%$. Our test facility is 758 feet above sea level.

Caution: this manual is not intended to be a comprehensive reloading reference book. It is intended to provide information about specific loads, for the caliber indicated on the cover, for use by experienced reloaders. If you are not an experienced reloader, set this manual aside until you have learned to reload, either from a comprehensive reloading manual or gained experience from a qualified instructor.

The LoadMAP™

An atlas contains road maps for driving; think of this book as an atlas with LoadMAP's for reloading. The LoadMAP™ is designed with easy loading in mind. As in driving, there are signs and colors for which to watch. The LoadMAP™ is colored like a traffic signal. The **GREEN** means **GO**, the **YELLOW** means proceed with **CAUTION** and the **RED** bars at the top and bottom mean **STOP**. The colors change as the propellant charge increases and the pressure rises. Always watch for signs of excessive pressure on the trip up the LoadMAP™. The yellow yield sign indicates that **extra caution should be exercised in the yellow and red zones**. Watch your cartridge cases for signs of excessive pressure and be prepared to stop and go back at any time. The stop sign and the STOP bars at the top and the bottom of the chart mean exactly that,— **STOP!** Going through the stop can be very dangerous.

The LoadMAP™ has three columns. The left column shows the propellant charge in grains, the middle column shows the approximate pressure in pounds per square inch (psi) and the right column shows the approximate velocity in feet per second (fps). Your actual pressures and velocities will be different from those indicated by the LoadMAP™. The

Hornady HP/XTP
.45 ACP 230 grain

Winchester 231

Charge
in
grains psi fps

STOP		
6.5	20000	803
6.3	19000	874
6.1	18000	846
5.9	17700	818
5.7	16600	790
5.5	15600	762
5.3	14500	737
5.1	13500	715
4.9	12300	687
4.7	11200	668
4.5	10200	643
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Read pages 2 - 11 before loading. Always watch for excessive pressure signs.

dotted black line across the LoadMAP™ indicates 95% of SAAMI MAP.

Using the LoadMAP™

Select a propellant charge from within the 'start here' area. Load and fire the cartridges as you normally would and watch for signs of excessive pressure as detailed in the next section.

When working up a load you may increase the propellant charge in the green zone faster than you can in the yellow zone or the red zone. A normal practice would be to increase the propellant charge by three tenths of a grain in the green zone but by only one tenth of a grain in the yellow zone or red zone. If, at any time, excessive pressure signs are observed, STOP. Reduce your load to a level where excessive pressure signs are not observed. Consider this the maximum safe load for your firearm under those conditions in which the ammunition was loaded, stored and fired. The most accurate loads are often found below the maximum velocity.

STOP: The top is ANS/SAAMI MAP. Do not load above the maximum or below the minimum charges shown in the LoadMAP™.

Factors That Affect Pressure

Many factors affect the pressure and velocity a cartridge generates when fired. Any of these factors could result in excessive pressure levels being reached at lower propellant charge weights than occurred in our laboratory testing. Some of the more important factors are:

The Barrel and Chamber

The individual firearm can cause the pressure to be different. Barrels made by the same gunsmith, with the same reamer, from the same barrel stock, on the same day, in the same caliber will develop different pressures using the same loads.

• Bore condition

Pressures will normally be lower in a worn barrel than in a new barrel. As the lands are worn down, especially in the throat area, less pressure is required to move the bullet through the bore. Propellant and bullet fouling will cause an increase in pressure. A clean barrel develops less pressure than a dirty barrel. See also the **Jacket Hardness** section on the next page.

• Bore diameter

Some firearms with the same chambering may have different bore diameters, e.g., the 7.62 x 39 may have a .308 or .311 bore. Firing a .311 bullet through a .308 bore might develop a higher pressure while firing a .308 bullet through a .311 bore might develop a lower pressure.

• Chamber condition and dimension

Anything that increases or decreases the total chamber capacity can affect the pressure. Some examples are: an oversize or undersize chamber, neck diameter, propellant residue, headspace, cleaning solvents, pieces of cleaning patches, rusty or pitted walls. Any increase in chamber size could decrease pressure and any decrease in chamber size could increase pressure.

Individual Cartridge Components

All the various factors involving cartridge components have an impact on the pressure developed when the primer ignites the propellant. Ignition changes the propellant from a solid into a rapidly expanding gas. The expansion of the gas creates the pressure to propel the bullet through the bore. Each factor contributes to the creation of pressure. In some instances, the pressure may exceed the safety limits of the cartridge case or the firearm.

Changing one or more of the cartridge components will create different pressures and velocities in the same firearm. Therefore, we encourage you to experiment with different bullets and propellants so that loads can be tailored for specific needs and shooting conditions. With any change in components, manufacturer or lot number, you should start loading at the 'start here' area and work the load up until the desired performance is achieved.

Bullet

• Bearing surface

The bearing surface is the part of the bullet that contacts the lands and grooves of the bore and creates friction. A longer bearing surface generally develops higher pressure than a short bearing surface.

• Crimp tightness

The crimp tightness affects how much pressure is required to get the bullet started into the bore. A tighter crimp holds the bullet longer causing the pressure to increase before the bullet leaves the cartridge case mouth. Some firearms may require a tighter crimp, i.e. tubular magazines, to keep the bullet from being pushed into the cartridge case by other cartridges during recoil.

• Diameter

A bullet with a diameter smaller than the bore diameter may not seal the bore. This allows gases to escape around the bullet resulting in lower pressures. A bullet with a larger diameter will cause the pressure to increase as the bullet is swaged down to fit in the bore. Some

bullet diameters may be different from the cartridge name i.e. the .303 British has a nominal bullet diameter of .312".

- **Jacket hardness**

Jacket hardness dictates how easily the jacket will be engraved by the rifling in the barrel. A soft jacket will normally develop lower pressure than a hard jacket. Soft jackets may leave copper deposits in the bore which can cause the pressure to increase rapidly to a potentially dangerous level. The first few shots may have a lower pressure than hard jackets but the pressure can increase with additional shots. Soft jackets require more frequent cleaning.

- **Seating depth**

Seating the bullet deeper reduces the interior dimensions of the cartridge, normally increasing the pressure. Seating the bullet out until it contacts the rifling may cause an initial increase in pressure.

- **Weight**

A heavier bullet develops higher pressure than a lighter bullet with the same propellant charge.

Cartridge Case

- **Capacity**

Smaller cartridge case capacity allows less room for the gases to expand, which results in higher pressure.

- **Length**

A cartridge case that is too long may go too far into the throat of the chamber. If this happens, the mouth of the cartridge case will hold the bullet very tightly and the pressure will increase dramatically before the bullet is released.

- **Number of times the cartridge case has been fired**

Each time the cartridge case is fired it lengthens and expands. Cartridge case material moves forward with each firing. The cartridge neck gets thicker with each firing. A thicker neck will hold the bullet tighter causing an increase in pressure.

- **Resizing of the cartridge case**

When the cartridge case is full-length resized, the shoulder is pushed back. Excessive resizing will cause the interior dimensions to become smaller. This will cause an increase in pressure and may create excessive headspace. The cartridge case may also split or separate upon firing.

- **Wall thickness/Manufacturer**

A thicker cartridge case wall reduces cartridge case capacity. All cartridge case manufacturers have different dimensions they work to. Thus each brand will have different capacities. Military cartridge cases have thicker walls resulting in a lower cartridge case capacity than commercial cartridge cases. If you are unsure of your cartridge case type, assume it is military, start loading at the 'start here' area and expect to reach your maximum safe pressure at a lower propellant charge weight than with commercial cartridge cases.

Propellant

- **Powder charge**

Some charts indicate a maximum pressure below the SAAMI MAP. In our testing, one tenth grain more powder than the maximum charge shown, exceeded the Maximum Average Pressure allowed. Do not load above the maximum charge shown.

- **Burn rate**

All propellants are coated with a deterrent to control their burn rate. Different propellant types have various shapes and deterrent coatings producing different burn rates. A faster burn rate will generate pressure faster than a slower burn rate. A faster burn rate will require less propellant to attain maximum pressure.

- **Load density**

This refers to how full the cartridge case is by volume of propellant. The fuller the cartridge case, the higher the load density. A slower burning propellant will have a higher load density. A higher load

density will give a more consistent ignition and a more consistent pressure. Propellant granule shape will affect the load density. The smaller the granule the more dense the load will be. Always refer to the LoadMAP[®] for the propellant charge weight of your specific bullet and propellant combination.

Primer

• Cup

The cup thickness and hardness varies between type and manufacturer. A soft cup will show signs of excessive pressure easier than a hard or thick cup.

• Primer flash

The quantity and type of primer mix varies from lot to lot and manufacturer to manufacturer. A stronger, hotter flash may create a higher peak pressure.

Component Lots

• Variations

Bullet weight and shape, cartridge case dimensions, propellant density, propellant burn rate and primer flash all vary from lot to lot. With any change in components, manufacturer or lot number, you should start loading at the 'start here' area and work the load up until the desired performance is achieved.

Atmospheric Conditions

It is important to understand how changes in the shooting and loading environments affect pressures. A cartridge loaded at 950 feet above sea level, at 80 degrees Fahrenheit, and 85% relative humidity will normally develop lower pressures when fired at 3000 feet above sea level, at 60 degrees Fahrenheit and 40% relative humidity. An increase in temperature or a decrease in relative humidity can raise pressures.

• Elevation

An increase in elevation may cause a decrease in pressure due to the thinner air. An increase in elevation may also be accompanied by a decrease in temperature.

• Temperature

Temperature, the most important of the atmospheric condition variables, greatly affects cartridge pressure. As the propellant temperature increases, the propellant is able to burn faster which increases pressure within the cartridge. The propellant temperature change may be due to many factors, including the speed of shooting and exposure to any outside heat source. The chamber temperature increases during firing. If a cartridge is left in a warm chamber for very long the propellant temperature may increase enough to cause a dramatic increase in pressure. When shooting in the summer, it is important not to leave any cartridges exposed to the sun. The propellant temperature will increase rapidly to a level which may produce unsafe pressures.

• Humidity

An increase in relative humidity can decrease the pressure generated by the cartridge. Conversely, a decrease in relative humidity can cause an increase in pressure. The moisture level of the propellant will greatly affect the pressure when the ammunition is shot. No matter the humidity level when the ammunition is loaded, in 24 hours, the propellant will take on the same relative humidity as where the ammunition is kept.

The data in this manual shows results achieved in our test facility. Your results will be different. Loads that generate moderate pressure levels in one firearm may generate excessive pressures in another firearm. Always tailor loads for individual firearms.

MidwayUSA[®], 5875 W Van Horn Tavern Road,
Columbia, MO 65203 phone 573-445-2400 FAX 573-446-1018

Excessive Pressure Signs

If, at any time, excessive pressure signs are observed, STOP, you may have exceeded a safe level already. Reduce your load to a level where excessive pressure signs are not observed. Consider this the maximum safe load for your firearm under the conditions the ammunition was loaded, stored and fired.



1. Flattened Primer - The primer is flattened against the bolt face or breech face and fills the entire primer pocket. Some primers are very hard and may not flatten as pressures become excessive. * See footnotes: **a,b**



2. Cratered Primer - The primer flows back into the bolt face or breech face around the firing pin. A circular ridge will appear on the primer around the firing pin indentation. Some primers are very hard and may not crater as pressures become excessive.

* See footnotes: **a,c**



3. Pierced Primer - The firing pin has punctured the primer. A black residue normally appears in the firing pin indentation. If the firing pin has punctured the primer, a small piece of the primer may be missing.

* See footnotes: **a,c**



4. Loose Primer Pocket - Repeated firings of the same cartridge case, using a high pressure load, can cause the primer pocket to enlarge and allow gases to escape around the primer. This causes a dark ring to appear around the primer and on the bolt face or breech face. * See footnotes: **a,d**



5. Blown Primer - The primer pocket may be much larger than the primer allowing the primer to fall out when the cartridge case is extracted. The face of the primer may blow off leaving the remainder in the primer pocket.

* See footnotes: **a,d**

* These conditions may appear as a result of the following:

- a)** excessive pressure.
- b)** excessive headspace caused by an incorrectly adjusted sizing die.
- c)** a problem with the firearm. If you have any questions about the firearm, take the firearm to a qualified gunsmith.
- d)** a worn out cartridge case.
- e)** a manufacturing defect.

Excessive Pressure Signs (continued)



6. Difficult Extraction - The bolt is hard to open and/or the cartridge case is difficult to remove from the chamber. You must use force other than normal finger pressure to operate the bolt or remove the cartridge case. * See footnotes: **a,b,c**



7. Cartridge Case Head Expansion - The cartridge case body expands just above the web area, approximately 1/4" above the extractor groove. To test, fire a factory round and measure just above the web area. If your fired handload is .0005" to .001" larger than the fired factory round, your pressure is too high. * See footnotes: **a,c,e**



8. Incipient Cartridge Case Head Separation - A faint line will appear on the cartridge case body just above the web area, approximately 1/4" above the extractor groove. * See footnotes: **a,b,c,d,e**



9. Cartridge Case Head Separation - The head of the cartridge case partially or completely separates from the body of the cartridge case. The cartridge case will split approximately 1/4" above the extractor groove. * See footnotes: **a,b,c,d,e**



10. Cartridge Case Separation - In some instances the cartridge case may separate closer to the shoulder. * See footnotes: **a,b,c,d**



11. Cartridge Case Splitting - The cartridge case will develop a vertical split anywhere on the cartridge case body or cartridge case mouth. * See footnotes: **a,b,c,d,e**

* These conditions may appear as a result of the following:

- a)** excessive pressure.
- b)** excessive headspace caused by an incorrectly adjusted sizing die.

c) a problem with the firearm. If you have any questions about the firearm, take the firearm to a qualified gunsmith.

d) a worn out cartridge case.

e) a manufacturing defect.

Always use caution when developing loads. For technical assistance, please contact the bullet or propellant company.

Propellant Companies

- Accurate Arms Co., Inc.**, 5891 Hwy 230 West, McEwen, TN 37101
phone 800-416-3006 FAX 615-729-4217
www.amfire.com/gunsites/accurate/accuratehome.html
- Alliant Techsystems** (formerly Hercules powders), New River
Energetics, Rt 114, PO Box 6, Radford, VA 24141-0096
phone 800-276-9337 FAX 540-639-8496
www.atk.com
- Hodgdon Powder Co., Inc.**, PO Box 2932, Shawnee Mission, KS 66201
phone 913-362-9455 FAX 913-362-1307
www.hodgdon.com
- IMR Powder Co.**, 1080 Military Turnpike, Suite 2,
Plattsburgh, NY 12901
phone 518-563-2253 FAX 518-563-6916
www.imrpowder.com
- Kaltron-Pettibone, VihtaVuori Oy**, 1241 Ellis Street,
Bensenville, IL 60106
phone 630-350-1116
www.vihtavuori.fi
- Winchester Div., Olin Corp.**, 427 N Shamrock, E Alton, IL 62024
phone 618-258-3588 FAX 618-258-3446
www.winchester.com

Bullet Companies

- Barnes Bullets, Inc.**, 318 S 860 E, PO Box 215,
American Fork, UT 84003
phone 801-756-4222 FAX 801-756-2465
www.barnesbullets.com
- Hornady Mfg. Co.**, PO Box 1848, Grand Island, NE 68802
phone 800-338-3220 FAX 308-382-5761
www.hornady.com
- MidwayUSA**, 5875 W Van Horn Tavern Road,
Columbia, MO 65202 phone 573-445-2400 FAX 573-446-1018
www.midwayusa.com
- Nosler, Inc.**, PO Box 671, Bend, OR 97709
phone 800-285-3701 FAX 541-388-4667
www.nosler.com
- Remington Arms Co., Inc.**, Product Service Dept., 2592 Arkansas
Hwy 15 North, PO Box 400, Lonoke, AR 72086-0400
phone 501-676-4197 FAX 501-676-4231
www.remington.com
- Sierra Bullets**, 1400 West Henry, Sedalia, MO 65301
phone 800-223-8799 FAX 816-827-4999
www.sierrabullets.com
- Speer Products, Div. of Blount, Inc.**, PO Box 4000, Lewiston, ID 83501
phone 208-746-2351 or 800-533-5000
www.blount.com
- Winchester Div., Olin Corp.**, 427 N Shamrock, E Alton, IL 62024
phone 618-258-3588 FAX 618-258-3446
www.winchester.com

Bullet Terminology

Abbreviation	Description	Abbreviation	Description	Abbreviation	Description
Barnes		Sierra		Common	
O	Original	Blitz	Blitz Bullet®	BBWC	Bevel Base Wadcutter
S	Solid	FPJ	Full Profile Jacket®	BT	Boat Tail
X	X-Bullet®	JHC	Jacketed Hollow Cavity®	DEWC	Double Ended Wadcutter
Hornady		SBT	Spitzer Boat Tail®	FMJ	Full Metal Jacket
A-Max™	Accuracy Match Bullet	SMP	Semi-Pointed®	FN	Flat Nose
CL	Crimp Lock™	Speer		FP	Flat Point
I	Interlock™	GD	Gold Dot®	HB	Hollow Base
SX™	Super Explosive	GS	Grand Slam®	HP	Hollow Point
V-Max™	Plastic Tipped Varmint	Mag-Tip™	Magnum Tip	J	Jacketed
XTP	Extreme Terminal Performance™	Plinker®	Plinker	L	Lead
UHC	Ultra High Coefficient™	Solid	Solid	Match	Match
V	Vector®	TMJ	Total Metal Jacket®	MC	Metal Case
Nosler		TNT™	Explosive	PHP	Plated Hollow Point
BT	Ballistic Tip®	Varminter®	Varminter	PSP	Pointed Soft Point
PAR	Partition®	Winchester		RN	Round Nose
PP	Practical Pistol™	PP	Power Point®	SIL	Silhouette
SB	Solid Base®	ST	Silver Tip™	SJ	Short-or Semi-Jacketed
Remington				SP	Spire Point or Soft Point
BRPT	Bronze Point®			SPT, SPTZ	Spitzer
CL	Core Lokt®			SST	Semi-Spitzer
ER	Extended Range®			SWC	Semi-Wadcutter
HPPL	Hollow Point-Power Lokt®			TC	Truncated Cone
				WC	Wadcutter

45 ACP

.451"-.452" Dia.
185 grain
Sect. Density .130



	Hornady HP/XTP	Hornady SWC Target	MidwayUSA FP	Nosler HP	Remington JHP	Remington Match
Ballistic Coefficient	.139	.068	N/A	.142	.149	.075
Ctg. Over All Length	1.265	1.184	1.273	1.275	1.285	1.215

Reducing Cartridge Over All Length increases pressure greatly.



	Sierra FPJ	Sierra JHP	Speer HP/GD	Speer SWC TMJ	Winchester SWC	MidwayUSA SWC Lead
Ballistic Coefficient	.130	.130	.109	.099	.075	N/A
Ctg. Overall Length	1.239	1.270	1.273	1.275	1.190	1.258

See page 12 for bullet terminology information.

BULLET	PAGE
Hornady HP/XTPJacketed	14-15
Hornady SWC TargetJacketed	16-17
MidwayUSA FPPlated	18-19
Nosler HPJacketed	20-21
Remington JHPJacketed	22-23
Remington MatchJacketed	24-25
Sierra FPJJacketed	26-27
Sierra JHPJacketed	28-29
Speer HP/GDPlated	30-31
Speer SWC TMJPlated	32-33
Winchester SWCJacketed	34-35
MidwayUSA SWCLead	36

Gun	Universal Receiver	Case	Remington
Barrel	H-S Precision test barrel	Max Case Length	.898
Length	5" with 1:16" twist	Trim to Length	.888
Primer	Remington 2-1/2	Max OAL	1.275

Maximum Average Pressure (MAP) 21,000 psi

All testing was done using a solid barrel.
Ammunition fired from a revolver will show a considerable decrease in velocity.



Accurate Arms No. 2

Charge in grains psi fps

STOP		
6.7	21000	983
6.5	19700	951
6.3	18500	919
6.1	17200	887
5.9	16000	855
5.7	14700	823
5.5	13500	791
5.3	12200	759
5.1	11000	727
4.9	9700	695
4.7	8500	663
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

Accurate Arms No. 5

Charge in grains psi fps

STOP		
10.6	21000	1089
10.4	20300	1048
10.2	19600	1027
10.0	19000	1006
9.8	18300	985
9.6	17700	964
9.4	17000	943
9.2	16400	922
9.0	15700	901
8.8	15100	881
8.6	14400	860
8.4	13800	839
8.2	13100	818
8.0	12500	797
7.8	11800	776
7.6	11200	755
7.4	10500	734
7.2	9900	713
STOP		

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
13.1	21000	1085
12.9	20400	1063
12.7	19900	1045
12.5	19300	1025
12.3	18800	1005
12.1	18200	985
11.9	17700	965
11.7	17100	945
11.5	16600	925
11.3	16000	905
11.1	15500	885
10.9	14900	865
10.7	14400	845
10.5	13800	825
10.3	13300	805
10.1	12700	785
9.9	12200	765
9.7	11600	745
9.5	11100	725
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
11.1	21000	1106
11.0	20700	1096
12.8	20200	1078
12.6	19800	1059
12.4	19300	1041
12.2	18800	1023
12.0	18300	1004
11.8	17800	986
11.6	17400	967
11.4	16900	949
11.2	16400	930
11.0	15900	912
10.8	15400	894
10.6	15000	875
10.4	14500	857
10.2	14000	838
10.0	13500	820
9.8	13100	801
9.6	12600	783
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
6.9	21000	1038
6.7	20100	1011
6.5	19200	984
6.3	18300	957
6.1	17400	930
5.9	16500	904
5.7	15600	877
5.5	14800	850
5.3	13900	823
5.1	13000	797
4.9	12100	770
4.7	11200	743
4.5	10300	716
4.3	9500	690
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Alliant Unique		
Charge in grains	psi	fps
STOP		
8.6	21000	1074
8.4	20200	1047
8.2	19500	1020
8.0	18700	994
7.8	18000	967
7.6	17200	941
7.4	16500	914
7.2	15800	887
7.0	15000	861
6.8	14300	834
6.6	13500	808
6.4	12800	781
6.2	12100	754
6.0	11300	728
5.8	10600	701
5.6	9800	675
5.4	9100	648
STOP		

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
7.6	21000	1038
7.4	20000	1010
7.2	19100	983
7.0	18200	956
6.8	17300	929
6.6	16400	901
6.4	15500	874
6.2	14600	847
6.0	13700	820
5.8	12800	792
5.6	11900	765
5.4	11000	738
5.2	10100	711
STOP		

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
11.4	21000	1063
11.2	20300	1061
11.0	19600	1039
10.8	19000	1017
10.6	18300	995
10.4	17600	973
10.2	17000	951
10.0	16300	929
9.8	15600	907
9.6	15000	885
9.4	14300	863
9.2	13600	841
9.0	13000	819
8.8	12300	797
8.6	11600	775
8.4	11000	753
8.2	10300	731
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
7.2	21000	1085
7.1	20500	1071
6.9	19700	1045
6.7	18800	1019
6.5	18000	992
6.3	17100	966
6.1	16300	939
5.9	15400	913
5.7	14600	887
5.5	13700	860
5.3	12900	834
5.1	12000	808
4.9	11200	781
4.7	10300	755
4.5	9500	729
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
7.6	21000	1036
7.5	20500	1021
7.3	19600	993
7.1	18700	965
6.9	17800	937
6.7	16900	909
6.5	16000	880
6.3	15100	852
6.1	14200	824
5.9	13300	796
5.7	12400	768
5.5	11500	740
STOP		

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All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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Accurate Arms No. 2

Charge in grains psi fps

STOP		
8.3	21000	970
6.3	19900	941
5.9	18800	912
5.7	17700	883
5.5	16600	854
5.3	15500	825
5.1	14400	796
4.9	13300	767
4.7	12200	738
STOP		

Use extreme caution when loading in the Yellow or Red zones.

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
9.4	21000	1020
9.6	20300	999
9.4	19700	978
9.2	19100	957
9.0	18400	936
8.8	17800	916
8.6	17200	895
8.4	16500	874
8.2	15900	853
8.0	15300	833
7.8	14600	812
7.6	14000	791
7.4	13400	770
7.2	12800	750
STOP		

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.8	21000	990
11.6	20300	977
11.4	19700	956
11.2	19100	935
11.0	18500	914
10.8	17800	891
10.6	17200	872
10.4	16600	851
10.2	16000	830
10.0	15300	809
9.8	14700	788
9.6	14100	767
9.4	13500	746
STOP		

Alliant Blue Dot

Charge in grains psi fps

STOP		
12.0	21000	1033
11.8	20300	1032
11.6	19700	1012
11.4	19100	991
11.2	18500	971
11.0	17900	950
10.8	17300	930
10.6	16700	909
10.4	16100	889
10.2	15500	868
10.0	14900	848
9.8	14300	827
9.6	13700	807
9.4	13100	786
9.2	12500	766
9.0	11900	745
8.8	11300	725
8.6	10700	704
8.4	10100	684
STOP		

Alliant Bullseye

Charge in grains psi fps

STOP		
6.2	21000	1012
6.1	20500	996
5.9	19700	966
5.7	18800	935
5.5	18000	905
5.3	17200	875
5.1	16300	844
4.9	15500	814
4.7	14600	783
4.5	13800	753
4.3	13000	723
STOP		

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Alliant Unique		
Charge in grains	psi	fps
STOP		
8.5	21000	1101
8.4	20600	1088
8.2	19900	1062
8.0	19200	1036
7.8	18500	1010
7.6	17700	984
7.4	17000	958
7.2	16300	932
7.0	15600	906
6.8	14900	880
6.6	14200	854
6.4	13500	828
6.2	12700	802
6.0	12000	776
5.8	11300	750
5.6	10600	724
5.4	9900	698
STOP		

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
6.8	21000	998
6.7	20500	982
6.5	19500	950
6.3	18600	919
6.1	17700	887
5.9	16700	855
5.7	15800	824
5.5	14800	792
5.3	13800	761
5.1	13000	729
4.9	12100	698
STOP		

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
10.8	21000	1066
10.6	20300	1061
10.4	19700	1037
10.2	19100	1013
10.0	18400	989
9.8	17800	965
9.6	17200	941
9.4	16600	917
9.2	15900	893
9.0	15300	869
8.8	14700	845
8.6	14100	821
8.4	13400	797
8.2	12800	773
8.0	12200	749
7.8	11600	725
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
6.5	21000	1050
6.3	20100	1020
6.1	19300	991
5.9	18500	961
5.7	17700	932
5.5	16900	903
5.3	16000	873
5.1	15200	844
4.9	14400	815
4.7	13600	785
4.5	12800	756
4.3	12000	727
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
7.0	21000	1041
6.9	20600	1025
6.7	19800	994
6.5	19000	964
6.3	18200	933
6.1	17400	902
5.9	16600	871
5.7	15800	841
5.5	15000	810
5.3	14200	779
5.1	13500	748
STOP		

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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Accurate Arms No. 2

Charge in grains psi fps

STOP		
7.3	21000	1060
7.1	19800	1027
6.9	18900	995
6.7	17800	963
6.5	16800	931
6.3	15700	898
6.1	14700	866
5.9	13600	834
5.7	12600	802
5.5	11500	769
5.3	10500	737
5.1	9400	705
4.9	8400	673
STOP		

Use extreme caution when loading in the Yellow or Red zones.

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
10.7	21000	1074
10.6	20600	1063
10.4	20000	1042
10.2	19300	1021
10.0	18600	1000
9.8	18000	979
9.6	17300	958
9.4	16600	938
9.2	16000	917
9.0	15300	896
8.8	14700	875
8.6	14000	854
8.4	13300	833
8.2	12700	812
8.0	12000	791
7.8	11300	770
7.6	10700	749
7.4	10000	728
STOP		

Accurate Arms No. 7

Charge in grains psi fps

STOP		
13.1	21000	1054
12.9	20900	1036
12.7	19700	1018
12.5	19100	1000
12.3	18500	982
12.1	17900	965
11.9	17300	947
11.7	16600	929
11.5	16000	911
11.3	15400	894
11.1	14800	876
10.9	14200	858
10.7	13600	840
10.5	12900	822
10.3	12300	804
10.1	11700	787
9.9	11100	769
9.7	10500	751
STOP		

Alliant Blue Dot

Charge in grains psi fps

STOP		
13.2	21000	1078
13.0	20900	1062
12.8	20000	1046
12.6	19600	1030
12.4	19100	1014
12.2	18700	998
12.0	18200	982
11.8	17700	966
11.6	17300	950
11.4	16800	934
11.2	16400	918
11.0	15900	902
10.8	15500	886
10.6	15000	870
10.4	14500	854
10.2	14100	838
10.0	13600	822
9.8	13200	806
STOP		

Alliant Bullseye

Charge in grains psi fps

STOP		
7.2	21000	1082
7.1	20500	1069
6.9	19700	1043
6.7	18900	1017
6.5	18100	991
6.3	17300	965
6.1	16400	939
5.9	15600	913
5.7	14800	887
5.5	14000	861
5.3	13200	835
5.1	12400	809
4.9	11500	783
4.7	10700	757
4.5	9900	731
4.3	9100	705
STOP		

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Alliant Unique

Charge		
grains	psi	fps
STOP		
8.5	21000	1077
8.4	20500	1064
8.2	19600	1039
8.0	18900	1014
7.8	17900	989
7.6	17000	964
7.4	16100	939
7.2	15300	914
7.0	14400	889
6.8	13500	864
6.6	13000	839
6.4	11900	814
6.2	10800	789
6.0	10000	764
5.8	9100	739
5.6	8300	714
STOP		

Hodgdon HP-38

Charge		
grains	psi	fps
STOP		
7.9	21000	1074
7.8	20500	1059
7.6	19600	1031
7.4	18700	1002
7.2	17800	973
7.0	16900	945
6.8	16000	916
6.6	15100	888
6.4	14200	859
6.2	13300	830
6.0	12400	802
5.8	11500	773
5.6	10600	745
STOP		

Hodgdon HS-6

Charge		
grains	psi	fps
STOP		
11.4	21000	1101
11.2	20300	1084
11.0	19600	1061
10.8	19000	1039
10.6	18300	1016
10.4	17600	993
10.2	17000	971
10.0	16500	948
9.8	15600	925
9.6	15000	903
9.4	14300	880
9.2	13600	857
9.0	13000	834
8.8	12300	811
8.6	11600	788
8.4	11000	765
8.2	10300	742
STOP		

IMR 700X

Charge		
grains	psi	fps
STOP		
7.2	21000	1080
7.1	20200	1066
6.9	19400	1041
6.7	18600	1016
6.5	17800	992
6.3	17000	967
6.1	16200	942
5.9	15400	918
5.7	14600	893
5.5	13800	868
5.3	13000	843
5.1	12200	819
4.9	11400	794
4.7	10600	769
4.5	9800	745
STOP		

Winchester 231

Charge		
grains	psi	fps
STOP		
7.8	21000	1080
7.7	20500	1051
7.5	19500	1025
7.3	18500	998
7.1	17500	970
6.9	16500	943
6.7	15500	915
6.5	14500	888
6.3	13500	860
6.1	12500	833
5.9	11500	805
5.7	10500	778
5.5	9500	751
STOP		

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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Accurate Arms No. 2

Charge in grains psi fps

STOP		
6.9	21000	1033
6.8	20700	998
6.6	18900	970
6.4	17600	941
6.2	16300	913
6.0	14900	885
5.8	13600	856
5.6	12300	828
5.4	10900	799
5.2	9600	771
5.0	8300	743
STOP		

Use extreme caution when loading in the Yellow or Red zones.

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
10.7	21000	1068
10.6	20700	1025
10.4	20100	1055
10.2	19500	1035
10.0	18900	1015
9.8	18300	994
9.6	17700	974
9.4	17200	954
9.2	16600	934
9.0	16000	914
8.8	15400	893
8.6	14800	873
8.4	14200	853
8.2	13700	833
8.0	13100	812
7.8	12500	792
7.6	11900	771
7.4	11300	752
7.2	10700	732
STOP		

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.0	21000	1075
12.9	20700	1065
12.7	20100	1046
12.5	19500	1027
12.3	18900	1007
12.1	18400	988
11.9	17800	969
11.7	17300	950
11.5	16800	931
11.3	16300	911
11.1	15800	892
10.9	14900	873
10.7	14100	854
10.5	13300	835
10.3	12500	815
10.1	11700	796
9.9	10900	777
9.7	10100	758
9.5	9300	739
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
13.1	21000	1107
13.0	20700	1097
12.8	20200	1077
12.6	19700	1057
12.4	19200	1037
12.2	18700	1017
12.0	18200	997
11.8	17700	977
11.6	17200	957
11.4	16700	937
11.2	16200	917
11.0	15700	897
10.8	15200	877
10.6	14700	858
10.4	14200	838
10.2	13700	818
10.0	13200	798
9.8	12700	778
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
7.1	21000	1027
6.9	20200	1012
6.7	19500	1008
6.5	18700	983
6.3	18000	959
6.1	17300	934
5.9	16500	910
5.7	15800	885
5.5	15100	861
5.3	14300	836
5.1	13600	812
4.9	12900	787
4.7	12100	763
4.5	11400	738
4.3	10700	714
STOP		

start here

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Alliant Unique

Charge in grains psi fps

STOP		
8.4	21000	1075
8.2	20000	1046
8.0	19100	1017
7.8	18200	988
7.6	17200	959
7.4	16300	931
7.2	15400	902
7.0	14400	873
6.8	13500	844
6.6	12600	816
6.4	11600	787
6.2	10700	758
6.0	9800	729
5.8	8900	701
STOP		

start here

Hodgdon HP-38

Charge in grains psi fps

STOP		
7.8	21000	1094
7.6	20200	1028
7.4	19400	1002
7.2	18600	976
7.0	17800	950
6.8	17000	924
6.6	16200	898
6.4	15400	872
6.2	14600	846
6.0	13800	820
5.8	13000	794
5.6	12200	768
5.4	11400	742
5.2	10600	716
STOP		

start here

Hodgdon HS-6

Charge in grains psi fps

STOP		
11.2	21000	1097
11.4	20600	1088
11.2	20000	1066
11.0	19400	1045
10.8	18800	1023
10.6	18100	1005
10.4	17500	985
10.2	16900	964
10.0	16300	944
9.8	15700	924
9.6	15000	900
9.4	14400	880
9.2	13800	860
9.0	13200	842
8.8	12500	822
8.6	11900	802
8.4	11300	781
STOP		

start here

IMR 700X

Charge in grains psi fps

STOP		
7.1	21000	1076
6.9	20100	1049
6.7	19200	1023
6.5	18400	997
6.3	17500	970
6.1	16700	944
5.9	15800	918
5.7	15000	891
5.5	14100	865
5.3	13300	839
5.1	12400	812
4.9	11600	786
4.7	10700	760
4.5	9900	734
STOP		

start here

Winchester 231

Charge in grains psi fps

STOP		
7.6	21000	1090
7.5	20500	1035
7.3	19600	1008
7.1	18700	981
6.9	17800	954
6.7	16900	926
6.5	16000	899
6.3	15100	872
6.1	14200	845
5.9	13300	818
5.7	12400	791
5.5	11500	764
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9-10.



Accurate Arms No. 2

Charge in grains psi fps

STOP		
6.8	25000	1041
6.8	20900	1025
6.6	19000	995
6.4	17700	962
6.2	16400	931
6.0	15100	899
5.8	13800	868
5.6	12500	837
5.4	11200	805
5.2	9900	774
5.0	8600	743
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

Accurate Arms No. 5

Charge in grains psi fps

STOP		
10.6	21000	1088
10.4	20400	1066
10.2	19800	1045
10.0	19200	1024
9.8	18600	1003
9.6	18000	982
9.4	17400	961
9.2	16800	940
9.0	16200	919
8.8	15600	898
8.6	15000	877
8.4	14400	856
8.2	13800	835
8.0	13200	814
7.8	12600	793
7.6	12000	772
7.4	11400	751
7.2	10800	730
STOP		

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
12.8	21000	1076
12.7	20000	1065
12.5	20000	1045
12.3	19400	1025
12.1	18800	1005
11.9	18200	985
11.7	17600	965
11.5	16900	945
11.3	16300	925
11.1	15700	904
10.9	15100	884
10.7	14500	864
10.5	13900	844
10.3	13300	824
10.1	12600	804
9.9	12000	784
9.7	11400	764
9.5	10800	744
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
13.2	21000	1141
13.1	20700	1131
12.9	20200	1111
12.7	19800	1092
12.5	19300	1072
12.3	18800	1053
12.1	18400	1033
11.9	17900	1014
11.7	17400	994
11.5	16900	974
11.3	16300	955
11.1	16000	935
10.9	15300	916
10.7	15000	896
10.5	14600	877
10.3	14100	857
10.1	13600	838
9.9	13200	818
9.7	12700	799
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
7.0	11000	1069
6.9	20500	1056
6.7	19600	1036
6.5	18800	1005
6.3	17900	979
6.1	17000	954
5.9	16100	928
5.7	15200	902
5.5	14300	877
5.3	13500	851
5.1	12600	826
4.9	11800	800
4.7	10900	775
4.5	10000	749
4.3	9200	724
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Alliant Unique		
Charge in grains	psi	fps
STOP		
8.8	21000	1065
8.4	20500	1080
8.2	19600	1056
8.0	18700	1031
7.8	17800	1007
7.6	17000	983
7.4	16100	958
7.2	15200	934
7.0	14300	909
6.8	13400	885
6.6	12500	860
6.4	11600	836
6.2	10700	811
6.0	9800	787
5.8	8900	763
STOP		

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
7.8	21000	1057
7.4	20500	1043
7.2	19500	1015
7.0	18600	987
6.8	17600	959
6.6	16700	932
6.4	15700	904
6.2	14800	876
6.0	13800	848
5.8	12900	821
5.6	11900	795
5.4	11000	767
5.2	10100	738
STOP		

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
11.4	21000	1138
11.2	20300	1085
11.0	19600	1063
10.8	18900	1041
10.6	18200	1019
10.4	17500	996
10.2	16800	974
10.0	16100	952
9.8	15400	930
9.6	14700	907
9.4	14000	885
9.2	13300	863
9.0	12600	841
8.8	11900	818
8.6	11200	796
8.4	10500	774
8.2	9800	752
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
7.0	21000	1084
6.9	20500	1071
6.7	19600	1045
6.5	18800	1019
6.3	17900	993
6.1	17000	967
5.9	16200	941
5.7	15300	915
5.5	14400	889
5.3	13500	863
5.1	12700	837
4.9	11800	811
4.7	10900	785
4.5	10000	760
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
7.6	21000	1062
7.5	20500	1049
7.3	19600	1023
7.1	18800	997
6.9	17900	971
6.7	17000	945
6.5	16100	919
6.3	15300	893
6.1	14400	867
5.9	13500	841
5.7	12600	815
5.5	11800	789
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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Accurate Arms No. 2

Charge in grains psi fps

STOP		
8.8	21000	1023
8.5	20600	1010
8.2	19800	981
8.1	19100	952
5.8	18400	922
5.7	17600	893
5.5	16900	864
5.3	16200	835
5.1	15400	806
4.9	14700	777
4.7	14000	748
STOP		

Use extreme caution when loading in the Yellow or Red zones.

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
9.8	21000	1011
9.6	20400	1000
9.4	19800	989
9.2	19300	968
9.0	18700	947
8.8	18100	926
8.6	17600	905
8.4	17000	885
8.2	16500	864
8.0	15900	843
7.8	15300	822
7.6	14800	801
7.4	14200	780
7.2	13700	760
STOP		

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.8	21000	1001
11.6	20400	981
11.4	19900	961
11.2	19400	941
11.0	18900	921
10.8	18300	901
10.6	17800	882
10.4	17200	862
10.2	16700	842
10.0	16200	822
9.8	15600	802
9.6	15100	782
9.4	14600	763
STOP		

Alliant Blue Dot

Charge in grains psi fps

STOP		
12.0	21000	1071
11.9	20700	1060
11.7	20200	1038
11.5	19600	1017
11.3	19100	995
11.1	18600	974
10.9	18100	952
10.7	17500	931
10.5	17000	909
10.3	16500	887
10.1	16000	866
9.9	15500	844
9.7	14900	823
9.5	14400	801
9.3	13900	780
9.1	13400	758
8.9	12800	737
8.7	12300	715
8.5	11800	694
STOP		

Alliant Bullseye

Charge in grains psi fps

STOP		
6.2	21000	1005
6.1	20500	990
5.9	19700	960
5.7	18900	930
5.5	18000	900
5.3	17200	870
5.1	16300	840
4.9	15500	810
4.7	14600	780
4.5	13800	750
4.3	13000	720
STOP		

Use extreme caution when loading in the Yellow or Red zones.

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

start here

Alliant Unique			
Charge in grains	psi	fps	
STOP			
7.8	21000	1027	
7.6	20100	999	
7.4	19300	971	
7.2	18500	944	
7.0	17600	916	
6.8	16800	888	
6.6	16000	861	
6.4	15200	833	
6.2	14500	805	
6.0	13500	778	
5.8	12700	750	
5.6	11800	722	
5.4	11000	695	
5.2	10200	667	
5.0	9400	640	
STOP			

Hodgdon HP-38			
Charge in grains	psi	fps	
STOP			
8.8	21000	960	
8.7	20800	975	
8.5	19600	944	
8.3	18700	914	
8.1	17800	883	
7.9	16900	852	
7.7	16000	821	
7.5	15100	790	
7.3	14200	760	
7.1	13300	729	
6.9	12400	698	
STOP			

Hodgdon HS-6			
Charge in grains	psi	fps	
STOP			
10.4	21000	1041	
10.2	20300	1018	
10.0	19700	995	
9.8	19100	972	
9.6	18500	949	
9.4	17900	926	
9.2	17300	903	
9.0	16700	880	
8.8	16100	857	
8.6	15500	834	
8.4	14900	811	
8.2	14300	788	
8.0	13700	765	
7.8	13100	742	
STOP			

IMR 700X			
Charge in grains	psi	fps	
STOP			
6.7	21000	1054	
6.5	20300	1027	
6.3	19600	1000	
6.1	19000	973	
5.9	18300	947	
5.7	17600	920	
5.5	17000	893	
5.3	16300	866	
5.1	15600	840	
4.9	15000	813	
4.7	14300	786	
4.5	13600	759	
4.3	13000	733	
STOP			

start here

Winchester 231			
Charge in grains	psi	fps	
STOP			
7.0	21000	1021	
6.9	20500	1005	
6.7	19700	975	
6.5	18900	945	
6.3	18100	915	
6.1	17300	885	
5.9	16500	854	
5.7	15700	824	
5.5	14900	794	
5.3	14100	764	
5.1	13300	734	
STOP			

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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Accurate Arms No. 2

Charge in grains	psi	fps
STOP		
8.8	21000	987
6.7	19900	965
6.5	18800	933
6.3	17800	901
6.1	16700	869
5.9	15600	837
5.7	14600	806
5.5	13500	774
5.3	12400	742
5.1	11300	710
4.9	10310	678
4.7	9300	647
STOP		

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All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length Increases pressure greatly. See cover page for this grain weight for O.A.L.

Accurate Arms No. 5

Charge in grains	psi	fps
STOP		
10.7	21000	1079
10.6	20900	1068
10.4	20000	1046
10.2	19400	1024
10.0	18800	1002
9.8	18200	980
9.6	17600	958
9.4	17000	936
9.2	16400	914
9.0	15800	892
8.8	15200	870
8.6	14600	848
8.4	14000	826
8.2	13400	804
8.0	12800	782
7.8	12200	760
7.6	11600	738
7.4	11000	716
7.2	10400	694
STOP		

Accurate Arms No. 7

Charge in grains	psi	fps
STOP		
12.9	21000	1090
12.7	20400	1041
12.5	19900	1022
12.3	19300	1003
12.1	18800	985
11.9	18300	966
11.7	17700	947
11.5	17200	929
11.3	16700	910
11.1	16100	891
10.9	15600	872
10.7	15100	854
10.5	14500	835
10.3	14000	816
10.1	13500	798
9.9	12900	779
9.7	12400	760
9.5	11900	742
STOP		

Alliant Blue Dot

Charge in grains	psi	fps
STOP		
12.8	21000	1104
12.7	20500	1095
12.5	20100	1073
12.3	19600	1053
12.1	19000	1033
11.9	18500	1013
11.7	17900	992
11.5	17400	972
11.3	16800	952
11.1	16300	932
10.9	15700	912
10.7	15200	892
10.5	14600	871
10.3	14100	851
10.1	13500	831
9.9	12900	811
9.7	12400	791
9.5	11800	770
9.3	11300	750
STOP		

Alliant Bullseye

Charge in grains	psi	fps
STOP		
6.9	21000	1038
6.7	20000	1008
6.5	19100	979
6.3	18200	949
6.1	17300	920
5.9	16400	890
5.7	15500	860
5.5	14600	831
5.3	13700	802
5.1	12800	772
4.9	11900	743
4.7	11000	713
4.5	10100	684
4.3	9200	655
STOP		

Use extreme caution when loading in the Yellow or Red zones.

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Alliant Unique		
Charge in grains	psi	fps
STOP		
8.2	21000	1071
8.4	20500	1058
start here		
8.2	19600	1032
8.0	18800	1006
7.8	17900	981
7.6	17000	955
7.4	16100	929
7.2	15300	904
7.0	14400	878
6.8	13500	852
6.6	12600	827
6.4	11800	801
6.2	10900	775
6.0	10000	750
5.8	9100	724
5.6	8300	699
STOP		

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
7.6	21000	1051
7.4	20100	1023
start here		
7.2	19200	992
7.0	18400	963
6.8	17500	934
6.6	16700	905
6.4	15800	876
6.2	14900	846
6.0	14100	817
5.8	13200	788
5.6	12400	759
5.4	11500	730
5.2	10700	701
STOP		

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
11.2	21000	1101
11.4	20600	1089
start here		
11.2	20000	1067
11.0	19300	1045
10.8	18700	1023
10.6	18000	1000
10.4	17300	978
10.2	16700	956
10.0	16000	933
9.8	15400	911
9.6	14700	889
9.4	14100	867
9.2	13400	844
9.0	12700	822
8.8	12000	800
8.6	11400	777
8.4	10800	754
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
7.1	21000	1064
6.9	20100	1035
start here		
6.7	19200	1007
6.5	18400	979
6.3	17500	951
6.1	16700	923
5.9	15800	895
5.7	15000	866
5.5	14100	838
5.3	13300	810
5.1	12400	782
4.9	11600	754
4.7	10800	726
4.5	9900	698
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
7.7	21000	1041
7.5	20000	1012
start here		
7.3	19100	984
7.1	18200	955
6.9	17300	927
6.7	16400	899
6.5	15500	870
6.3	14600	842
6.1	13700	814
5.9	12800	785
5.7	11900	757
5.5	11000	728
STOP		

Use extreme caution when loading in the Yellow or Red zones.

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

WARNING: Always begin in the "start here" area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



Accurate Arms No. 2

Charge in grains			psi	fps
STOP				
6.9	21000	1011		
6.7	19800	983		
6.5	18600	956		
6.3	17500	929		
6.1	16300	902		
5.9	15200	875		
5.7	14000	848		
5.5	12800	821		
5.3	11700	794		
5.1	10600	767		
4.9	9400	740		
4.7	8300	713		
STOP				

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

Accurate Arms No. 5

Charge in grains			psi	fps
STOP				
10.7	21000	1011		
10.6	20600	1072		
10.4	20000	1050		
start here				
10.2	19400	1029		
10.0	18800	1007		
9.8	18200	986		
9.6	17600	964		
9.4	17000	943		
9.2	16400	921		
9.0	15800	900		
8.8	15200	878		
8.6	14600	857		
8.4	14000	835		
8.2	13400	814		
8.0	12800	792		
7.8	12200	771		
7.6	11600	749		
7.4	11000	728		
7.2	10400	707		
STOP				

Accurate Arms No. 7

Charge in grains			psi	fps
STOP				
12.9	21000	1011		
12.7	20400	1037		
12.5	19800	1017		
12.3	19200	997		
12.1	18600	977		
11.9	18000	957		
11.7	17400	937		
11.5	16800	917		
11.3	16200	897		
11.1	15600	877		
10.9	15000	857		
10.7	14400	837		
10.5	13800	817		
10.3	13200	797		
10.1	12600	777		
9.9	12000	757		
9.7	11400	737		
9.5	10800	717		
STOP				

Alliant Blue Dot

Charge in grains			psi	fps
STOP				
13.0	21000	1091		
12.9	20700	1091		
12.7	20200	1073		
12.5	19700	1054		
12.3	19100	1036		
12.1	18600	1017		
11.9	18100	999		
11.7	17600	980		
11.5	17100	962		
11.3	16600	943		
11.1	16100	925		
10.9	15600	906		
10.7	15000	888		
10.5	14500	869		
10.3	14000	851		
10.1	13500	832		
9.9	13000	814		
9.7	12400	795		
9.5	11900	777		
STOP				

Alliant Bullseye

Charge in grains			psi	fps
STOP				
6.8	21000	1041		
6.7	20100	1012		
6.5	19200	984		
6.3	18400	955		
6.1	17500	927		
5.9	16700	899		
5.7	15800	870		
5.5	15000	842		
5.3	14100	813		
5.1	13300	785		
4.9	12400	757		
4.7	11600	728		
4.5	10700	700		
4.3	9900	672		
STOP				

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Alliant Unique		
Charge in grains	psi	fps
STOP		
8.4	21000	1099
8.2	20100	1082
8.0	19200	1066
7.8	18300	979
7.6	17400	953
7.4	16500	926
7.2	15600	900
7.0	14700	873
6.8	13800	847
6.6	12900	820
6.4	12000	794
6.2	11100	767
6.0	10200	741
5.8	9300	714
5.6	8400	688
STOP		

start here

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
7.5	21000	1099
7.4	20500	1020
7.2	19500	992
7.0	18600	964
6.8	17700	936
6.6	16700	908
6.4	15800	880
6.2	14800	852
6.0	13900	824
5.8	13000	796
5.6	12000	768
5.4	11100	740
5.2	10200	712
STOP		

start here

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
11.4	21000	1109
11.2	20200	1085
11.0	19500	1061
10.8	18800	1037
10.6	18100	1013
10.4	17400	989
10.2	16700	965
10.0	16000	941
9.8	15300	917
9.6	14600	893
9.4	13900	869
9.2	13200	845
9.0	12500	821
8.8	11800	797
8.6	11100	773
8.4	10400	749
8.2	9700	725
STOP		

start here

IMR 700X		
Charge in grains	psi	fps
STOP		
6.9	21000	1099
6.7	20100	1081
6.5	19200	1063
6.3	18300	976
6.1	17400	948
5.9	16500	921
5.7	15600	893
5.5	14700	865
5.3	13800	838
5.1	12900	810
4.9	12000	783
4.7	11100	755
4.5	10200	728
STOP		

start here

Winchester 231		
Charge in grains	psi	fps
STOP		
7.6	21000	1047
7.5	20500	1012
7.3	19700	1004
7.1	18900	976
6.9	18100	948
6.7	17200	920
6.5	16400	891
6.3	15600	863
6.1	14800	835
5.9	13900	807
5.7	13100	779
5.5	12300	751
STOP		

start here

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

Use extreme caution when loading in the Yellow or Red zones.

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WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



Accurate Arms No. 2

Charge in grains psi fps

STOP		
7.4	21000	1074
7.3	20500	1060
7.1	19600	1032
6.9	18700	1004
6.7	17800	976
6.5	16900	948
6.3	16000	920
6.1	15100	892
5.9	14200	864
5.7	13300	836
5.5	12400	808
5.3	11500	780
5.1	10600	752
4.9	9700	724
4.7	8800	696
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

Accurate Arms No. 5

Charge in grains psi fps

STOP		
10.9	21000	1121
10.8	20600	1110
10.6	20000	1089
10.4	19300	1068
10.2	18700	1047
10.0	18000	1026
9.8	17400	1005
9.6	16700	984
9.4	16100	963
9.2	15400	942
9.0	14800	921
8.8	14100	900
8.6	13500	879
8.4	12900	858
8.2	12200	837
8.0	11500	816
7.8	10900	795
7.6	10200	774
7.4	9600	753
STOP		

Accurate Arms No. 7

Charge in grains psi fps

STOP		
13.1	21000	1091
12.9	20300	1072
12.7	19700	1053
12.5	19000	1034
12.3	18400	1015
12.1	17700	996
11.9	17100	977
11.7	16400	958
11.5	15800	939
11.3	15100	920
11.1	14500	901
10.9	13800	882
10.7	13200	863
10.5	12500	844
10.3	11900	825
10.1	11200	806
9.9	10600	787
9.7	9900	768
9.5	9300	749
STOP		

Alliant Blue Dot

Charge in grains psi fps

STOP		
13.1	21000	1154
12.9	20400	1133
12.7	19800	1113
12.5	19200	1093
12.3	18500	1073
12.1	18000	1053
11.9	17600	1033
11.7	17000	1013
11.5	16400	992
11.3	15900	972
11.1	15300	952
10.9	14800	932
10.7	14200	912
10.5	13600	892
10.3	13100	872
10.1	12500	851
9.9	11900	831
9.7	11400	811
9.5	10800	791
STOP		

Alliant Bullseye

Charge in grains psi fps

STOP		
9.2	20300	1086
7.1	20600	1073
6.9	19800	1047
6.7	19000	1021
6.5	18200	996
6.3	17400	970
6.1	16600	944
5.9	15800	918
5.7	15000	893
5.5	14200	867
5.3	13400	841
5.1	12600	816
4.9	11800	790
4.7	11000	764
4.5	10200	738
STOP		

Use extreme caution when loading in the Yellow or Red zones.

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WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Alliant Unique

Charge in grains			psi			fps		
STOP								
9.0	21000	1114						
8.8	19900	1086						
8.6	18800	1058						
8.4	17700	1030						
8.2	16600	1003						
8.0	15500	975						
7.8	14400	947						
7.6	13300	920						
7.4	12200	892						
7.2	11100	864						
7.0	10000	837						
STOP								

Hodgdon HP-38

Charge in grains			psi			fps		
STOP								
8.0	21000	1089						
7.8	20000	1061						
7.6	19000	1034						
7.4	18100	1006						
7.2	17100	979						
7.0	16200	951						
6.8	15200	924						
6.6	14200	896						
6.4	13200	869						
6.2	12200	841						
6.0	11200	814						
STOP								

Hodgdon HS-6

Charge in grains			psi			fps		
STOP								
12.1	21000	1152						
12.0	20000	1141						
11.8	19900	1121						
11.6	19200	1100						
11.4	18600	1079						
11.2	17900	1059						
11.0	17200	1038						
10.8	16500	1017						
10.6	15800	997						
10.4	15100	976						
10.2	14500	955						
10.0	13800	935						
9.8	13100	914						
9.6	12400	893						
9.4	11700	873						
9.2	11000	852						
9.0	10400	832						
STOP								

IMR 700X

Charge in grains			psi			fps		
STOP								
7.4	21000	1121						
7.3	20500	1108						
7.1	19600	1083						
6.9	18700	1057						
6.7	17700	1032						
6.5	16800	1007						
6.3	15900	982						
6.1	15000	956						
5.9	14100	931						
5.7	13200	906						
5.5	12300	881						
STOP								

Winchester 231

Charge in grains			psi			fps		
STOP								
8.1	21000	1100						
8.0	20500	1087						
7.8	19700	1061						
7.6	18900	1036						
7.4	18000	1010						
7.2	17200	984						
7.0	16400	959						
6.8	15500	933						
6.6	14700	908						
6.4	13900	882						
6.2	13100	857						
STOP								

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

WARNING: Always begin in the 'start bars' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



Accurate Arms No. 2

Charge in grains	psi	fps
STOP		
6.9	21000	1040
6.7	19900	1008
6.5	18900	977
6.3	17900	946
6.1	16800	915
5.9	15800	884
5.7	14700	852
5.5	13700	821
5.3	12700	790
5.1	11600	759
4.9	10600	728
4.7	9500	697
STOP		

Accurate Arms No. 5

Charge in grains	psi	fps
STOP		
10.3	21000	1076
10.4	20700	1065
10.2	20200	1043
start here		
10.0	19500	1022
9.8	19100	1001
9.6	18500	979
9.4	18000	957
9.2	17500	936
9.0	17000	914
8.8	16400	893
8.6	15900	871
8.4	15400	850
8.2	14800	829
8.0	14300	807
7.8	13800	785
7.6	13200	764
7.4	12700	742
7.2	12200	721
STOP		

Accurate Arms No. 7

Charge in grains	psi	fps
STOP		
12.4	21000	1100
12.2	20300	1089
12.0	19700	1088
start here		
11.8	19100	1067
11.6	18500	1046
11.4	17900	1025
11.2	17300	1004
11.0	16700	983
10.8	16100	962
10.6	15500	941
10.4	14900	920
10.2	14300	899
10.0	13700	878
9.8	13100	857
9.6	12500	836
9.4	11900	815
STOP		

Alliant Blue Dot

Charge in grains	psi	fps
STOP		
12.4	21000	1109
12.3	20700	1097
12.1	20100	1075
start here		
11.9	19500	1052
11.7	18900	1029
11.5	18300	1007
11.3	17800	984
11.1	17200	961
10.9	16600	939
10.7	16000	916
10.5	15400	893
10.3	14800	871
10.1	14300	848
9.9	13700	825
9.7	13100	803
9.5	12500	780
9.3	12000	757
9.1	11400	733
STOP		

Alliant Bullseye

Charge in grains	psi	fps
STOP		
6.9	21000	1060
6.7	20100	1040
6.5	19200	1014
6.3	18300	988
6.1	17500	961
5.9	16600	935
5.7	15700	909
5.5	14800	882
5.3	14000	856
5.1	13100	830
4.9	12300	803
4.7	11400	777
4.5	10500	751
4.3	9700	725
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

Use extreme caution when loading in the Yellow or Red zones.

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Alliant Unique		
Charge in grains	psi	fps
STOP		
8.5	21000	1092
8.4	20600	1081
8.2	19500	1059
8.0	19100	1057
7.8	18400	1016
7.6	17700	994
7.4	16900	972
7.2	16200	950
7.0	15500	929
6.8	14700	907
6.6	14000	885
6.4	13300	864
6.2	12500	842
6.0	11800	820
5.8	11100	798
STOP		

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
7.0	21000	1061
7.4	20100	1033
7.2	19200	1005
7.0	18300	978
6.8	17400	950
6.6	16500	923
6.4	15600	895
6.2	14700	867
6.0	13800	840
5.8	12900	812
5.6	12000	785
5.4	11100	757
5.2	10200	730
STOP		

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
11.5	21000	1118
11.2	20600	1096
11.0	19900	1073
10.8	19200	1050
10.6	18500	1027
10.4	17800	1004
10.2	17100	981
10.0	16400	957
9.8	15700	934
9.6	15000	911
9.4	14300	888
9.2	13600	865
9.0	12900	842
8.8	12200	819
8.6	11500	796
8.4	10800	773
8.2	10100	750
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
7.0	21000	1066
6.9	20500	1071
6.7	19700	1043
6.5	18800	1015
6.3	18000	987
6.1	17100	959
5.9	16300	931
5.7	15400	902
5.5	14600	874
5.3	13700	846
5.1	12900	818
4.9	12000	790
4.7	11200	762
4.5	10400	734
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
7.6	21000	1063
7.5	20600	1048
7.3	19800	1020
7.1	19000	992
6.9	18200	965
6.7	17400	937
6.5	16600	909
6.3	15800	881
6.1	15000	854
5.9	14200	826
5.7	13400	798
5.5	12600	771
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

WARNING: Always begin in the "start here" area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 18.



Accurate Arms No. 2

Charge in grains psi fps

STOP		
6.3	21000	978
6.1	19900	945
5.9	18900	913
5.7	17900	881
5.5	16900	849
5.3	15900	817
5.1	14900	785
4.9	13900	753
4.7	12900	721
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

Accurate Arms No. 5

Charge in grains psi fps

STOP		
9.4	21000	1029
9.6	20400	1007
9.4	19900	986
9.2	19300	965
9.0	18800	944
8.8	18200	923
8.6	17700	902
8.4	17100	881
8.2	16600	860
8.0	16000	839
7.8	15500	818
7.6	14900	797
7.4	14400	776
7.2	13900	755
STOP		

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.8	21000	1069
11.6	20400	985
11.4	19800	965
11.2	19200	947
11.0	18700	927
10.8	18100	906
10.6	17500	886
10.4	16900	866
10.2	16400	845
10.0	15800	825
9.8	15200	804
9.6	14600	784
9.4	14100	764
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
12.0	21000	1087
11.9	20700	1076
11.7	20200	1054
11.5	19700	1033
11.3	19300	1011
11.1	18900	989
10.9	18300	968
10.7	17800	946
10.5	17300	925
10.3	16900	903
10.1	16400	882
9.9	15900	860
9.7	15400	838
9.5	14900	817
9.3	14500	797
9.1	14000	774
8.9	13500	752
8.7	13000	731
8.5	12500	709
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
8.2	21000	1002
8.3	20800	986
5.9	19700	956
5.7	18900	926
5.5	18100	896
5.3	17300	866
5.1	16400	836
4.9	15600	806
4.7	14800	776
4.5	14000	746
4.3	13200	716
STOP		

start here

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Alliant Unique		
Charge in grains	psi	fps
STOP		
7.3	21000	1034
7.6	20200	1017
7.4	19400	980
7.2	18600	955
7.0	17800	927
6.8	17000	900
6.6	16200	873
6.4	15500	847
6.2	14700	820
6.0	13900	793
5.8	13100	766
5.6	12300	740
5.4	11500	713
5.2	10700	686
5.0	9900	660
STOP		

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
6.9	21000	1013
6.7	20100	985
6.5	19300	954
6.3	18500	922
6.1	17600	891
5.9	16800	859
5.7	16000	828
5.5	15100	796
5.3	14300	765
5.1	13500	733
4.9	12700	702
STOP		

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
10.7	21000	1064
10.6	20300	1032
10.4	20200	1048
10.2	19700	1024
10.0	19100	1000
9.8	18600	977
9.6	18100	953
9.4	17600	929
9.2	17100	906
9.0	16600	882
8.8	16100	858
8.6	15500	834
8.4	15000	811
8.2	14500	787
8.0	14000	763
7.8	13500	740
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
6.3	21000	1031
6.1	20100	999
5.9	19300	968
5.7	18400	937
5.5	17600	906
5.3	16700	875
5.1	15900	843
4.9	15000	812
4.7	14200	781
4.5	13300	750
4.3	12500	718
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
7.0	21000	1000
6.9	20600	1004
6.7	19800	974
6.5	19000	943
6.3	18300	912
6.1	17500	882
5.9	16700	851
5.7	16000	820
5.5	15200	790
5.3	14400	759
5.1	13700	728
STOP		

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Alliant Blue Dot

Charge in grains psi fps

STOP		
11.1	21000	1011
11.0	20600	1001
10.8	19900	981
10.6	19200	961
10.4	18500	941
10.2	17800	922
10.0	17100	902
9.8	16500	882
9.6	15800	863
9.4	15100	843
9.2	14400	823
9.0	13700	803
8.8	13000	784
8.6	12300	764
8.4	11600	744
8.2	10900	724
8.0	10200	705
STOP		

start here (bracketed next to 8.0-8.4)

Alliant Bullseye

Charge in grains psi fps

STOP		
6.4	21000	1072
6.3	20500	1058
6.1	19700	1032
5.9	18800	1005
5.7	17900	979
5.5	17100	952
5.3	16200	926
5.1	15300	899
4.9	14500	873
4.7	13600	846
4.5	12800	820
4.3	11900	793
4.1	11000	767
3.9	10200	740
3.7	9300	714
3.5	8500	688
STOP		

start here (bracketed next to 3.5-3.9)

Alliant Green Dot

Charge in grains psi fps

STOP		
6.9	21000	1092
6.7	20000	1062
6.5	19000	1032
6.3	18000	1003
6.1	17000	973
5.9	16000	943
5.7	15000	914
5.5	14000	884
5.3	13000	854
5.1	12000	825
4.9	11000	795
4.7	10000	765
4.5	9000	736
STOP		

start here (bracketed next to 4.5-4.9)

Hodgdon HS-6

Charge in grains psi fps

STOP		
10.5	21000	1015
10.4	20000	1004
10.2	20000	1042
10.0	19300	1021
9.8	18700	999
9.6	18000	978
9.4	17400	956
9.2	16700	935
9.0	16100	913
8.8	15400	892
8.6	14800	870
8.4	14100	849
8.2	13500	827
8.0	12900	806
7.8	12200	784
7.6	11500	763
7.4	10900	741
7.2	10200	720
7.0	9600	698
STOP		

start here (bracketed next to 7.0-7.4)

IMR 700X

Charge in grains psi fps

STOP		
6.5	21000	1091
6.4	20500	1083
6.2	19700	1056
6.0	18800	1029
5.8	17900	1001
5.6	17100	974
5.4	16200	947
5.2	15300	920
5.0	14500	893
4.8	13600	865
4.6	12700	838
4.4	11900	811
4.2	11000	784
4.0	10200	757
STOP		

start here (bracketed next to 4.0-4.4)

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All pressures are listed in psi not C.U.P. See page 4.

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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45 ACP

.451"-.452" Dia.
200 grain
Sect. Density .140



	Hornady FMJ CT	Hornady HP/XTP	MidwayUSA FP	MidwayUSA HP	MidwayUSA SWC	Sierra FPJ
Ballistic Coefficient	.115	.151	N/A	N/A	N/A	.140
Ctg. Over All Length	1.275	1.275	1.275	1.274	1.265	1.237

Reducing Cartridge Over All Length increases pressure greatly.



	Speer HP	Speer SWC TMJ	Hornady CT Lead	Hornady SWC Lead	MidwayUSA SWC Lead	Speer SWC Lead
Ballistic Coefficient	.138	.129	.081	.070	N/A	.139
Ctg. Over All Length	1.235	1.275	1.275	1.200	1.271	1.220

See page 12 for bullet terminology information.

BULLET	PAGE
Hornady FMJ CTJacketed.....	38-39
Hornady HP/XTPJacketed.....	40-41
MidwayUSA FPPlated.....	42-43
MidwayUSA HPPlated.....	44-45
MidwayUSA SWCPlated.....	46-47
Sierra FPJJacketed.....	48-49
Speer HPPlated.....	50-51
Speer SWC TMJPlated.....	52-53
Hornady CTLead.....	54-55
Hornady SWCLead.....	56-57
MidwayUSA SWCLead.....	58-59
Speer SWCLead.....	60-61

Gun	Universal Receiver	Case	Remington
Barrel	H-S Precision test barrel	Max Case Length	.898
Length	5" with 1:16" twist	Trim to Length	.888
Primer	Remington 2-1/2	Max OAL	1.275

Maximum Average Pressure (MAP) 21,000 psi

All testing was done using a solid barrel.
Ammunition fired from a revolver will show a considerable decrease in velocity.



Accurate Arms No. 5

Charge in grains psi fps

STOP		
10.1	21000	1048
10.0	20800	1036
9.8	20000	1014
9.6	19300	991
9.4	18600	969
9.2	18000	946
9.0	17300	924
8.8	16700	901
8.6	16000	879
8.4	15300	856
8.2	14700	834
8.0	14000	811
7.8	13400	789
7.6	12700	766
7.4	12000	744
7.2	11400	721
STOP		

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.9	21000	1080
11.8	20600	988
11.6	19900	966
11.4	19300	943
11.2	18800	921
11.0	17900	899
10.8	17200	876
10.6	16500	854
10.4	15900	831
10.2	15200	809
10.0	14500	786
9.8	13800	764
9.6	13200	742
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
12.1	21000	1080
11.9	20300	1066
11.7	19600	1043
11.5	19000	1020
11.3	18300	997
11.1	17600	974
10.9	17000	952
10.7	16300	929
10.5	15600	906
10.3	15000	883
10.1	14300	860
9.9	13600	837
9.7	13000	815
9.5	12300	792
9.3	11600	769
9.1	11000	746
8.9	10300	723
8.7	9600	700
8.5	9000	678
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
6.2	21000	995
6.0	19900	966
5.8	18800	938
5.6	17800	910
5.4	16700	882
5.2	15700	854
5.0	14600	825
4.8	13600	797
4.6	12500	769
4.4	11500	741
4.2	10400	713
4.0	9400	685
STOP		

start here

Alliant Unique

Charge in grains psi fps

STOP		
8.1	21000	1053
7.9	20000	1029
7.7	19600	1005
7.5	18900	981
7.3	18200	958
7.1	17500	934
6.9	16800	910
6.7	16100	887
6.5	15400	863
6.3	14700	839
6.1	14000	816
5.9	13300	792
5.7	12600	768
5.5	11900	745
5.3	11200	721
5.1	10500	697
4.9	9800	674
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Hodgdon HP-38

Charge in grains psi fps

STOP		
6.8	21000	987
6.7	20500	972
6.5	19500	943
6.3	18600	915
6.1	17800	896
5.9	17000	857
5.7	15800	829
5.5	14800	800
5.3	13900	771
5.1	12900	742
4.9	12000	714
4.7	11000	685
4.5	10100	656
4.3	9200	628

start here

STOP

Hodgdon HS-6

Charge in grains psi fps

STOP		
10.4	21000	1033
10.3	20600	1021
10.1	19900	998
9.9	19200	975
9.7	18400	952
9.5	17700	929
9.3	17000	907
9.1	16300	884
8.9	15600	861
8.7	14900	838
8.5	14200	815
8.3	13400	792
8.1	12700	769
7.9	12000	746
7.7	11300	723
7.5	10600	700
7.3	9900	677

start here

STOP

Hodgdon Clays

Charge in grains psi fps

STOP		
5.0	21000	858
4.8	18700	856
4.6	16900	815
4.4	14200	773
4.2	12800	732
4.0	10800	691

start here

STOP

Winchester 231

Charge in grains psi fps

STOP		
6.7	21000	971
6.6	20400	959
6.4	19200	931
6.2	18000	903
6.0	16800	875
5.8	15700	847
5.6	14500	819
5.4	13400	791
5.2	12200	763
5.0	11000	735
4.8	9900	708

start here

STOP

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
10.3	21000	1048
10.4	20700	1038
10.2	20100	1016
10.0	19500	994
9.8	18900	972
9.6	18300	951
9.4	17700	929
9.2	17200	907
9.0	16600	886
8.8	16000	864
8.6	15400	842
8.4	14800	820
8.2	14200	799
8.0	13700	777
7.8	13100	755
7.6	12500	733
7.4	11900	712
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Accurate Arms No. 7

Charge in grains psi fps

STOP		
12.4	21000	1013
12.3	20700	1005
12.1	20100	985
11.9	19500	965
11.7	18900	946
11.5	18400	926
11.3	17800	907
11.1	17200	887
10.9	16600	867
10.7	16100	848
10.5	15500	828
10.3	14900	809
10.1	14300	789
9.9	13800	769
9.7	13200	750
9.5	12600	730
9.3	12100	711
STOP		

Alliant Blue Dot

Charge in grains psi fps

STOP		
11.8	21000	1013
11.5	20700	1005
11.3	20100	982
11.1	19600	959
10.9	19100	936
10.7	18500	913
10.5	18000	890
10.3	17400	867
10.1	16900	845
9.9	16300	822
9.7	15800	799
9.5	15300	776
9.3	14700	753
9.1	14200	730
8.9	13600	707
8.7	13100	684
8.5	12600	661
8.3	12000	638
8.1	11500	615
STOP		

Alliant Bullseye

Charge in grains psi fps

STOP		
6.6	21000	996
6.4	20100	967
6.2	19300	938
6.0	18400	909
5.8	17600	880
5.6	16800	851
5.4	15900	822
5.2	15100	793
5.0	14200	764
4.8	13400	735
4.6	12600	706
4.4	11700	677
4.2	10900	648
4.0	10100	620
STOP		

Alliant Unique

Charge in grains psi fps

STOP		
8.2	21000	1011
8.1	20000	993
7.9	19000	970
7.7	18100	942
7.5	18100	925
7.3	17500	898
7.1	16800	861
6.9	16000	833
6.7	15300	806
6.5	14500	779
6.3	13800	752
6.1	13000	724
5.9	12200	697
5.7	11500	670
5.5	10700	642
5.3	10000	625
5.1	9200	598
4.9	8500	581
STOP		

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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**Hodgdon
HP-38**

Charge
in
grains psi fps

STOP		
7.2	21000	983
7.0	20000	954
6.8	19000	926
6.6	18000	898
6.4	17000	870
6.2	16000	841
6.0	15000	813
5.8	14000	785
5.6	13000	757
5.4	12000	728
5.2	11000	700
5.0	10000	672
4.8	9000	644
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

**Hodgdon
HS-6**

Charge
in
grains psi fps

STOP		
11.0	21000	1030
10.9	20000	1018
10.7	20000	995
10.5	19400	972
10.3	18700	949
10.1	18100	926
9.9	17500	902
9.7	16900	880
9.5	16200	857
9.3	15500	834
9.1	14800	811
8.9	14300	798
8.7	13800	785
8.5	13000	742
8.3	12400	719
8.1	11700	696
7.9	11100	673
STOP		

start here

**Hodgdon
Clays**

Charge
in
grains psi fps

STOP		
5.2	21000	884
5.3	20300	867
5.1	19000	833
4.9	17900	799
4.7	16300	765
4.5	15000	731
4.3	13800	697
4.1	12300	663
3.9	10800	630
STOP		

start here

**Winchester
231**

Charge
in
grains psi fps

STOP		
7.2	21000	901
7.0	20000	861
6.8	19100	829
6.6	18100	798
6.4	17200	766
6.2	16300	734
6.0	15300	703
5.8	14400	671
5.6	13400	640
5.4	12500	608
5.2	11600	576
5.0	10600	545
4.8	9700	513
4.6	8800	482
STOP		

start here

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All pressures are listed in psi net C.U.P. See page 4.

Accurate Arms No. 5

Charge in grains	psi	fps
STOP		
10.8	21000	1051
10.2	20400	1030
10.0	19800	1010
9.8	19200	989
9.6	18600	969
9.4	18000	948
9.2	17400	928
9.0	16800	907
8.8	16200	887
8.6	15600	867
8.4	15000	846
8.2	14400	826
8.0	13800	805
7.8	13200	785
7.6	12600	764
7.4	12000	744
7.2	11400	723
7.0	10800	703
6.8	10200	683
STOP		

Accurate Arms No. 7

Charge in grains	psi	fps
STOP		
12.8	21000	1058
12.6	20400	1019
12.4	19900	1000
12.2	19400	981
12.0	18900	963
11.8	18400	944
11.6	17900	925
11.4	17400	907
11.2	16900	888
11.0	16300	869
10.8	15800	851
10.6	15300	832
10.4	14800	813
10.2	14300	795
10.0	13800	776
9.8	13300	757
9.6	12800	739
STOP		

Alliant Blue Dot

Charge in grains	psi	fps
STOP		
12.3	21000	1052
12.1	20500	1040
11.9	20000	1028
11.7	19500	1017
11.5	19000	1015
11.3	18500	993
11.1	18000	972
10.9	17500	950
10.7	17100	928
10.5	16600	907
10.3	16100	885
10.1	15600	863
9.9	15100	842
9.7	14600	820
9.5	14100	798
9.3	13600	777
9.1	13200	755
8.9	12700	733
8.7	12200	712
STOP		

Alliant Bullseye

Charge in grains	psi	fps
STOP		
6.7	21000	1023
6.6	20500	1000
6.4	19700	983
6.2	18900	956
6.0	18000	929
5.8	17200	903
5.6	16300	876
5.4	15500	850
5.2	14700	823
5.0	13900	796
4.8	13000	770
4.6	12200	743
4.4	11300	717
4.2	10500	690
4.0	9700	664
STOP		

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for G.A.L.

Alliant Unique

Charge in grains	psi	fps
STOP		
8.3	21000	1044
8.1	20400	1034
8.2	19800	1007
8.0	19100	980
7.8	18300	953
7.6	17500	926
7.4	16800	900
7.2	16000	873
7.0	15300	846
6.8	14500	819
6.6	13800	792
6.4	13000	765
6.2	12200	738
6.0	11500	711
5.8	10700	684
5.6	10000	657
5.4	9200	630
5.2	8500	606
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi net C.U.P. See page 4.

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

start here

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
7.3	21000	1020
7.4	20500	1014
7.2	19700	985
7.0	18800	956
6.8	18000	928
6.6	17200	899
6.4	16300	870
6.2	15500	841
6.0	14600	812
5.8	13800	783
5.6	13000	755
5.4	12100	726
5.2	11300	697
5.0	10400	668
4.8	9600	639
4.6	8800	611
STOP		

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
11.1	21000	1040
10.9	20400	1028
10.7	19800	1007
10.5	19200	987
10.3	18600	966
10.1	18000	945
9.9	17400	925
9.7	16800	904
9.5	16200	883
9.3	15600	863
9.1	15000	842
8.9	14500	821
8.7	13900	801
8.5	13300	780
8.3	12700	759
8.1	12100	739
7.9	11500	718
STOP		

start here

Hodgdon Clays		
Charge in grains	psi	fps
STOP		
5.5	21000	941
5.3	19500	905
5.1	18100	870
4.9	16600	835
4.7	15200	799
4.5	13700	764
4.3	12300	729
STOP		

start here

Winchester 231		
Charge in grains	psi	fps
STOP		
7.8	21000	1021
7.2	20000	993
7.0	19000	965
6.8	18100	937
6.6	17100	909
6.4	16200	881
6.2	15200	854
6.0	14200	826
5.8	13300	798
5.6	12300	770
5.4	11400	742
5.2	10400	714
5.0	9500	687
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
10.2	21000	1042
10.0	20400	1020
9.8	19800	998
9.6	19200	976
9.4	18600	954
9.2	18000	931
9.0	17400	911
8.8	16800	889
8.6	16200	867
8.4	15700	846
8.2	15100	824
8.0	14500	802
7.8	13900	780
7.6	13300	759
7.4	12700	737
7.2	12100	715
7.0	11500	693
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Accurate Arms No. 7

Charge in grains psi fps

STOP		
12.6	21000	1030
12.5	20700	1029
12.3	20100	1009
12.1	19500	990
11.9	18900	971
11.7	18400	951
11.5	17800	932
11.3	17200	912
11.1	16600	893
10.9	16100	874
10.7	15500	854
10.5	14900	835
10.3	14300	815
10.1	13800	796
9.9	13200	777
9.7	12600	757
9.5	12000	738
9.3	11500	719
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
11.8	21000	1008
11.5	20700	997
11.3	20100	976
11.1	19500	955
10.9	19000	934
10.7	18400	913
10.5	17800	892
10.3	17300	871
10.1	16700	850
9.9	16100	829
9.7	15600	808
9.5	15000	787
9.3	14400	766
9.1	13900	745
8.9	13300	724
8.7	12700	703
8.5	12200	682
8.3	11600	661
8.1	11000	640
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
6.8	21000	1055
6.6	20200	1007
6.4	19500	980
6.2	18700	953
6.0	18000	926
5.8	17300	899
5.6	16500	872
5.4	15800	845
5.2	15100	818
5.0	14300	791
4.8	13600	764
4.6	12900	737
4.4	12100	710
4.2	11400	683
4.0	10700	656
STOP		

start here

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

Alliant Unique

Charge in grains psi fps

STOP		
8.4	21000	1037
8.2	20200	1002
8.0	19400	967
7.8	18700	963
7.6	17900	938
7.4	17200	914
7.2	16400	889
7.0	15600	865
6.8	14900	840
6.6	14100	816
6.4	13400	791
6.2	12600	767
6.0	11800	742
5.8	11100	718
5.6	10300	693
5.4	9600	669
STOP		

start here

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Hodgdon HP-38

Charge in grains psi fps

STOP		
7.1	21000	908
7.2	20500	884
7.0	19600	857
6.8	18700	830
6.6	17900	804
6.4	16900	777
6.2	16000	750
6.0	15100	723
5.8	14200	706
5.6	13300	700
5.4	12400	743
5.2	11500	716
5.0	10600	689
4.8	9700	662
4.6	8800	635
4.4	7900	608
STOP		

start here

Hodgdon HS-6

Charge in grains psi fps

STOP		
11.4	21000	1061
11.3	20700	1050
11.1	20100	1029
10.9	19500	1007
10.7	18900	986
10.5	18300	965
10.3	17700	943
10.1	17100	922
9.9	16600	901
9.7	16000	879
9.5	15400	858
9.3	14800	837
9.1	14200	816
8.9	13600	794
8.7	13000	773
8.5	12500	752
STOP		

start here

Hodgdon Clays

Charge in grains psi fps

STOP		
5.3	21000	907
5.1	18200	842
4.9	16800	809
4.7	15400	777
4.5	14000	745
4.3	12600	712
4.1	11200	680
3.9	9800	648
STOP		

start here

Winchester 231

Charge in grains psi fps

STOP		
7.4	21000	1013
7.2	20100	985
7.0	19300	958
6.8	18500	930
6.6	17700	903
6.4	16900	876
6.2	16100	848
6.0	15300	821
5.8	14400	794
5.6	13600	766
5.4	12800	739
5.2	12000	712
5.0	11200	684
4.8	10400	657
4.6	9600	630
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
9.7	21000	1025
9.6	20600	1022
9.4	19900	998
9.2	19300	973
9.0	18600	948
8.8	17900	924
8.6	17300	899
8.4	16600	874
8.2	15900	850
8.0	15300	825
7.8	14600	801
7.6	13900	776
7.4	13300	751
7.2	12600	727
7.0	11900	702
6.8	11300	678
STOP		

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.7	21000	999
11.5	20400	977
11.3	19600	955
11.1	18900	933
10.9	18200	911
10.7	17500	889
10.5	16800	867
10.3	16100	845
10.1	15400	823
9.9	14700	801
9.7	14000	779
9.5	13300	757
9.3	12600	736
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
11.8	21000	1025
11.5	20700	1014
11.3	20100	992
11.1	19500	970
10.9	18900	948
10.7	18300	926
10.5	17800	904
10.3	17200	882
10.1	16600	860
9.9	16000	838
9.7	15400	816
9.5	14800	794
9.3	14200	772
9.1	13700	750
8.9	13100	728
8.7	12500	706
8.5	11900	684
8.3	11400	662
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
6.2	21000	1002
6.0	20100	969
5.8	19200	937
5.6	18400	905
5.4	17500	873
5.2	16700	841
5.0	15800	809
4.8	15000	777
4.6	14100	745
4.4	13300	713
4.2	12400	681
4.0	11600	649
STOP		

start here

Alliant Unique

Charge in grains psi fps

STOP		
7.7	21000	1009
7.5	20100	980
7.3	19200	951
7.1	18300	922
6.9	17400	893
6.7	16500	865
6.5	15600	836
6.3	14700	807
6.1	13800	778
5.9	12900	749
5.7	12000	721
5.5	11100	692
5.3	10200	663
5.1	9300	634
4.9	8400	606
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Hodgdon HP-38

Charge in grains psi fps

STOP		
6.7	21000	854
6.6	20400	840
6.4	19400	813
6.2	18300	885
6.0	17200	858
5.8	16200	831
5.6	15100	803
5.4	14100	776
5.2	13000	748
5.0	11900	721
4.8	10900	694
4.6	9800	667
4.4	8800	640
STOP		

start here

Hodgdon HS-6

Charge in grains psi fps

STOP		
10.4	21000	1013
10.3	20600	1000
10.1	20000	978
9.9	19300	955
9.7	18700	932
9.5	18000	910
9.3	17400	887
9.1	16700	864
8.9	16000	842
8.7	15400	819
8.5	14700	796
8.3	14100	774
8.1	13400	751
7.9	12800	728
7.7	12100	706
7.5	11500	683
7.3	10800	660
STOP		

start here

Hodgdon Clays

Charge in grains psi fps

STOP		
3.0	21000	866
4.9	20200	850
4.7	18700	818
4.5	17200	786
4.3	15700	755
4.1	14200	723
3.9	12800	692
STOP		

start here

Winchester 231

Charge in grains psi fps

STOP		
6.8	21000	971
6.6	20000	941
6.4	19000	912
6.2	18000	882
6.0	17000	853
5.8	16000	823
5.6	15000	794
5.4	14000	764
5.2	13000	735
5.0	12000	705
4.8	11000	676
4.6	10000	647
STOP		

start here

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
10.1	21000	1038
10.0	20600	1016
9.8	20000	993
9.6	19400	969
9.4	18700	946
9.2	18100	923
9.0	17500	900
8.8	16900	877
8.6	16200	853
8.4	15600	830
8.2	15000	807
8.0	14300	784
7.8	13700	761
7.6	13100	737
7.4	12400	714
7.2	11800	691
STOP		

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
12.4	23000	1021
12.3	20700	1011
12.1	20000	993
11.9	19300	975
11.7	19200	965
11.5	18700	938
11.3	18200	920
11.1	17700	902
10.9	17200	884
10.7	16700	865
10.5	16200	847
10.3	15700	829
10.1	15200	811
9.9	14700	792
9.7	14200	774
9.5	13700	756
9.3	13200	738
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
12.2	21000	1043
12.1	20700	1034
11.9	20200	1013
11.7	19700	992
11.5	19200	971
11.3	18700	950
11.1	18200	929
10.9	17700	908
10.7	17200	887
10.5	16700	867
10.3	16200	846
10.1	15700	825
9.9	15200	804
9.7	14700	783
9.5	14200	762
9.3	13700	741
9.1	13200	720
8.9	12700	699
8.7	12200	678
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
6.5	21000	984
6.4	20600	968
6.2	19800	938
6.0	19000	908
5.8	18200	877
5.6	17400	847
5.4	16600	816
5.2	15900	786
5.0	15100	756
4.8	14300	725
4.6	13500	695
4.4	12700	664
4.2	11900	634
4.0	11200	604
STOP		

start here

Alliant Unique

Charge in grains psi fps

STOP		
8.1	21000	1004
7.9	20200	977
7.7	19400	951
7.5	18600	924
7.3	17900	898
7.1	17100	871
6.9	16300	845
6.7	15500	818
6.5	14800	792
6.3	14000	765
6.1	13200	739
5.9	12400	712
5.7	11700	686
5.5	10900	659
5.3	10100	633
5.1	9300	606
4.9	8500	580
STOP		

start here

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48 **WARNING:** Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



Use extreme caution when loading in the Yellow or Red zones.

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Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
7.2	21000	979
7.0	20100	947
6.8	19300	916
6.6	18400	884
6.4	17600	853
6.2	16700	821
6.0	15900	790
5.8	15000	758
5.6	14200	727
5.4	13300	695
5.2	12500	664
5.0	11600	632
4.8	10800	601
4.6	9900	569
4.4	9100	538
4.2	8300	507
STOP		

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
11.1	21000	1049
10.9	20400	1027
10.7	19800	1005
10.5	19200	983
10.3	18600	962
10.1	18000	940
9.9	17400	918
9.7	16800	897
9.5	16200	875
9.3	15600	853
9.1	15100	832
8.9	14500	810
8.7	13900	788
8.5	13300	766
8.3	12700	745
8.1	12100	723
7.9	11500	701
STOP		

Hodgdon Clays		
Charge in grains	psi	fps
STOP		
5.4	21000	882
5.3	20300	862
5.1	18900	824
4.9	17500	785
4.7	16100	747
4.5	14700	708
4.3	13300	670
4.1	11900	631
3.9	10500	593
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
7.2	21000	991
7.0	20100	960
6.8	19200	930
6.6	18300	899
6.4	17400	869
6.2	16500	838
6.0	15600	808
5.8	14800	777
5.6	13900	747
5.4	13000	716
5.2	12100	686
5.0	11200	655
4.8	10300	625
4.6	9500	595
STOP		

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Accurate Arms No. 5		
Charge in grains	psi	fps
STOP		
9.5	21000	1019
9.4	20600	1008
9.2	19800	978
9.0	19000	950
8.8	18200	923
8.6	17400	896
8.4	16600	869
8.2	15800	841
8.0	15000	814
7.8	14200	787
7.6	13400	760
7.4	12600	732
7.2	11800	705
7.0	11000	678
6.8	10200	651
STOP		

Accurate Arms No. 7		
Charge in grains	psi	fps
STOP		
12.2	21000	1011
12.0	20300	989
11.8	19700	968
11.6	19000	946
11.4	18400	925
11.2	17800	903
11.0	17100	882
10.8	16500	860
10.6	15800	839
10.4	15200	817
10.2	14600	796
10.0	13900	774
9.8	13300	753
9.6	12700	732
STOP		

Alliant Blue Dot		
Charge in grains	psi	fps
STOP		
12.4	21000	1099
12.3	20700	1088
12.1	20200	1067
11.9	19800	1046
11.7	19300	1025
11.5	18800	1004
11.3	18300	982
11.1	17800	961
10.9	17400	940
10.7	16900	919
10.5	16500	898
10.3	16000	877
10.1	15500	856
9.9	15000	835
9.7	14600	814
9.5	14100	793
9.3	13600	771
9.1	13100	750
8.9	12700	729
STOP		

Alliant Bullseye		
Charge in grains	psi	fps
STOP		
6.1	21000	955
6.0	20400	939
5.8	19300	908
5.6	18200	876
5.4	17200	845
5.2	16100	814
5.0	15000	782
4.8	13900	751
4.6	12800	720
4.4	11700	688
4.2	10600	657
4.0	9600	626
STOP		

Alliant Unique		
Charge in grains	psi	fps
STOP		
7.2	21000	967
7.0	19900	938
6.8	18800	910
6.6	17900	882
6.4	16900	854
6.2	15900	826
6.0	14900	797
5.8	13900	769
5.6	12900	741
5.4	11900	713
5.2	10900	685
5.0	9900	657
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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All pressures are listed in psi not C.U.P. See page 4.

Hodgdon HP-38

Charge in		
grams	psi	fps
STOP		
7.5	21000	1024
7.4	20500	1010
7.2	19700	984
7.0	18900	957
6.8	18100	931
6.6	17300	904
6.4	16400	878
6.2	15600	851
6.0	14800	825
5.8	14000	798
5.6	13200	772
5.4	12300	745
5.2	11500	719
5.0	10700	692
4.8	9900	666
4.6	9100	640
STOP		

Hodgdon HS-6

Charge in		
grams	psi	fps
STOP		
11.2	21000	1094
11.1	20700	1043
10.9	20100	1021
10.7	19500	999
10.5	18900	977
10.3	18300	955
10.1	17800	933
9.9	17200	911
9.7	16600	889
9.5	16000	867
9.3	15400	845
9.1	14800	823
8.9	14300	801
8.7	13700	779
8.5	13100	757
8.3	12500	735
8.1	12000	713
STOP		

Hodgdon Clays

Charge in		
grams	psi	fps
STOP		
5.8	21000	932
5.4	20000	899
5.2	19100	866
5.0	18100	833
4.8	17200	800
4.6	16300	767
4.4	15300	734
4.2	14400	701
4.0	13500	668
STOP		

Winchester 231

Charge in		
grams	psi	fps
STOP		
7.4	21000	1017
7.2	20100	992
7.0	19300	968
6.8	18500	944
6.6	17700	920
6.4	16900	895
6.2	16100	871
6.0	15200	847
5.8	14400	823
5.6	13600	798
5.4	12800	774
5.2	12000	750
5.0	11200	726
STOP		

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WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



Accurate Arms No. 5

Charge in grains psi fps

STOP		
8.8	21000	991
9.4	20200	972
9.2	19500	947
9.0	18700	922
8.8	18000	897
8.6	17200	872
8.4	16500	847
8.2	15700	822
8.0	15000	797
7.8	14200	772
7.6	13500	747
7.4	12700	722
7.2	12000	697
7.0	11200	672
6.8	10500	647
STOP		

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.7	21000	991
11.5	20300	970
11.3	19600	949
11.1	19000	928
10.9	18300	907
10.7	17600	886
10.5	17000	866
10.3	16300	845
10.1	15600	824
9.9	15000	803
9.7	14300	782
9.5	13600	761
9.3	13000	741
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
11.6	21000	1013
11.4	20400	992
11.2	19800	972
11.0	19300	952
10.8	18700	932
10.6	18100	912
10.4	17600	892
10.2	17000	872
10.0	16400	852
9.8	15900	832
9.6	15300	812
9.4	14700	792
9.2	14200	772
9.0	13600	752
8.8	13000	732
8.6	12500	712
8.4	11900	692
8.2	11300	672
8.0	10800	652
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
6.3	21000	884
6.2	20500	873
6.0	19800	841
5.8	18700	809
5.6	17800	777
5.4	16900	746
5.2	16000	714
5.0	15100	682
4.8	14200	650
4.6	13300	619
4.4	12400	587
4.2	11500	555
4.0	10600	524
STOP		

start here

Alliant Unique

Charge in grains psi fps

STOP		
7.8	21000	1027
7.7	20500	1011
7.5	19600	979
7.3	18700	948
7.1	17800	916
6.9	16900	884
6.7	16100	853
6.5	15200	821
6.3	14300	790
6.1	13400	758
5.9	12500	726
5.7	11600	695
5.5	10700	663
5.3	9800	632
5.1	8900	600
4.9	8000	569
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

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Use extreme caution when loading in the Yellow or Red zones.

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Hodgdon HP-38			
Charge in grains	psi	fps	
STOP			
4.7	21000	852	
4.8	20500	835	
4.4	19500	801	
4.2	18500	868	
4.0	17500	834	
3.8	16500	801	
3.6	15500	767	
3.4	14000	734	
3.2	13000	700	
3.0	12000	667	
2.8	11000	633	
2.6	10000	600	
2.4	9000	566	
2.2	8700	533	
STOP			

Hodgdon HS-6			
Charge in grains	psi	fps	
STOP			
10.4	21000	1012	
10.3	20600	1000	
10.1	19500	976	
9.9	19100	953	
9.7	18400	930	
9.5	17700	906	
9.3	17000	883	
9.1	16300	859	
8.9	15500	836	
8.7	14800	813	
8.5	14200	789	
8.3	13400	766	
8.1	12700	742	
7.9	11900	719	
7.7	11200	696	
7.5	10500	672	
7.3	9800	649	
STOP			

Hodgdon Clays			
Charge in grains	psi	fps	
STOP			
5.0	21000	876	
4.9	20200	856	
4.7	18500	818	
4.5	17000	779	
4.3	15400	741	
4.1	13800	702	
3.9	12300	664	
STOP			

Winchester 231			
Charge in grains	psi	fps	
STOP			
5.3	21000	965	
5.6	20000	934	
6.4	19000	903	
6.2	18000	872	
6.0	17000	841	
5.8	16000	810	
5.6	15100	779	
5.4	14100	748	
5.2	13100	717	
5.0	12100	686	
4.8	11100	655	
4.6	10200	624	
STOP			

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
9.5	21000	1002
9.4	20600	992
9.2	19800	973
9.0	19000	954
8.8	18300	935
8.6	17500	916
8.4	16700	898
8.2	16000	879
8.0	15200	860
7.8	14400	841
7.6	13700	822
7.4	12900	803
7.2	12100	784
7.0	11400	765
6.8	10800	746
6.6	9900	728
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Accurate Arms No. 7

Charge in grains psi fps

STOP		
12.2	21000	1023
12.0	20400	1006
11.8	19900	990
11.6	19400	973
11.4	18900	957
11.2	18400	940
11.0	17900	924
10.8	17300	908
10.6	16800	891
10.4	16300	875
10.2	15800	858
10.0	15300	842
9.8	14700	826
9.6	14200	809
9.4	13700	793
9.2	13200	776
9.0	12700	760
8.8	12200	744
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
12.3	21000	1103
12.2	20700	1093
12.0	20200	1075
11.8	19600	1057
11.6	19100	1038
11.4	18600	1020
11.2	18100	1002
11.0	17500	983
10.8	17000	965
10.6	16500	947
10.4	16000	928
10.2	15400	910
10.0	14900	892
9.8	14400	873
9.6	13900	855
9.4	13300	837
9.2	12800	818
9.0	12300	800
8.8	11800	782
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
6.4	21000	1038
6.2	20100	1012
6.0	19200	986
5.8	18300	960
5.6	17400	934
5.4	16500	909
5.2	15600	883
5.0	14800	857
4.8	13900	831
4.6	13000	806
4.4	12100	780
4.2	11200	754
4.0	10300	728
3.8	9500	703
STOP		

start here

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

Alliant Unique

Charge in grains psi fps

STOP		
7.5	21000	1023
7.4	20400	1010
7.2	19400	985
7.0	18400	960
6.8	17400	935
6.6	16400	910
6.4	15400	885
6.2	14400	860
6.0	13400	835
5.8	12400	810
5.6	11400	785
5.4	10400	760
STOP		

start here

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Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
10.4	21000	1031
10.3	20600	1040
10.1	19800	1017
9.9	19000	993
9.7	18200	970
9.5	17400	947
9.3	16700	924
9.1	15900	901
8.9	15100	877
8.7	14300	854
8.5	13500	831
8.3	12800	808
8.1	12000	784
7.9	11200	761
7.7	10400	738
7.5	9600	715
7.3	8800	692
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
6.0	21000	994
5.8	19800	967
5.6	18700	941
5.4	17800	914
5.2	16500	888
5.0	15400	861
4.8	14300	835
4.6	13200	808
4.4	12100	782
4.2	11000	755
4.0	9900	728
STOP		

IMR SR4756		
Charge in grains	psi	fps
STOP		
8.5	21000	1000
8.4	20500	995
8.2	19500	968
8.0	18600	942
7.8	17700	915
7.6	16700	888
7.4	15800	862
7.2	14900	835
7.0	13900	808
6.8	13000	781
6.6	12100	755
6.4	11100	728
6.2	10200	701
6.0	9300	675
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
7.3	21000	1035
7.1	20100	1011
6.9	19300	988
6.7	18400	965
6.5	17600	941
6.3	16700	918
6.1	15900	895
5.9	15000	871
5.7	14200	848
5.5	13300	825
5.3	12500	801
5.1	11600	778
4.9	10800	755
STOP		

Winchester WST		
Charge in grains	psi	fps
STOP		
5.7	21000	948
5.5	20100	925
5.3	19200	902
5.1	18400	880
4.9	17500	857
4.7	16600	835
4.5	15800	812
4.3	14900	790
4.1	14000	767
3.9	13200	744
3.7	12300	722
3.5	11500	700
STOP		

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
9.5	21000	1018
9.4	20600	1007
9.2	19900	985
9.0	19200	963
8.8	18400	941
8.6	17700	919
8.4	17000	897
8.2	16300	875
8.0	15600	853
7.8	14900	831
7.6	14100	809
7.4	13400	787
7.2	12700	765
7.0	12000	743
6.8	11300	721
6.6	10600	700
STOP		

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.3	21000	1019
11.2	20600	970
11.0	20000	953
10.8	19400	937
10.6	18700	920
10.4	18100	903
10.2	17500	886
10.0	16900	869
9.8	16200	853
9.6	15600	836
9.4	14900	819
9.2	14300	802
9.0	13700	785
8.8	13100	768
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
11.8	21000	1094
11.7	20700	1084
11.5	20200	1064
11.3	19600	1044
11.1	19100	1024
10.9	18600	1005
10.7	18100	985
10.5	17500	965
10.3	17000	946
10.1	16500	926
9.9	16000	906
9.7	15400	886
9.5	14900	867
9.3	14400	847
9.1	13900	827
8.9	13300	807
8.7	12800	788
8.5	12300	768
8.3	11800	748
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
6.1	21000	1000
6.0	20500	996
5.8	19700	971
5.6	18800	946
5.4	18000	921
5.2	17100	896
5.0	16300	871
4.8	15400	846
4.6	14600	821
4.4	13700	796
4.2	12900	771
4.0	12000	746
3.8	11200	721
3.6	10400	696
STOP		

start here

Alliant Unique

Charge in grains psi fps

STOP		
7.5	21000	1025
7.4	20500	1014
7.2	19500	992
7.0	18600	971
6.8	17600	949
6.6	16600	927
6.4	15700	906
6.2	14700	884
6.0	13800	863
STOP		

start here

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
10.7	21000	1024
10.2	20600	1011
10.0	19900	991
9.8	19200	972
9.6	18500	953
9.4	17800	933
9.2	17000	914
9.0	16300	894
8.8	15600	875
8.6	14900	855
8.4	14200	836
8.2	13500	817
8.0	12800	797
7.8	12100	778
7.6	11400	758
7.4	10700	739
7.2	10000	720
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
8.0	21000	1003
5.8	19900	975
5.6	18900	947
5.4	17800	919
5.2	16800	891
5.0	15800	863
4.8	14700	835
4.6	13700	807
4.4	12600	779
4.2	11600	751
4.0	10600	724
STOP		

IMR SR4756		
Charge in grains	psi	fps
STOP		
8.5	21000	1037
8.3	20000	1008
8.1	19100	979
7.9	18200	951
7.7	17300	922
7.5	16300	894
7.3	15400	865
7.1	14500	837
6.9	13600	808
6.7	12700	779
6.5	11700	751
6.3	10800	722
6.1	9900	694
5.9	9000	665
5.7	8100	637
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
8.8	21000	1005
8.5	20400	988
8.3	19300	960
8.1	18200	932
7.9	17000	904
7.7	15900	875
7.5	14800	847
7.3	13700	819
7.1	12600	791
6.9	11500	763
STOP		

Winchester WST		
Charge in grains	psi	fps
STOP		
5.3	21000	931
5.1	19900	905
4.9	18800	880
4.7	17800	855
4.5	16700	830
4.3	15700	804
4.1	14600	779
3.9	13600	754
3.7	12500	729
3.5	11500	704
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



Accurate Arms No. 5

Charge in grains psi fps

STOP		
8.3	21900	1001
9.4	20600	991
9.2	19900	972
9.0	19200	953
8.8	18500	934
8.6	17800	915
8.4	17100	895
8.2	16400	876
8.0	15700	857
7.8	15000	838
7.6	14300	819
7.4	13600	800
7.2	12900	781
7.0	12200	762
6.8	11500	743
6.6	10800	724
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.5	21000	997
11.4	20700	988
11.2	20100	971
11.0	19500	953
10.8	18900	936
10.6	18300	919
10.4	17700	901
10.2	17100	884
10.0	16600	867
9.8	16000	849
9.6	15400	832
9.4	14800	815
9.2	14200	797
9.0	13600	780
8.8	13100	763
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
11.8	21000	1113
11.7	20700	1101
11.5	20200	1083
11.3	19700	1064
11.1	19200	1044
10.9	18700	1025
10.7	18200	1005
10.5	17700	986
10.3	17200	967
10.1	16700	947
9.9	16200	928
9.7	15700	908
9.5	15200	889
9.3	14700	869
9.1	14200	850
8.9	13700	830
8.7	13200	811
8.5	12700	791
8.3	12200	772
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
6.1	21000	1029
5.9	20100	1003
5.7	19300	977
5.5	18400	951
5.3	17600	925
5.1	16700	899
4.9	15900	873
4.7	15000	848
4.5	14200	822
4.3	13300	796
4.1	12500	770
3.9	11600	744
3.7	10800	718
3.5	10000	691
STOP		

start here

Alliant Unique

Charge in grains psi fps

STOP		
7.5	21000	1053
7.4	20500	1042
7.2	19700	1016
7.0	18900	990
6.8	18100	964
6.6	17300	939
6.4	16500	913
6.2	15700	887
6.0	14900	861
5.8	14000	835
5.6	13200	810
5.4	12400	784
5.2	11600	758
5.0	10800	732
4.8	10000	707
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
10.1	21000	1007
10.2	20600	997
10.0	19900	978
9.8	19200	959
9.6	18600	940
9.4	17900	921
9.2	17200	903
9.0	16500	884
8.8	15800	865
8.6	15100	846
8.4	14500	827
8.2	13800	808
8.0	13100	789
7.8	12400	770
7.6	11700	751
7.4	11000	732
7.2	10400	714
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
6.0	21000	1006
5.8	19900	979
5.6	18900	952
5.4	17900	926
5.2	16900	899
5.0	15900	873
4.8	14900	846
4.6	13900	819
4.4	12900	791
4.2	11900	764
4.0	10900	736
STOP		

IMR SR4756		
Charge in grains	psi	fps
STOP		
9.1	21000	1083
9.0	20800	1071
8.8	19900	1043
8.6	19200	1019
8.4	18500	993
8.2	17800	966
8.0	17200	940
7.8	16500	914
7.6	15800	888
7.4	15100	861
7.2	14400	835
7.0	13700	809
6.8	13000	783
6.6	12300	756
6.4	11600	730
6.2	10900	704
6.0	10200	678
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
6.6	21000	1010
6.5	20500	996
6.3	19500	968
6.1	18500	941
5.9	17500	913
5.7	16600	886
5.5	15600	858
5.3	14600	831
5.1	13600	803
4.9	12700	776
STOP		

Winchester WST		
Charge in grains	psi	fps
STOP		
5.2	21000	933
5.1	20400	919
4.9	19300	891
4.7	18200	863
4.5	17100	835
4.3	16000	807
4.1	14900	779
3.9	13800	751
3.7	12700	723
3.5	11600	695
STOP		

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



Accurate Arms No. 5

Charge in grains psi fps

STOP		
8.5	21000	1012
9.4	20700	1012
9.2	20100	994
9.0	19500	976
8.8	18900	958
8.6	18300	940
8.4	17800	922
8.2	17200	904
8.0	16600	886
7.8	16000	868
7.6	15400	850
7.4	14900	832
7.2	14300	814
7.0	13700	796
6.8	13100	778
6.6	12500	760
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.3	21000	973
11.0	20600	962
10.8	20000	945
10.6	19300	927
10.4	18700	909
10.2	18000	890
10.0	17400	872
9.8	16700	854
9.6	16100	836
9.4	15400	817
9.2	14800	799
9.0	14100	781
8.8	13500	763
STOP		

start here

Alliant Blue Dot

Charge in grains psi fps

STOP		
11.6	21000	1076
11.5	20700	1069
11.3	20200	1049
11.1	19600	1030
10.9	19100	1010
10.7	18600	991
10.5	18000	971
10.3	17500	952
10.1	17000	932
9.9	16400	912
9.7	15800	893
9.5	15400	873
9.3	14900	854
9.1	14300	834
8.9	13800	815
8.7	13300	796
8.5	12700	776
8.3	12200	756
8.1	11700	737
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
5.9	21000	1001
5.7	20000	974
5.5	19000	947
5.3	18000	920
5.1	17000	894
4.9	16000	867
4.7	15100	840
4.5	14100	813
4.3	13100	787
4.1	12100	760
3.9	11100	733
3.7	10100	706
3.5	9100	680
STOP		

start here

Alliant Unique

Charge in grains psi fps

STOP		
7.3	21000	1012
7.4	20900	1019
7.2	19700	994
7.0	18800	969
6.8	17900	944
6.6	17100	919
6.4	16200	893
6.2	15300	868
6.0	14500	843
5.8	13600	818
5.6	12700	793
5.4	11900	768
5.2	11000	743
5.0	10100	718
4.8	9200	693
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 18.



Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
18.3	21000	1018
16.2	20500	1004
10.0	19600	981
9.8	18700	958
9.6	17800	935
9.4	17000	912
9.2	16100	889
9.0	15200	866
8.8	14300	843
8.6	13400	820
8.4	12500	797
8.2	11600	774
8.0	10700	751
7.8	9800	728
7.6	8900	705
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
8.0	21000	1013
5.8	19900	964
5.6	18900	955
5.4	17700	926
5.2	16700	897
5.0	15600	869
4.8	14500	840
4.6	13300	811
4.4	12400	782
4.2	11300	753
4.0	10100	724
STOP		

IMR SR4756		
Charge in grains	psi	fps
STOP		
9.1	21000	1072
9.0	20600	1059
8.8	20000	1034
8.6	19300	1010
8.4	18600	985
8.2	18000	960
8.0	17300	936
7.8	16700	911
7.6	16000	886
7.4	15300	861
7.2	14700	837
7.0	14000	812
6.8	13400	787
6.6	12700	762
6.4	12000	738
6.2	11400	713
6.0	10700	688
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
6.4	21000	993
6.3	20400	977
6.1	19200	947
5.9	18000	916
5.7	16800	886
5.5	15600	855
5.3	14400	825
5.1	13200	794
4.9	12000	764
STOP		

Winchester WST		
Charge in grains	psi	fps
STOP		
5.2	21000	823
5.1	20400	810
4.9	19300	886
4.7	18200	862
4.5	17100	838
4.3	16000	813
4.1	14900	789
3.9	13800	765
3.7	12700	741
3.5	11600	717
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.

45 ACP

.451" Dia.
225 grain
Sect. Density .158



Speer HP	
Ballistic Coefficient	.169
Ctg. Over All Length	1.275

Reducing Cartridge Over All Length increases pressure greatly.

See page 12 for bullet terminology information.

BULLET.....PAGE
Speer HPPlated63

Gun	Universal Receiver	Case	Remington
Barrel	H-S Precision test barrel	Max Case Length	.898
Length	5" with 1:16" twist	Trim to Length	.888
Primer	Remington 2-1/2	Max OAL	1.275
Maximum Average Pressure (MAP) 21,000 psi			



The extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

start here

Alliant Blue Dot		
Charge in grains	psi	fps
STOP		
11.8	21000	1027
11.5	20700	1016
11.3	20100	995
11.1	19500	973
10.9	19000	952
10.7	18400	931
10.5	17800	910
10.3	17200	888
10.1	16700	867
9.9	16100	846
9.7	15500	824
9.5	15000	803
9.3	14400	782
9.1	13800	761
8.9	13200	739
8.7	12700	718
8.5	12100	697
STOP		

start here

Alliant Bullseye		
Charge in grains	psi	fps
STOP		
6.3	21000	928
6.0	20000	901
5.8	19100	875
5.6	18100	848
5.4	17200	822
5.2	16300	795
5.0	15300	768
4.8	14400	742
4.6	13400	716
4.4	12500	689
4.2	11600	663
STOP		

start here

Alliant Unique		
Charge in grains	psi	fps
STOP		
7.7	21000	971
7.5	20100	946
7.3	19300	922
7.1	18500	897
6.9	17700	873
6.7	16900	848
6.5	16100	824
6.3	15300	799
6.1	14500	775
5.9	13700	750
5.7	12900	726
5.5	12100	701
5.3	11300	677
5.1	10500	653
STOP		

start here

IMR 700X		
Charge in grains	psi	fps
STOP		
6.3	21000	950
6.2	20500	936
6.0	19500	910
5.8	18500	883
5.6	17500	857
5.4	16500	830
5.2	15500	804
5.0	14500	777
4.8	13500	751
4.6	12500	724
4.4	11500	698
4.2	10500	672
STOP		

start here

Winchester 231		
Charge in grains	psi	fps
STOP		
6.8	21000	913
6.6	20000	889
6.4	19100	863
6.2	18100	838
6.0	17200	812
5.8	16300	787
5.6	15300	761
5.4	14400	735
5.2	13400	710
5.0	12500	684
4.8	11600	658
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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WARNING: Always begin in the "start here" area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



The Webley pictured above left and the S&W pictured above right are both chambered in .45 Colt. The .45 Colt headspaces on the rim of the case and the .45 ACP headspaces on the mouth of the case. "Half moon" or "full moon" clips must be used with the .45 ACP cartridges to fire them in a .45 Colt cylinder. The clip holds the cartridge by the extractor groove and supports the case in the same manner as a rim. Some revolvers are chambered in .45 ACP. Other revolvers are available with interchangeable cylinders to go from .45 ACP to .45 Colt.

45 ACP

.451"-.452" Dia.
230 grain
Sect. Density .162



	Homady FMJFP	Homady FMJ/RN	Homady HP/XTP	MidwayUSA RN	Nosler FMJ	Remington FMJ
Ballistic Coefficient	.168	.184	N/A	N/A	.183	.160
Ctg. Over All Length	1.275	1.275	1.275	1.275	1.275	1.275

Reducing Cartridge Over All Length increases pressure greatly.



	Sierra FMJ	Speer HP/GD	Speer TMJ	Winchester FMJ	Winchester JHP
Ballistic Coefficient	.161	.143	.195	.160	.168
Ctg. Over All Length	1.275	1.275	1.275	1.275	1.275



	Homady RN Lead	MidwayUSA RN Lead	Speer Lead
Ballistic Coefficient	.207	N/A	.160
Ctg. Over All Length	1.275	1.275	1.275

See page 12 for bullet terminology information.

Gun	Universal Receiver	Case	Remington
Barrel	H-S Precision test barrel	Max Case Length	.898
Length	5" with 1:16" twist	Trim to Length	.888
Primer	Remington 2-1/2	Max OAL	1.275

Maximum Average Pressure (MAP) 21,000 psi

BULLET.....	PAGE
Homady FMJ/FP.....	Jacketed .66-67
Homady FMJ/RN.....	Jacketed .68-69
Homady HP/XTP.....	Jacketed .70-71
MidwayUSA RN.....	Plated .72-73
Nosler FMJ.....	Jacketed .74-75
Remington FMJ.....	Plated .76-77
Sierra FMJ.....	Jacketed .78-79
Speer HP/GD.....	Plated .80-81
Speer TMJ.....	Plated .82-83
Winchester FMJ.....	Plated .84-85
Winchester JHP.....	Plated .86-87
Homady RN.....	Lead .88-89
MidwayUSA RN.....	Lead .90-91
Speer RN.....	Lead .92-93

All testing was done using a solid barrel.

Ammunition fired from a revolver will show a considerable decrease in velocity.



Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Accurate Arms No. 5		
Charge in grains	psi	fps
STOP		
9.2	21000	931
9.0	20300	911
8.8	19600	889
8.6	18900	868
8.4	18200	846
8.2	17500	825
8.0	16800	803
7.8	16100	781
7.6	15500	760
7.4	14800	738
7.2	14100	717
7.0	13400	695
6.8	12700	673
6.6	12000	652
6.4	11300	630
6.2	10700	608
STOP		

Accurate Arms No. 7		
Charge in grains	psi	fps
STOP		
11.0	21000	905
10.9	20600	894
10.7	19800	874
10.5	19000	854
10.3	18200	834
10.1	17400	814
9.9	16700	794
9.7	15900	774
9.5	15100	754
9.3	14300	734
9.1	13500	714
8.9	12800	694
STOP		

Alliant Bullseye		
Charge in grains	psi	fps
STOP		
5.9	21000	909
5.8	20500	896
5.6	19700	871
5.4	18800	846
5.2	18000	820
5.0	17200	795
4.8	16300	770
4.6	15500	745
4.4	14600	720
4.2	13800	695
4.0	13000	670
STOP		

Alliant Unique		
Charge in grains	psi	fps
STOP		
7.2	21000	950
7.1	20500	935
6.9	19500	907
6.7	18500	879
6.5	17500	851
6.3	16500	823
6.1	15500	795
5.9	14500	767
5.7	13500	739
5.5	12500	711
5.3	11600	683
STOP		

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
6.4	21000	898
6.3	20600	884
6.1	19600	856
5.9	18700	828
5.7	17800	800
5.5	16900	772
5.3	16000	744
5.1	15100	716
4.9	14200	688
4.7	13300	660
4.5	12400	632
4.3	11500	604
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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The user of this manual recognizes, acknowledges, appreciates and accepts the fact that reloading can be a dangerous activity which can result in serious injury.

Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.

Read pages 2 - 11 before loading.
Always watch for excessive pressure signs.

.45 ACP

Hornady FMJ/FP 230 grain



Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Hodgdon HS-6

Charge in grains			psi		fps	
STOP						
10.1	21000	863				
10.0	20500	853				
9.8	19900	829				
9.6	19200	806				
9.4	18500	882				
9.2	17800	858				
9.0	17100	835				
8.8	16400	811				
8.6	15700	788				
8.4	15000	764				
8.2	14300	740				
8.0	13600	717				
7.8	12900	693				
7.6	12200	670				
7.4	11500	646				
7.2	10800	623				
STOP						

Hodgdon HS-7

Charge in grains			psi		fps	
STOP						
10.8	21000	957				
10.4	20200	935				
10.2	19500	913				
10.0	18800	891				
9.8	18000	869				
9.6	17300	847				
9.4	16600	825				
9.2	15800	803				
9.0	15100	781				
8.8	14400	759				
8.6	13600	737				
8.4	12900	715				
8.2	12200	693				
8.0	11500	671				
STOP						

Hodgdon Universal

Charge in grains			psi		fps	
STOP						
7.2	21000	976				
7.1	20400	957				
6.9	19300	920				
6.7	18100	883				
6.5	17000	847				
6.3	15900	810				
6.1	14800	773				
5.9	13600	736				
5.7	12500	699				
5.5	11400	662				
5.3	10300	625				
5.1	9200	588				
STOP						

IMR 700X

Charge in grains			psi		fps	
STOP						
8.3	21000	843				
8.2	20500	829				
8.0	19700	803				
7.8	18800	876				
7.6	18000	849				
7.4	17200	823				
7.2	16300	796				
7.0	15500	770				
6.8	14600	743				
6.6	13800	716				
6.4	12900	690				
6.2	12100	663				
6.0	11300	637				
STOP						

Winchester 231

Charge in grains			psi		fps	
STOP						
6.6	21000	911				
6.5	20500	897				
6.3	19500	870				
6.1	18500	842				
5.9	17500	815				
5.7	16500	788				
5.5	15600	760				
5.3	14600	733				
5.1	13600	706				
4.9	12600	678				
4.7	11600	651				
4.5	10600	624				
STOP						

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
9.0	21000	924
8.8	20500	904
8.6	19600	884
8.4	18900	864
8.2	18200	844
8.0	17500	824
7.8	16800	804
7.6	16200	784
7.4	15500	764
7.2	14800	744
7.0	14100	724
6.8	13400	704
6.6	12700	684
6.4	12000	664
6.2	11300	644
STOP		

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Accurate Arms No. 7

Charge in grains psi fps

STOP		
10.9	21000	904
10.7	20100	880
10.5	19300	860
10.3	18500	840
10.1	17700	821
9.9	16900	801
9.7	16100	781
9.5	15300	762
9.3	14500	742
9.1	13700	722
8.9	12900	703
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
5.8	21000	916
5.6	19900	890
5.4	18900	864
5.2	17900	838
5.0	16900	813
4.8	15900	787
4.6	14900	761
4.4	13900	736
STOP		

start here

Alliant Unique

Charge in grains psi fps

STOP		
7.2	21000	934
7.1	20500	941
6.9	19600	915
6.7	18700	890
6.5	17800	864
6.3	16900	838
6.1	16000	813
5.9	15100	787
5.7	14200	762
5.5	13300	736
5.3	12400	711
STOP		

start here

Hodgdon HP-38

Charge in grains psi fps

STOP		
6.3	21000	898
6.1	19900	869
5.9	18800	840
5.7	17700	812
5.5	16600	783
5.3	15600	755
5.1	14500	726
4.9	13400	697
4.7	12300	668
4.5	11200	640
4.3	10100	612
STOP		

start here

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Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
9.0	21000	966
9.8	20000	955
9.6	19900	954
9.4	19200	942
9.2	18500	931
9.0	17800	920
8.8	17100	908
8.6	16400	897
8.4	15700	886
8.2	15000	874
8.0	14300	863
7.8	13600	852
7.6	12900	840
7.4	12200	829
7.2	11500	818
STOP		

Hodgdon HS-7		
Charge in grains	psi	fps
STOP		
10.8	21000	980
10.4	20300	939
10.2	19700	920
10.0	19100	901
9.8	18400	882
9.6	17800	862
9.4	17200	843
9.2	16500	824
9.0	15900	805
8.8	15300	785
8.6	14600	766
8.4	14000	747
8.2	13400	728
8.0	12800	709
STOP		

Hodgdon Universal		
Charge in grains	psi	fps
STOP		
7.3	21000	982
6.9	19800	946
6.7	18700	911
6.5	17500	876
6.3	16400	841
6.1	15200	806
5.9	14100	770
5.7	12900	735
5.5	11800	700
5.3	10600	665
5.1	9500	630
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
8.1	21000	979
6.0	20400	925
5.8	19400	897
5.6	18400	869
5.4	17400	841
5.2	16400	813
5.0	15300	786
4.8	14300	758
4.6	13300	730
4.4	12300	702
4.2	11300	674
4.0	10300	647
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
6.5	21000	969
6.3	20000	933
6.1	19000	897
5.9	18000	861
5.7	17100	826
5.5	16100	790
5.3	15100	754
5.1	14200	719
4.9	13200	683
4.7	12200	647
4.5	11300	612
STOP		

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Accurate Arms No. 5

Charge in grains	psi	fps
STOP		
9.0	21000	801
8.9	20600	795
8.7	19900	873
8.5	19200	850
8.3	18500	828
8.1	17800	805
7.9	17100	783
7.7	16400	760
7.5	15700	738
7.3	15000	715
7.1	14300	693
6.9	13600	670
6.7	12900	648
6.5	12200	625
6.3	11500	603
STOP		

Accurate Arms No. 7

Charge in grains	psi	fps
STOP		
11.0	21000	808
10.9	20600	796
10.7	19800	872
10.5	19000	848
10.3	18200	824
10.1	17400	800
9.9	16600	776
9.7	15800	752
9.5	15000	728
9.3	14200	704
9.1	13400	680
STOP		

Alliant Bullseye

Charge in grains	psi	fps
STOP		
5.0	21000	691
5.7	20100	870
5.5	19200	847
5.3	18300	824
5.1	17400	801
4.9	16500	778
4.7	15600	755
STOP		

Alliant Unique

Charge in grains	psi	fps
STOP		
7.1	21000	839
6.9	20000	801
6.7	19000	872
6.5	18000	843
6.3	17000	814
6.1	16000	785
5.9	15000	756
5.7	14000	727
5.5	13000	698
5.3	12000	670
STOP		

Hodgdon HP-38

Charge in grains	psi	fps
STOP		
6.4	21000	685
6.2	20000	870
6.1	19000	840
5.9	18400	810
5.7	17800	780
5.5	16300	750
5.3	15300	720
5.1	14300	690
4.9	13200	660
4.7	12200	630
4.5	11200	600
4.3	10200	570
STOP		

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Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
9.9	21000	944
9.8	20600	932
9.6	19900	911
9.4	19200	889
9.2	18500	868
9.0	17900	846
8.8	17200	825
8.6	16500	803
8.4	15800	781
8.2	15100	760
8.0	14400	738
7.8	13700	716
7.6	13000	695
7.4	12300	673
7.2	11700	652
STOP		

Hodgdon HS-7		
Charge in grains	psi	fps
STOP		
10.7	21000	951
10.6	20600	940
10.4	19900	918
10.2	19100	896
10.0	18400	875
9.8	17700	853
9.6	17000	831
9.4	16200	809
9.2	15500	788
9.0	14800	766
8.8	14100	744
8.6	13300	723
8.4	12600	701
8.2	11900	679
8.0	11200	658
STOP		

Hodgdon Universal		
Charge in grains	psi	fps
STOP		
7.2	21000	852
7.1	20400	833
6.9	19300	805
6.7	18100	758
6.5	17000	720
6.3	15900	783
6.1	14700	745
5.9	13600	708
5.7	12500	670
5.5	11300	633
5.3	10200	595
5.1	9100	558
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
6.0	21000	909
5.8	20000	880
5.6	19100	852
5.4	18100	824
5.2	17200	796
5.0	16200	768
4.8	15300	740
4.6	14300	712
4.4	13400	684
4.2	12400	656
4.0	11300	628
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
6.5	21000	903
6.3	19900	874
6.1	18800	846
5.9	17700	818
5.7	16600	790
5.5	15600	762
5.3	14500	733
5.1	13400	705
4.9	12300	677
4.7	11200	648
4.5	10200	620
STOP		

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Accurate Arms No. 5

Charge in		
grains	psi	fps
STOP		
9.3	21000	940
9.1	20200	927
8.9	19400	906
8.7	18700	885
8.5	17900	864
8.3	17200	843
8.1	16400	822
7.9	15700	801
7.7	14900	779
7.5	14200	758
7.3	13400	737
7.1	12700	716
6.9	11900	695
6.7	11200	674
6.5	10400	653
6.3	9700	632
STOP		

Accurate Arms No. 7

Charge in		
grains	psi	fps
STOP		
10.9	21000	938
10.7	20300	916
10.5	19600	899
10.3	18900	882
10.1	18300	864
9.9	17600	847
9.7	16900	830
9.5	16300	812
9.3	15600	795
9.1	14900	778
8.9	14300	761
STOP		

Alliant Bullseye

Charge in		
grains	psi	fps
STOP		
5.8	21000	924
5.6	20000	898
5.4	19000	872
5.2	18100	846
5.0	17100	820
4.8	16100	795
4.6	15200	769
4.4	14200	743
4.2	13200	717
4.0	12300	691
STOP		

Alliant Unique

Charge in		
grains	psi	fps
STOP		
7.1	21000	935
6.9	20000	925
6.7	19000	898
6.5	18100	870
6.3	17100	845
6.1	16200	815
5.9	15200	789
5.7	14300	761
5.5	13300	733
5.3	12400	706
STOP		

Hodgdon HP-38

Charge in		
grains	psi	fps
STOP		
6.3	21000	922
6.1	19900	873
5.9	18800	845
5.7	17700	816
5.5	16600	788
5.3	15500	759
5.1	14400	731
4.9	13300	702
4.7	12200	674
4.5	11100	645
4.3	10000	617
STOP		

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Read pages 2 - 11 before loading.
Always watch for excessive pressure signs.

.45 ACP

MidwayUSA RN 230 grain



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Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
9.8	21000	966
9.8	20500	953
9.6	19700	929
9.4	18900	905
9.2	18000	881
9.0	17200	857
8.8	16500	835
8.6	15900	809
8.4	14700	784
8.2	13800	760
8.0	13000	736
7.8	12200	712
7.6	11300	688
7.4	10500	664
7.2	9700	640
STOP		

Hodgdon HS-7		
Charge in grains	psi	fps
STOP		
10.5	21000	977
10.4	20600	966
10.2	19800	924
10.0	19100	903
9.8	18300	882
9.6	17500	860
9.4	16800	839
9.2	16000	818
9.0	15100	796
8.8	14500	775
8.6	13700	754
8.4	13000	732
8.2	12200	711
8.0	11500	690
STOP		

Hodgdon Universal		
Charge in grains	psi	fps
STOP		
7.2	21000	967
7.1	20400	969
6.9	19300	935
6.7	18300	901
6.5	17200	867
6.3	16100	833
6.1	15000	798
5.9	14000	764
5.7	12900	730
5.5	11800	696
5.3	10700	662
5.1	9700	628
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
6.0	21000	845
5.8	20000	817
5.6	19100	890
5.4	18100	863
5.2	17200	836
5.0	16200	809
4.8	15300	782
4.6	14300	755
4.4	13400	728
4.2	12400	701
4.0	11500	674
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
6.3	21000	911
6.3	19000	864
6.1	18000	857
5.9	17000	830
5.7	16000	803
5.5	15000	777
5.3	14000	750
5.1	13000	723
4.9	12000	696
4.7	11000	669
4.5	10000	643
STOP		

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Accurate Arms No. 5

Charge in grains	psi	fps
STOP		
9.2	21000	928
9.0	20300	907
8.8	19600	887
8.6	18900	867
8.4	18200	846
8.2	17500	826
8.0	16800	806
7.8	16100	785
7.6	15400	765
7.4	14700	745
7.2	14000	724
7.0	13300	704
6.8	12600	684
6.6	11900	663
6.4	11200	643
6.2	10500	623
STOP		

Accurate Arms No. 7

Charge in grains	psi	fps
STOP		
11.5	21000	958
11.3	20300	919
11.1	19700	900
10.9	19100	881
10.7	18500	862
10.5	17900	844
10.3	17300	825
10.1	16700	806
9.9	16100	787
9.7	15500	769
9.5	14900	750
9.3	14300	731
9.1	13700	712
8.9	13100	694
STOP		

Alliant Bullseye

Charge in grains	psi	fps
STOP		
5.8	21000	917
5.6	20000	889
5.4	19000	862
5.2	18000	825
5.0	17000	808
4.8	16000	780
4.6	15000	753
4.4	14000	726
4.2	13000	699
4.0	12100	672
STOP		

Alliant Unique

Charge in grains	psi	fps
STOP		
7.4	21000	968
7.3	20500	955
7.1	19700	929
6.9	18800	905
6.7	18000	877
6.5	17100	851
6.3	16200	825
6.1	15400	799
5.9	14500	773
5.7	13700	747
5.5	12800	721
5.3	12000	696
STOP		

Hodgdon HP-38

Charge in grains	psi	fps
STOP		
6.5	21000	915
6.3	20000	886
6.1	19000	858
5.9	18000	830
5.7	17000	802
5.5	16000	774
5.3	15100	746
5.1	14100	718
4.9	13100	690
4.7	12100	662
4.5	11100	634
4.3	10200	606
STOP		

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Hodgdon HS-6

Charge in grains psi fps

STOP		
10.1	21000	985
10.0	20600	973
9.8	19900	951
9.6	19200	929
9.4	18500	907
9.2	17800	885
9.0	17100	862
8.8	16400	840
8.6	15700	818
8.4	15000	796
8.2	14300	774
8.0	13600	751
7.8	12900	729
7.6	12200	707
7.4	11500	685
7.2	10800	662
STOP		

Hodgdon HS-7

Charge in grains psi fps

STOP		
10.9	21000	978
10.8	20600	967
10.6	19900	947
10.4	19300	926
10.2	18600	905
10.0	17900	885
9.8	17200	864
9.6	16600	843
9.4	15900	823
9.2	15200	802
9.0	14500	782
8.8	13800	761
8.6	13200	740
8.4	12500	720
8.2	11800	699
8.0	11200	678
STOP		

Hodgdon Universal

Charge in grains psi fps

STOP		
7.3	21000	986
7.1	19900	952
6.9	18800	918
6.7	17700	884
6.5	16700	850
6.3	15600	816
6.1	14500	782
5.9	13400	748
5.7	12400	714
5.5	11300	680
5.3	10200	646
5.1	9200	612
STOP		

IMR 700X

Charge in grains psi fps

STOP		
6.1	21000	945
6.0	20500	931
5.8	19500	904
5.6	18500	878
5.4	17600	851
5.2	16600	824
5.0	15700	797
4.8	14700	771
4.6	13700	744
4.4	12800	717
4.2	11800	690
4.0	10800	664
STOP		

Winchester 231

Charge in grains psi fps

STOP		
6.6	21000	921
6.5	20400	909
6.3	19400	882
6.1	18400	855
5.9	17400	829
5.7	16400	802
5.5	15300	775
5.3	14300	748
5.1	13300	721
4.9	12300	694
4.7	11300	667
4.5	10300	641
STOP		

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Accurate Arms No. 5

Charge in grains	psi	fps
STOP		
8.3	21000	953
9.2	20200	931
8.9	19400	910
8.7	18700	899
8.5	17900	888
8.3	17100	847
8.1	16400	826
7.9	15600	805
7.7	14800	784
7.5	14100	763
7.3	13300	742
7.1	12500	721
6.9	11800	700
6.7	11000	679
6.5	10200	658
6.3	9500	637
STOP		

Accurate Arms No. 7

Charge in grains	psi	fps
STOP		
11.0	21000	903
10.8	20200	884
10.6	19400	865
10.4	18600	847
10.2	17800	828
10.0	17000	809
9.8	16200	791
9.6	15400	772
9.4	14600	753
9.2	13800	735
9.0	13000	716
8.8	12200	698
STOP		

Alliant Bullseye

Charge in grains	psi	fps
STOP		
5.8	21000	916
5.6	20000	888
5.4	19000	861
5.2	18000	834
5.0	17000	807
4.8	16000	779
4.6	15000	752
4.4	14000	725
4.2	13000	698
4.0	12000	671
STOP		

Alliant Unique

Charge in grains	psi	fps
STOP		
7.4	21000	971
7.3	20500	960
7.1	19600	935
6.9	18700	909
6.7	17800	884
6.5	16900	859
6.3	16000	834
6.1	15100	808
5.9	14200	783
5.7	13300	758
5.5	12400	733
5.3	11500	708
STOP		

Hodgdon HP-38

Charge in grains	psi	fps
STOP		
6.5	21000	909
6.3	19900	883
6.1	18900	857
5.9	17900	831
5.7	16900	805
5.5	15900	779
5.3	14900	753
5.1	13900	727
4.9	12900	701
4.7	11900	675
4.5	10900	649
4.3	9900	624
STOP		

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Read pages 2 - 11 before loading.
Always watch for excessive pressure signs.

.45 ACP

Remington FMJ 230 grain



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Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
9.9	20000	961
9.8	20500	949
9.6	19700	926
9.4	18900	903
9.2	18100	881
9.0	17300	858
8.8	16400	835
8.6	15600	812
8.4	14800	789
8.2	14000	767
8.0	13100	744
7.8	12300	721
7.6	11500	698
7.4	10700	675
7.2	9900	653
STOP		

Hodgdon HS-7		
Charge in grains	psi	fps
STOP		
10.8	20000	953
10.4	20300	933
10.2	19600	913
10.0	18900	893
9.8	18200	873
9.6	17500	854
9.4	16800	834
9.2	16200	814
9.0	15500	794
8.8	14800	775
8.6	14100	755
8.4	13400	735
8.2	12700	715
8.0	12100	696
STOP		

Hodgdon Universal		
Charge in grains	psi	fps
STOP		
7.2	20000	980
7.1	20400	971
6.9	19300	937
6.7	18200	903
6.5	17100	869
6.3	16000	835
6.1	14900	800
5.9	13800	766
5.7	12700	732
5.5	11600	698
5.3	10500	664
5.1	9400	630
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
6.1	20000	943
6.0	20500	929
5.8	19500	903
5.6	18500	877
5.4	17500	852
5.2	16500	826
5.0	15600	801
4.8	14600	775
4.6	13700	749
4.4	12700	724
4.2	11700	698
4.0	10800	673
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
6.3	20000	892
6.1	19800	885
5.9	18600	838
5.7	17500	811
5.5	16300	784
5.3	15200	757
5.1	14000	730
4.9	12900	703
4.7	11700	676
4.5	10600	649
STOP		

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Accurate Arms No. 5

Charge in grains			psi	fps
STOP				
8.1	21000	844		
9.0	20600	932		
8.8	19900	910		
8.6	19200	887		
8.4	18500	865		
8.2	17800	843		
8.0	17100	820		
7.8	16400	798		
7.6	15700	775		
7.4	15000	753		
7.2	14300	731		
7.0	13600	708		
6.8	12900	686		
6.6	12200	663		
6.4	11500	641		
6.2	10800	619		
STOP				

Accurate Arms No. 7

Charge in grains			psi	fps
STOP				
10.0	21000	911		
10.8	20600	990		
10.6	19800	878		
10.4	19100	856		
10.2	18300	834		
10.0	17600	812		
9.8	16900	790		
9.6	16100	768		
9.4	15300	746		
9.2	14600	724		
9.0	13900	702		
8.8	13100	680		
STOP				

Alliant Bullseye

Charge in grains			psi	fps
STOP				
5.8	21000	811		
5.6	19900	896		
5.4	18900	859		
5.2	17800	832		
5.0	16800	805		
4.8	15700	779		
4.6	14700	752		
4.4	13600	725		
4.2	12600	698		
4.0	11600	672		
STOP				

Alliant Unique

Charge in grains			psi	fps
STOP				
7.5	21000	968		
7.1	20100	943		
6.9	19200	919		
6.7	18300	895		
6.5	17400	870		
6.3	16500	846		
6.1	15600	822		
5.9	14700	797		
5.7	13800	773		
5.5	12900	749		
5.3	12000	725		
STOP				

Hodgdon HP-38

Charge in grains			psi	fps
STOP				
6.5	21000	911		
6.3	20000	884		
6.1	19100	858		
5.9	18100	832		
5.7	17200	806		
5.5	16300	780		
5.3	15300	753		
5.1	14400	727		
4.9	13500	701		
4.7	12500	675		
4.5	11600	649		
4.3	10700	623		
STOP				

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Hodgdon HS-6

Charge		
in grains	psi	fps
STOP		
9.9	21000	923
9.8	20800	961
9.6	19900	939
9.4	19200	917
9.2	18500	894
9.0	17800	872
8.8	17100	850
8.6	16400	828
8.4	15700	805
8.2	15000	783
8.0	14300	761
7.8	13600	738
7.6	12900	716
7.4	12200	694
7.2	11500	672
STOP		

Hodgdon HS-7

Charge		
in grains	psi	fps
STOP		
10.8	21000	957
10.4	20200	936
10.2	19500	916
10.0	18700	896
9.8	18000	876
9.6	17200	856
9.4	16500	836
9.2	15700	816
9.0	15000	796
8.8	14200	776
8.6	13500	756
8.4	12700	736
8.2	12000	716
8.0	11300	696
STOP		

Hodgdon Universal

Charge		
in grains	psi	fps
STOP		
7.1	21000	981
6.9	19800	943
6.7	18600	906
6.5	17400	869
6.3	16200	832
6.1	15100	795
5.9	13900	758
5.7	12700	721
5.5	11500	684
5.3	10300	647
5.1	9200	610
STOP		

IMR 700X

Charge		
in grains	psi	fps
STOP		
6.0	21000	931
5.8	19900	905
5.6	18900	880
5.4	17800	855
5.2	16800	829
5.0	15700	804
4.8	14700	779
4.6	13600	753
4.4	12600	728
4.2	11500	703
4.0	10500	678
STOP		

Winchester 231

Charge		
in grains	psi	fps
STOP		
6.5	21000	915
6.3	20000	889
6.1	19000	863
5.9	18100	837
5.7	17100	811
5.5	16200	786
5.3	15200	760
5.1	14200	734
4.9	13300	708
4.7	12300	682
4.5	11400	657
STOP		

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Accurate Arms No. 5

Charge in grains	psi	fps
STOP		
8.9	21000	923
8.8	20600	911
8.6	19800	887
8.4	19000	863
8.2	18200	839
8.0	17400	816
7.8	16600	792
7.6	15800	768
7.4	15100	744
7.2	14300	720
7.0	13500	697
6.8	12700	673
6.6	11900	649
6.4	11100	625
6.2	10300	602
STOP		

Accurate Arms No. 7

Charge in grains	psi	fps
STOP		
10.5	21000	876
10.4	20500	865
10.2	19800	843
10.0	19000	821
9.8	17700	800
9.6	16800	778
9.4	15900	756
9.2	15000	735
9.0	14100	713
8.8	13200	692
STOP		

Alliant Bullseye

Charge in grains	psi	fps
STOP		
5.7	21000	880
5.6	20400	867
5.4	19200	841
5.2	18100	818
5.0	17000	790
4.8	15800	765
4.6	14700	739
4.4	13500	714
4.2	12400	688
4.0	11300	663
STOP		

Alliant Unique

Charge in grains	psi	fps
STOP		
7.4	21000	964
7.3	20500	951
7.1	19700	926
6.9	18800	902
6.7	17900	877
6.5	17100	852
6.3	16200	827
6.1	15300	803
5.9	14500	778
5.7	13600	753
5.5	12700	728
5.3	11900	704
STOP		

Hodgdon HP-38

Charge in grains	psi	fps
STOP		
6.3	21000	881
6.1	19800	854
5.9	18900	827
5.7	17800	800
5.5	16800	773
5.3	15800	746
5.1	14700	719
4.9	13700	692
4.7	12800	665
4.5	11800	638
4.3	10800	612
STOP		

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Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
9.9	21000	969
9.8	20800	956
9.6	19800	932
9.4	19000	907
9.2	18200	882
9.0	17400	858
8.8	16600	833
8.6	15800	808
8.4	15100	784
8.2	14300	759
8.0	13500	734
7.8	12700	710
7.6	11900	685
7.4	11100	660
7.2	10400	636
STOP		

Hodgdon HS-7		
Charge in grains	psi	fps
STOP		
10.5	21000	954
10.4	20600	942
10.2	19800	919
10.0	19100	897
9.8	18300	874
9.6	17600	851
9.4	16800	828
9.2	16100	805
9.0	15300	783
8.8	14600	760
8.6	13800	737
8.4	13100	714
8.2	12300	691
8.0	11600	668
STOP		

Hodgdon Universal		
Charge in grains	psi	fps
STOP		
7.2	21000	967
7.1	20400	949
6.9	19300	915
6.7	18100	880
6.5	17000	846
6.3	15900	811
6.1	14800	776
5.9	13600	742
5.7	12500	707
5.5	11400	673
5.3	10300	638
5.1	9200	604
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
8.1	21000	900
8.0	20400	916
5.8	19400	889
5.6	18400	862
5.4	17400	836
5.2	16400	809
5.0	15300	782
4.8	14300	755
4.6	13300	728
4.4	12300	701
4.2	11300	674
4.0	10300	648
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
6.5	21000	910
6.3	20000	882
6.1	19100	855
5.9	18200	827
5.7	17300	800
5.5	16400	772
5.3	15400	745
5.1	14500	717
4.9	13600	690
4.7	12700	662
4.5	11800	635
STOP		

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Accurate Arms No. 5		
Charge in grains	psi	fps
STOP		
9.0	21000	931
8.8	20200	908
8.6	19500	885
8.4	18800	863
8.2	18000	840
8.0	17300	818
7.8	16600	795
7.6	15900	773
7.4	15100	750
7.2	14400	727
7.0	13700	705
6.8	12900	682
6.6	12200	660
6.4	11500	637
6.2	10800	615
STOP		

Accurate Arms No. 7		
Charge in grains	psi	fps
STOP		
10.8	21000	903
10.8	20600	893
10.6	19800	874
10.4	19100	854
10.2	18300	835
10.0	17600	816
9.8	16800	797
9.6	16100	777
9.4	15300	758
9.2	14600	739
9.0	13800	720
8.8	13100	701
STOP		

Alliant Bullseye		
Charge in grains	psi	fps
STOP		
5.7	21000	906
5.6	20400	892
5.4	19400	866
5.2	18400	839
5.0	17400	812
4.8	16300	786
4.6	15300	759
4.4	14300	733
4.2	13300	706
4.0	12300	680
STOP		

Alliant Unique		
Charge in grains	psi	fps
STOP		
7.5	21000	980
7.3	20200	956
7.1	19400	933
6.9	18600	909
6.7	17900	886
6.5	17100	862
6.3	16300	839
6.1	15500	815
5.9	14800	792
5.7	14000	768
5.5	13200	745
5.3	12400	722
STOP		

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
6.5	21000	967
6.3	19900	878
6.1	18800	849
5.9	17900	820
5.7	16900	791
5.5	15900	762
5.3	14800	734
5.1	13800	705
4.9	12800	676
4.7	11800	647
4.5	10800	618
4.3	9800	590
STOP		

Use extreme caution when loading in the Yellow or Red zones.

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Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Hodgdon HS-6			
Charge in grains	psi	fps	
STOP			
9.9	21000	953	
9.8	20600	941	
9.6	19800	919	
9.4	19000	897	
9.2	18300	874	
9.0	17500	852	
8.8	16700	830	
8.6	15900	808	
8.4	15200	785	
8.2	14400	763	
8.0	13600	741	
7.8	12900	718	
7.6	12100	696	
7.4	11300	674	
7.2	10500	652	
STOP			

Hodgdon HS-7			
Charge in grains	psi	fps	
STOP			
10.3	21000	941	
10.4	20600	933	
10.2	19900	914	
10.0	19300	896	
9.8	18600	877	
9.6	17900	858	
9.4	17200	839	
9.2	16500	820	
9.0	15900	802	
8.8	15200	783	
8.6	14500	764	
8.4	13800	745	
8.2	13100	726	
8.0	12500	708	
STOP			

Hodgdon Universal			
Charge in grains	psi	fps	
STOP			
7.2	21000	936	
7.1	20400	918	
6.9	19300	924	
6.7	18200	890	
6.5	17100	856	
6.3	16000	821	
6.1	14900	787	
5.9	13800	753	
5.7	12700	718	
5.5	11600	684	
5.3	10500	650	
5.1	9400	616	
STOP			

IMR 700X			
Charge in grains	psi	fps	
STOP			
6.1	21000	917	
6.0	20400	924	
5.8	19400	899	
5.6	18400	873	
5.4	17400	848	
5.2	16400	823	
5.0	15300	797	
4.8	14300	772	
4.6	13300	747	
4.4	12300	721	
4.2	11300	696	
4.0	10300	671	
STOP			

Winchester 231			
Charge in grains	psi	fps	
STOP			
6.6	21000	913	
6.5	20500	902	
6.3	19500	876	
6.1	18500	850	
5.9	17500	825	
5.7	16500	799	
5.5	15500	773	
5.3	14500	747	
5.1	13500	722	
4.9	12500	696	
4.7	11500	670	
4.5	10500	645	
STOP			

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
9.1	21000	942
9.0	20600	921
8.8	19900	909
8.6	19300	887
8.4	18600	865
8.2	17900	844
8.0	17300	822
7.8	16600	800
7.6	15900	778
7.4	15200	757
7.2	14600	735
7.0	13900	713
6.8	13200	691
6.6	12500	670
6.4	11900	648
6.2	11300	626
6.0	10600	605
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

start here

Accurate Arms No. 7

Charge in grains psi fps

STOP		
10.9	21000	893
10.8	20600	884
10.6	19900	866
10.4	19100	848
10.2	18400	831
10.0	17700	813
9.8	17000	796
9.6	16200	778
9.4	15500	760
9.2	14800	743
9.0	14100	725
8.8	13400	708
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
5.8	21000	913
5.6	19900	896
5.4	18800	880
5.2	17800	853
5.0	16700	817
4.8	15600	780
4.6	14600	754
4.4	13500	727
4.2	12400	701
4.0	11400	675
STOP		

start here

Alliant Unique

Charge in grains psi fps

STOP		
7.5	21000	963
7.1	20100	938
6.9	19200	914
6.7	18300	890
6.5	17400	866
6.3	16500	842
6.1	15700	817
5.9	14800	793
5.7	13900	768
5.5	13000	743
5.3	12100	719
STOP		

start here

Hodgdon HP-38

Charge in grains psi fps

STOP		
6.2	21000	898
6.1	19800	869
5.9	18700	840
5.7	17600	811
5.5	16500	783
5.3	15400	754
5.1	14300	725
4.9	13200	697
4.7	12100	668
4.5	11000	639
4.3	9900	611
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

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Reducing Cartridge Over All Length increases pressure greatly. See cover page for this grain weight for O.A.L.

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WARNING: Always begin in the "start here" area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.

Read pages 2 - 11 before loading.
Always watch for excessive pressure signs.

.45 ACP

Winchester FMJ 230 grain



Hodgdon HS-6

Charge in grains psi fps

STOP		
9.7	21000	965
9.6	20500	953
9.4	19700	930
9.2	18900	907
9.0	18100	884
8.8	17300	861
8.6	16500	838
8.4	15600	815
8.2	14800	792
8.0	14000	769
7.8	13200	746
7.6	12400	723
7.4	11600	700
7.2	10800	677
STOP		

Hodgdon HS-7

Charge in grains psi fps

STOP		
10.8	21000	966
10.4	20600	955
10.2	19900	935
10.0	19200	915
9.8	18500	894
9.6	17900	874
9.4	17200	853
9.2	16500	833
9.0	15800	813
8.8	15100	792
8.6	14400	772
8.4	13700	751
8.2	13000	731
8.0	12300	711
STOP		

Hodgdon Universal

Charge in grains psi fps

STOP		
7.0	21000	965
6.9	20400	947
6.7	19200	912
6.5	18000	877
6.3	16800	841
6.1	15600	806
5.9	14400	771
5.7	13200	736
5.5	12000	701
5.3	10800	666
5.1	9600	631
STOP		

IMR 700X

Charge in grains psi fps

STOP		
5.9	21000	951
5.8	20400	916
5.6	19400	888
5.4	18300	860
5.2	17300	832
5.0	16300	804
4.8	15200	776
4.6	14200	748
4.4	13100	720
4.2	12000	692
4.0	11000	664
STOP		

Winchester 231

Charge in grains psi fps

STOP		
6.4	21000	909
6.3	20400	891
6.1	19400	864
5.9	18300	838
5.7	17300	811
5.5	16300	784
5.3	15200	757
5.1	14200	731
4.9	13100	704
4.7	12100	677
4.5	11100	651
STOP		

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Accurate Arms No. 5

Charge in grains psi fps

STOP		
9.3	21000	957
9.1	20300	936
8.9	19700	916
8.7	19100	895
8.5	18400	875
8.3	17800	854
8.1	17200	834
7.9	16500	813
7.7	15900	793
7.5	15300	772
7.3	14600	752
7.1	14000	731
6.9	13400	711
6.7	12700	690
6.5	12100	670
6.3	11500	649
STOP		

Accurate Arms No. 7

Charge in grains psi fps

STOP		
11.1	21000	903
11.0	20600	896
10.8	20000	878
10.6	19400	860
10.4	18800	843
10.2	18200	825
10.0	17600	807
9.8	16900	790
9.6	16300	772
9.4	15700	754
9.2	15100	737
9.0	14500	719
8.8	13900	702
STOP		

Alliant Bullseye

Charge in grains psi fps

STOP		
5.8	21000	910
5.6	19900	883
5.4	18900	856
5.2	17900	829
5.0	16900	802
4.8	15900	776
4.6	14900	749
4.4	13900	722
4.2	12900	695
4.0	11900	669
STOP		

Alliant Unique

Charge in grains psi fps

STOP		
7.3	21000	968
7.1	20000	939
6.9	19000	910
6.7	18000	882
6.5	17000	853
6.3	16000	825
6.1	15000	796
5.9	14000	767
5.7	13000	739
5.5	12000	710
5.3	11000	682
STOP		

Hodgdon HP-38

Charge in grains psi fps

STOP		
6.6	21000	839
6.5	20500	806
6.3	19600	779
6.1	18700	852
5.9	17800	825
5.7	16800	799
5.5	15900	772
5.3	15000	745
5.1	14000	718
4.9	13000	691
4.7	12000	664
4.5	11000	637
4.3	10000	611
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Read pages 2 - 11 before loading.
Always watch for excessive pressure signs.

.45 ACP

Winchester JHP 230 grain



Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
9.7	21000	965
9.6	20500	953
9.4	19700	930
9.2	18900	907
9.0	18100	884
8.8	17300	861
8.6	16500	838
8.4	15600	815
8.2	14800	792
8.0	14000	769
7.8	13200	746
7.6	12400	723
7.4	11600	700
7.2	10800	677
STOP		

Hodgdon HS-7		
Charge in grains	psi	fps
STOP		
10.6	21000	950
10.4	20300	938
10.2	19700	918
10.0	19100	898
9.8	18400	877
9.6	17800	857
9.4	17200	837
9.2	16500	816
9.0	15900	796
8.8	15300	776
8.6	14600	755
8.4	14000	735
8.2	13400	715
8.0	12800	695
STOP		

Hodgdon Universal		
Charge in grains	psi	fps
STOP		
7.2	21000	976
7.1	20500	959
6.9	19500	925
6.7	18500	892
6.5	17500	858
6.3	16500	825
6.1	15600	791
5.9	14600	758
5.7	13600	724
5.5	12600	691
5.3	11600	657
5.1	10700	624
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
8.7	21000	948
8.6	20500	931
8.8	19600	903
8.6	18600	875
8.4	17700	847
8.2	16800	818
8.0	15800	789
7.8	14900	762
7.6	14000	733
7.4	13000	705
7.2	12100	677
7.0	11200	648
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
6.6	21000	915
6.5	20500	901
6.3	19600	874
6.1	18700	848
5.9	17800	821
5.7	16900	794
5.5	16000	767
5.3	15000	741
5.1	14100	714
4.9	13200	687
4.7	12300	660
4.5	11400	634
STOP		

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Accurate Arms No. 2

Charge in grains			psi			fps		
STOP								
8.4	21000	952						
8.3	20400	939						
6.3	19400	915						
5.9	18400	891						
5.7	17400	867						
5.5	16400	843						
5.3	15300	818						
5.1	14300	794						
4.9	13300	770						
4.7	12300	746						
4.5	11300	722						
STOP								

Accurate Arms No. 5

Charge in grains			psi			fps		
STOP								
9.5	21000	983						
9.4	20600	973						
9.2	19900	954						
9.0	19300	935						
8.8	18600	916						
8.6	17900	897						
8.4	17200	878						
8.2	16600	859						
8.0	15900	840						
7.8	15200	821						
7.6	14500	802						
7.4	13900	783						
7.2	13200	764						
7.0	12500	745						
6.8	11800	726						
6.6	11200	707						
6.4	10500	688						
6.2	9800	669						
6.0	9200	650						
STOP								

Accurate Arms No. 7

Charge in grains			psi			fps		
STOP								
11.5	21000	963						
11.4	20600	953						
11.2	20000	935						
11.0	19300	917						
10.8	18600	899						
10.6	18000	880						
10.4	17300	862						
10.2	16600	844						
10.0	16000	825						
9.8	15300	807						
9.6	14700	789						
9.4	14000	771						
9.2	13300	752						
9.0	12700	734						
8.8	12000	716						
8.6	11400	698						
STOP								

Alliant Bullseye

Charge in grains			psi			fps		
STOP								
6.1	21000	944						
5.9	20100	922						
5.7	19200	900						
5.5	18300	879						
5.3	17400	857						
5.1	16500	836						
4.9	15600	814						
4.7	14700	793						
4.5	13800	771						
4.3	12900	750						
STOP								

Alliant Unique

Charge in grains			psi			fps		
STOP								
7.8	21000	991						
7.4	20100	967						
7.2	19300	944						
7.0	18500	921						
6.8	17600	898						
6.6	16800	875						
6.4	16000	852						
6.2	15100	829						
6.0	14300	806						
5.8	13500	783						
5.6	12600	760						
5.4	11800	737						
5.2	11000	714						
STOP								

Use extreme caution when loading in the Yellow or Red zones.

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**Hodgdon
HP-38**

Charge
in
grains psi fps

STOP		
6.5	21000	933
6.4	20400	922
6.2	19400	898
6.0	18400	873
5.8	17400	848
5.6	16400	824
5.4	15400	799
5.2	14400	774
5.0	13400	750
4.8	12400	725
4.6	11400	701
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

**Hodgdon
HS-6**

Charge
in
grains psi fps

STOP		
10.2	21000	947
10.0	20300	927
9.8	19500	918
9.6	18900	909
9.4	18200	900
9.2	17500	891
9.0	16900	882
8.8	16100	873
8.6	15400	864
8.4	14700	855
8.2	14000	846
8.0	13300	837
7.8	12600	828
7.6	11900	819
7.4	11200	810
7.2	10500	801
7.0	9800	792
STOP		

start here

**IMR
700X**

Charge
in
grains psi fps

STOP		
6.4	21000	900
6.3	20500	887
6.1	19600	874
5.9	18600	861
5.7	17700	848
5.5	16800	835
5.3	15900	822
5.1	15000	809
4.9	14000	796
4.7	13100	783
4.5	12200	770
4.3	11300	757
4.1	10400	744
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

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Accurate Arms No. 2

Charge in grains			psi			fps		
STOP								
6.0	21000	990						
5.8	19900	918						
5.6	18800	890						
5.4	17700	862						
5.2	16700	835						
5.0	15600	807						
4.8	14500	779						
4.6	13500	752						
4.4	12400	724						
4.2	11300	696						
4.0	10300	669						
STOP								

Accurate Arms No. 5

Charge in grains			psi			fps		
STOP								
8.0	21000	961						
8.8	20600	950						
8.6	19800	930						
8.4	19100	910						
8.2	18300	890						
8.0	17600	870						
7.8	16800	849						
7.6	16100	829						
7.4	15300	809						
7.2	14600	789						
7.0	13800	769						
6.8	13100	749						
6.6	12300	729						
6.4	11600	709						
6.2	10800	689						
6.0	10100	669						
STOP								

Accurate Arms No. 7

Charge in grains			psi			fps		
STOP								
10.0	21000	931						
10.8	20600	907						
10.6	19800	889						
10.4	19100	871						
10.2	18300	853						
10.0	17500	835						
9.8	16700	817						
9.6	16000	798						
9.4	15300	780						
9.2	14500	762						
9.0	13800	744						
8.8	13000	726						
8.6	12300	708						
STOP								

Alliant Bullseye

Charge in grains			psi			fps		
STOP								
5.7	21000	942						
5.6	20500	929						
5.4	19500	903						
5.2	18500	878						
5.0	17800	852						
4.8	16800	827						
4.6	15800	801						
4.4	14800	776						
4.2	13800	750						
4.0	12800	725						
STOP								

Alliant Unique

Charge in grains			psi			fps		
STOP								
7.1	21000	890						
6.9	20000	863						
6.7	19000	837						
6.5	18100	811						
6.3	17100	785						
6.1	16200	759						
5.9	15200	733						
5.7	14300	707						
5.5	13300	681						
5.3	12400	655						
5.1	11400	629						
4.9	10500	603						
STOP								

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.



Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

Hodgdon HP-38		
Charge in grains	psi	fps
STOP		
6.2	21000	936
6.1	20400	922
5.9	19300	894
5.7	18200	866
5.5	17000	838
5.3	15900	810
5.1	14800	782
4.9	13700	754
4.7	12600	726
4.5	11500	698
STOP		

Hodgdon HS-6		
Charge in grains	psi	fps
STOP		
10.0	21000	1000
9.9	20600	989
9.7	19900	969
9.5	19200	948
9.3	18500	927
9.1	17800	907
8.9	17200	886
8.7	16500	865
8.5	15800	845
8.3	15100	824
8.1	14400	803
7.9	13700	783
7.7	13000	762
7.5	12300	741
7.3	11600	721
7.1	10900	700
6.9	10200	679
STOP		

IMR 700X		
Charge in grains	psi	fps
STOP		
6.0	21000	970
5.8	20000	944
5.6	19100	918
5.4	18200	892
5.2	17300	866
5.0	16400	840
4.8	15500	814
4.6	14600	788
4.4	13700	762
4.2	12800	736
4.0	11900	710
3.8	11000	685
STOP		

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Accurate Arms No. 2

Charge in grains	psi	fps
STOP		
6.2	21000	939
6.1	20400	926
5.9	19300	901
5.7	18200	876
5.5	17100	851
5.3	16000	826
5.1	14900	801
4.9	13800	776
4.7	12700	751
4.5	11600	727
STOP		

Accurate Arms No. 5

Charge in grains	psi	fps
STOP		
9.3	21000	981
9.2	20600	970
9.0	20000	950
8.8	19300	930
8.6	18600	910
8.4	18000	899
8.2	17300	889
8.0	16600	849
7.8	16000	829
7.6	15200	808
7.4	14600	788
7.2	14000	768
7.0	13300	748
6.8	12600	727
6.6	12000	707
6.4	11300	687
6.2	10600	667
6.0	9800	647
STOP		

Accurate Arms No. 7

Charge in grains	psi	fps
STOP		
11.3	21000	948
11.2	20600	938
11.0	19800	920
10.8	19200	902
10.6	18500	884
10.4	17800	866
10.2	17000	847
10.0	16300	829
9.8	15600	811
9.6	14900	793
9.4	14200	774
9.2	13500	756
9.0	12800	738
8.8	12100	720
8.6	11400	702
STOP		

Alliant Bullseye

Charge in grains	psi	fps
STOP		
6.6	21000	953
5.9	20500	943
5.7	19700	919
5.5	18800	896
5.3	18000	872
5.1	17100	848
4.9	16300	825
4.7	15400	801
4.5	14600	778
4.3	13700	754
4.1	12900	731
STOP		

Alliant Unique

Charge in grains	psi	fps
STOP		
7.3	21000	982
7.4	20500	969
7.2	19600	945
7.0	18700	921
6.8	17800	896
6.6	17000	872
6.4	16100	848
6.2	15200	823
6.0	14300	799
5.8	13400	775
5.6	12500	750
5.4	11600	726
5.2	10700	702
5.0	9800	678
STOP		

Use extreme caution when loading in the Yellow or Red zones.

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**Hodgdon
HP-38**

Charge
in
grains psi fps

STOP		
8.5	21000	939
8.4	20500	926
6.2	19600	902
6.0	18700	877
5.8	17900	853
5.6	17000	829
5.4	16100	801
5.2	15200	779
5.0	14300	754
4.8	13400	730
4.6	12500	705
4.4	11700	681
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

**Hodgdon
HS-6**

Charge
in
grains psi fps

STOP		
10.2	21000	940
10.1	20600	929
9.9	20000	919
9.7	19300	910
9.5	18700	920
9.3	18000	910
9.1	17300	881
8.9	16700	861
8.7	16000	842
8.5	15400	822
8.3	14700	802
8.1	14100	783
7.9	13400	763
7.7	12700	744
7.5	12100	724
7.3	11400	704
7.1	10800	685
STOP		

start here

**IMR
700X**

Charge
in
grains psi fps

STOP		
8.1	21000	961
8.0	20500	948
5.8	19500	922
5.6	18500	896
5.4	17500	871
5.2	16500	845
5.0	15500	819
4.8	14500	793
4.6	13500	768
4.4	12500	742
4.2	11500	716
4.0	10500	691
STOP		

start here

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45 ACP

.451" Dia.
240 grain
Sect. Density .167



Sierra JHC	
Ballistic Coefficient	.168
Ctg. Over All Length	1.275

Reducing Cartridge Over All Length increases pressure greatly.

See page 12 for bullet terminology information.

Gun	Universal Receiver	Case	Remington
Barrel	H-S Precision test barrel	Max Case Length	.898
Length	5" with 1:16" twist	Trim to Length	.888
Primer	Remington 2-1/2	Max OAL	1.275
Maximum Average Pressure (MAP) 21,000 psi			

BULLET.....PAGE
Sierra JHC.....Jacketed95



Alliant Blue Dot

Charge in grains psi fps

STOP		
11.0	21000	864
10.8	20300	862
10.6	19700	841
10.4	19000	819
10.2	18400	808
10.0	17700	876
9.8	17100	835
9.6	16400	833
9.4	15800	812
9.2	15100	790
9.0	14500	768
8.8	13800	747
8.6	13200	726
8.4	12500	704
8.2	11800	683
STOP		

start here

Alliant Bullseye

Charge in grains psi fps

STOP		
5.8	21000	897
5.6	19900	870
5.4	18900	844
5.2	17900	818
5.0	16900	792
4.8	15800	766
4.6	14800	740
4.4	13800	714
4.2	12800	688
4.0	11800	662
STOP		

start here

Alliant Unique

Charge in grains psi fps

STOP		
7.3	21000	939
7.2	20800	926
7.0	19600	901
6.8	18700	875
6.6	17800	850
6.4	17000	825
6.2	16100	800
6.0	15200	775
5.8	14300	749
5.6	13400	724
5.4	12500	699
5.2	11600	674
5.0	10800	648
STOP		

start here

IMR 700X

Charge in grains psi fps

STOP		
6.1	21000	912
6.0	20500	899
5.8	19500	873
5.6	18500	847
5.4	17500	821
5.2	16500	795
5.0	15500	769
4.8	14500	743
4.6	13500	717
4.4	12500	691
4.2	11500	665
4.0	10500	639
STOP		

start here

Winchester 231

Charge in grains psi fps

STOP		
6.4	21000	878
6.3	20400	862
6.1	19400	836
5.9	18300	810
5.7	17300	784
5.5	16200	758
5.3	15200	732
5.1	14100	706
4.9	13100	680
4.7	12000	654
4.5	11000	628
STOP		

start here

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Our ballistics lab has the finest loading and computer equipment available. Our ballistics personnel are highly trained in its use and purpose.

45 ACP

.451"-.452" Dia.
250 grain
Sect. Density .174



	Hornady HP/XTP	MidwayUSA FP	Nosler HP	Speer SWC Lead
Ballistic Coefficient	.146	N/A	.177	.117
Clg. Over All Length	1.275	1.275	1.275	1.275

Reducing Cartridge Over All Length increases pressure greatly.

See page 12 for bullet terminology information.

Gun	Universal Receiver	Case	Remington
Barrel	H-S Precision test barrel	Max Case Length	.898
Length	5" with 1:16" twist	Trim to Length	.888
Primer	Remington 2-1/2	Max OAL	1.275
Maximum Average Pressure (MAP) 21,000 psi			

BULLET	PAGE
Hornady HP/XTP.....Jacketed.....	98-99
MidwayUSA FP.....Plated.....	100-101
Nosler HP.....Jacketed.....	102-103
Speer SWC.....Lead.....	104

All testing was done using a solid barrel.
Ammunition fired from a revolver will show a considerable decrease in velocity.



Alliant Blue Dot

Charge in grains	psi	fps
STOP		
10.8	21000	890
10.7	20600	916
10.5	19900	889
10.3	19300	862
10.1	18600	835
9.9	17900	808
9.7	17200	781
9.5	16600	754
9.3	15900	727
9.1	15200	700
8.9	14500	673
8.7	13800	646
8.5	13200	619
8.3	12500	592
8.1	11900	565
STOP		

Alliant Bullseye

Charge in grains	psi	fps
STOP		
5.4	21000	811
5.3	20500	794
5.1	19500	761
4.9	18600	728
4.7	17600	695
4.5	16600	662
4.3	15700	629
4.1	14700	596
3.9	13800	563
3.7	12800	530
3.5	11900	497
STOP		

Alliant Herco

Charge in grains	psi	fps
STOP		
7.6	21000	896
7.5	20600	882
7.3	19600	854
7.1	19000	827
6.9	18200	800
6.7	17400	772
6.5	16600	745
6.3	15900	717
6.1	15100	690
5.9	14300	663
5.7	13500	635
5.5	12700	608
5.3	12000	581
STOP		

Alliant Unique

Charge in grains	psi	fps
STOP		
6.6	21000	850
6.4	19900	820
6.2	18900	790
6.0	17900	760
5.8	16900	730
5.6	15900	700
5.4	14900	670
5.2	13900	640
5.0	12900	610
4.8	11900	580
STOP		

Hodgdon Clays

Charge in grains	psi	fps
STOP		
4.4	21000	711
4.2	19500	655
4.0	18000	599
3.8	16500	544
3.6	15000	488
3.4	13500	433
3.2	12000	377
3.0	10500	322
STOP		

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Hodgdon HS-6

Charge in grains psi fps

STOP		
8.3	20000	841
9.1	20200	856
8.9	19500	831
8.7	18800	806
8.5	18000	781
8.3	17300	757
8.1	16600	732
7.9	15800	707
7.7	15100	682
7.5	14400	658
7.3	13600	633
7.1	12900	608
6.9	12200	583
6.7	11500	558
STOP		

IMR 700X

Charge in grains psi fps

STOP		
5.6	21000	836
5.4	19500	802
5.2	18000	769
5.0	17000	736
4.8	16000	703
4.6	15000	670
4.4	14000	637
4.2	13000	604
4.0	12000	571
3.8	11000	538
STOP		

Winchester 231

Charge in grains psi fps

STOP		
6.0	21000	818
5.9	20000	802
5.7	19000	772
5.5	18000	741
5.3	17000	710
5.1	16500	680
4.9	15300	649
4.7	14300	619
4.5	13300	588
4.3	12300	558
STOP		

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Alliant Blue Dot

Charge in grains			psi			fps		
STOP								
11.1	21000	925						
10.9	20800	931						
10.7	19600	907						
10.5	19000	883						
10.3	18300	859						
10.1	17700	835						
9.9	17000	811						
9.7	16400	787						
9.5	15700	763						
9.3	15100	739						
9.1	14400	715						
8.9	13800	691						
8.7	13100	667						
8.5	12500	643						
8.3	11800	619						
8.1	11200	596						
STOP								

Alliant Bullseye

Charge in grains			psi			fps		
STOP								
5.7	21000	857						
5.5	20100	830						
5.3	19200	803						
5.1	18300	777						
4.9	17400	750						
4.7	16600	724						
4.5	15700	697						
4.3	14800	670						
4.1	13900	644						
3.9	13000	617						
3.7	12200	591						
STOP								

Alliant Herco

Charge in grains			psi			fps		
STOP								
8.0	21000	941						
7.9	20000	929						
7.7	20000	905						
7.5	19300	882						
7.3	18600	859						
7.1	18000	835						
6.9	17300	812						
6.7	16600	788						
6.5	16000	765						
6.3	15300	742						
6.1	14600	718						
5.9	14000	695						
5.7	13300	671						
5.5	12600	648						
5.3	12000	625						
STOP								

Alliant Unique

Charge in grains			psi			fps		
STOP								
7.1	21000	896						
7.0	20500	882						
6.8	19500	854						
6.6	18500	827						
6.4	17500	799						
6.2	16500	772						
6.0	15500	744						
5.8	14500	717						
5.6	13500	689						
5.4	12500	662						
5.2	11500	634						
5.0	10500	607						
4.8	9600	580						
STOP								

Hodgdon Clays

Charge in grains			psi			fps		
STOP								
4.7	21000	791						
4.5	19400	754						
4.3	17900	717						
4.1	16400	680						
3.9	14800	643						
3.7	13300	606						
3.5	11800	569						
3.3	10300	532						
STOP								

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Hodgdon HS-6

Charge in grains psi fps

STOP		
9.7	21000	919
9.5	20300	896
9.3	19600	874
9.1	18900	851
8.9	18200	829
8.7	17600	806
8.5	16900	784
8.3	16200	761
8.1	15500	739
7.9	14800	716
7.7	14200	694
7.5	13500	671
7.3	12800	649
7.1	12100	626
6.9	11400	604
6.7	10800	582
STOP		

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

start here

IMR 700X

Charge in grains psi fps

STOP		
6.0	21000	891
5.8	20000	863
5.6	19100	835
5.4	18200	807
5.2	17300	779
5.0	16400	751
4.8	15500	723
4.6	14600	695
4.4	13700	667
4.2	12800	639
4.0	11900	611
STOP		

start here

Winchester 231

Charge in grains psi fps

STOP		
6.2	21000	858
6.1	20500	844
5.9	19500	816
5.7	18500	789
5.5	17500	761
5.3	16500	733
5.1	15500	706
4.9	14500	679
4.7	13500	651
4.5	12500	623
4.3	11500	596
STOP		

start here

Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 4.

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Alliant Blue Dot

Charge in grains	psi	fps
STOP		
10.8	21000	961
10.7	20600	954
10.5	20000	929
10.3	19300	906
10.1	18600	884
9.9	18000	861
9.7	17300	839
9.5	16700	816
9.3	16000	794
9.1	15300	771
8.9	14700	749
8.7	14000	726
8.5	13400	704
8.3	12700	681
8.1	12100	659
STOP		

Alliant Bullseye

Charge in grains	psi	fps
STOP		
5.5	21000	858
5.3	19900	830
5.1	18900	803
4.9	17700	775
4.7	16700	748
4.5	15600	721
4.3	14500	693
4.1	13500	666
3.9	12400	638
3.7	11300	611
3.5	10300	584
STOP		

Alliant Herco

Charge in grains	psi	fps
STOP		
7.5	21000	911
7.3	20100	892
7.1	19300	867
6.9	18500	843
6.7	17600	818
6.5	16800	794
6.3	16000	769
6.1	15200	745
5.9	14300	720
5.7	13500	696
5.5	12700	671
5.3	11900	647
STOP		

Alliant Unique

Charge in grains	psi	fps
STOP		
6.8	21000	896
6.6	20000	869
6.4	19100	843
6.2	18100	817
6.0	17200	791
5.8	16200	765
5.6	15300	738
5.4	14300	712
5.2	13400	686
5.0	12400	660
4.8	11500	634
STOP		

Hodgdon Clays

Charge in grains	psi	fps
STOP		
4.5	21000	766
4.7	19300	731
4.1	17600	696
5.9	16000	661
5.7	14300	627
5.5	12700	592
5.3	11000	557
5.1	9400	523
STOP		

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Hodgdon HS-6

Charge in grains psi fps

STOP		
9.3	20000	910
9.1	20100	896
8.9	19300	863
8.7	18500	849
8.5	17700	816
8.3	16800	793
8.1	16000	770
7.9	15200	747
7.7	14400	723
7.5	13600	700
7.3	12700	677
7.1	11900	653
6.9	11100	630
6.7	10300	607
6.5	9500	584
STOP		

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All pressures are listed in psi not C.U.P. See page 4.

Start Here

IMR 700X

Charge in grains psi fps

STOP		
5.3	20000	832
5.4	20400	838
5.2	19200	811
5.0	18100	784
4.8	17000	758
4.6	15800	731
4.4	14700	704
4.2	13500	677
4.0	12400	650
3.8	11300	624
STOP		

Start Here

Winchester 231

Charge in grains psi fps

STOP		
6.0	20000	850
5.9	20400	836
5.7	19300	808
5.5	18200	780
5.3	17100	752
5.1	16000	725
4.9	14900	697
4.7	13800	669
4.5	12700	641
4.3	11700	614
STOP		

Start Here

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Alliant Bullseye

Charge in grains psi fps

STOP		
5.5	21000	880
5.3	19800	856
5.1	18700	832
4.9	17600	808
4.7	16400	784
4.5	15300	760
4.3	14200	736
4.1	13000	712
3.9	11900	688
3.7	10800	665
STOP		

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Alliant Herco

Charge in grains psi fps

STOP		
7.8	21000	963
7.6	20200	942
7.4	19500	921
7.2	18800	900
7.0	18000	879
6.8	17300	858
6.6	16600	837
6.4	15800	816
6.2	15100	795
6.0	14400	774
5.8	13600	753
5.6	12800	732
5.4	12000	711
5.2	11300	690
STOP		

Alliant Red Dot

Charge in grains psi fps

STOP		
5.4	21000	861
5.2	19700	840
5.0	18400	813
4.8	17100	787
4.6	15800	760
4.4	14500	733
4.2	13200	707
4.0	11900	680
3.8	10700	654
STOP		

Alliant Unique

Charge in grains psi fps

STOP		
6.9	21000	821
6.7	20000	799
6.5	19000	776
6.3	18100	753
6.1	17100	729
5.9	16200	706
5.7	15200	683
5.5	14300	660
5.3	13300	636
5.1	12400	613
4.9	11400	590
4.7	10500	567
STOP		

Winchester 231

Charge in grains psi fps

STOP		
6.0	21000	878
5.9	20400	865
5.7	19300	840
5.5	18200	814
5.3	17200	789
5.1	16100	764
4.9	15000	739
4.7	13900	713
4.5	12800	688
4.3	11700	663
4.1	10700	638
STOP		

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MidwayUSA's Ballistics Lab is temperature and humidity controlled to SAAMI specifications - 70 degrees Fahrenheit and 60% relative humidity. Pressure and velocity are recorded using an Oehler System 85 and piezo-electric transducers, the latest in industry standard equipment. The Universal Receiver on the right accepts specially made barrels for nearly all sporting arms cartridges. The wire at the top of the gun is connected to a piezo-electric transducer which measures the pressure in the chamber.

45 ACP

.452" Dia.
255 grain
Sect. Density .178



MidwayUSA
SWC Lead

Ballistic Coefficient	N/A
Ctg. Over All Length	1.275

Reducing Cartridge Over All Length increases pressure greatly.

See page 12 for bullet terminology information.

Gun	Universal Receiver	Case	Remington
Barrel	H-S Precision test barrel	Max Case Length	.898
Length	5' with 1:16" twist	Trim to Length	.888
Primer	Remington 2-1/2	Max OAL	1.275

Maximum Average Pressure (MAP) 21,000 psi

BULLET.....PAGE
MidwayUSA SWCLead107



Use extreme caution when loading in the Yellow or Red zones.

All pressures are listed in psi not C.U.P. See page 3.

Alliant Bullseye		
Charge in grains	psi	fps
STOP		
4.2	21000	798
4.1	20200	783
3.9	18700	754
3.7	17300	726
3.5	15800	697
3.3	14300	668
3.1	12900	640
STOP		

Alliant Herco		
Charge in grains	psi	fps
STOP		
5.9	21000	863
5.7	19800	836
5.5	18700	808
5.3	17500	779
5.1	16400	751
4.9	15200	722
4.7	14100	694
4.5	12900	665
4.3	11800	637
STOP		

Alliant Red Dot		
Charge in grains	psi	fps
STOP		
4.1	21000	780
4.0	20200	763
3.8	18600	730
3.6	17100	697
3.4	15500	664
3.2	13900	631
3.0	12400	598
STOP		

Alliant Unique		
Charge in grains	psi	fps
STOP		
5.8	21000	848
5.2	19600	820
5.0	18200	792
4.8	16800	763
4.6	15400	734
4.4	14000	705
4.2	12600	676
STOP		

Winchester 231		
Charge in grains	psi	fps
STOP		
4.6	21000	778
4.5	20300	764
4.3	19000	736
4.1	17600	708
3.9	16300	680
3.7	15000	652
3.5	13700	624
STOP		

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WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.

45 ACP

.452" Dia.
260 grain
Sect. Density .183



	Speer HP
Ballistic Coefficient	.183
Ctg. Over All Length	1.275

Reducing Cartridge Over All Length increases pressure greatly.

See page 12 for bullet terminology information.

Gun	Universal Receiver	Case	Remington
Barrel	H-S Precision test barrel	Max Case Length	.898
Length	5" with 1:16" twist	Trim to Length	.888
Primer	Remington 2-1/2	Max OAL	1.275
Maximum Average Pressure (MAP) 21,000 psi			

BULLET.....PAGE
Speer HPPlated109



**Alliant
Bullseye**

Charge
in
grains psi fps

STOP		
5.4	21000	815
5.2	19500	789
5.0	18900	762
4.8	17800	735
4.6	16800	708
4.4	15700	681
4.2	14700	654
STOP		

start here

**Alliant
Herco**

Charge
in
grains psi fps

STOP		
7.3	21000	898
7.4	20600	887
7.2	19800	864
7.0	19000	841
6.8	18200	818
6.6	17400	795
6.4	16600	772
6.2	15800	749
6.0	15000	726
5.8	14200	703
STOP		

start here

**Alliant
Unique**

Charge
in
grains psi fps

STOP		
6.6	21000	858
6.4	19800	831
6.2	18700	804
6.0	17600	777
5.8	16500	750
5.6	15400	723
5.4	14300	696
5.2	13200	670
STOP		

start here

**IMR
700X**

Charge
in
grains psi fps

STOP		
5.7	21000	850
5.5	19500	811
5.3	18100	772
5.1	16700	733
4.9	15300	694
4.7	13900	655
4.5	12500	617
STOP		

start here

**Winchester
231**

Charge
in
grains psi fps

STOP		
5.9	21000	813
5.7	19700	787
5.5	18500	759
5.3	17300	731
5.1	16100	703
4.8	14900	675
4.7	13700	648
STOP		

start here

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Favorite Loads

Bullet			Propellant	
Weight	Brand	Style	Weight	Brand
200	Hornady	HP/XTP	XXX	45
Primer:	Case:	Overall Length:	Lot number:	Temperature:
2-1/2R-P	P	2.0		
Range:	Best Group:	Average Group:	Velocity (fps):	
200		2.0	XXXX	
Gun: Springfield Pitt At				
Notes: This bullet shoots best with a...				
Bullet			Propellant	
Weight	Brand	Style	Weight	Brand
Primer:	Case:	Overall Length:	Lot number:	Temperature:
Range:	Best Group:	Average Group:	Velocity (fps):	
Gun:				
Notes:				

Favorite Loads

Bullet			Propellant	
Weight	Brand	Style	Weight	Brand
Primer:	Case:	Overall Length:	Lot number:	Temperature:
Range:	Best Group:	Average Group:	Velocity (fps):	
Gun:				
Notes:				
Bullet			Propellant	
Weight	Brand	Style	Weight	Brand
Primer:	Case:	Overall Length:	Lot number:	Temperature:
Range:	Best Group:	Average Group:	Velocity (fps):	
Gun:				
Notes:				

WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.

Read pages 2 - 11 before loading. Always watch for excessive pressure signs.

Favorite Loads

Bullet			Propellant	
Weight	Brand	Style	Weight	Brand
Primer	Case	Overall Length	Lot number	Temperature
Best Group: <input type="text"/>		Average Group: <input type="text"/>		Velocity (fps): <input type="text"/>
Gun:				
Notes:				
Bullet			Propellant	
Weight	Brand	Style	Weight	Brand
Primer	Case	Overall Length	Lot number	Temperature
Best Group: <input type="text"/>		Average Group: <input type="text"/>		Velocity (fps): <input type="text"/>
Gun:				
Notes:				

Favorite Loads

Bullet			Propellant	
Weight	Brand	Style	Weight	Brand
Primer	Case	Overall Length	Lot number	Temperature
Best Group: <input type="text"/>		Average Group: <input type="text"/>		Velocity (fps): <input type="text"/>
Gun:				
Notes:				
Bullet			Propellant	
Weight	Brand	Style	Weight	Brand
Primer	Case	Overall Length	Lot number	Temperature
Best Group: <input type="text"/>		Average Group: <input type="text"/>		Velocity (fps): <input type="text"/>
Gun:				
Notes:				

WARNING: Always begin in the 'start here' area of the green zone and work your loads up slowly. Loads listed in yellow zone or red zone should not be used without working loads up slowly from the loads listed in the green zone. Watch for excessive pressure signs, see pages 9 - 10.

John Moses Browning
(1855-1926)

On January 21, 1855 a son was born to Jonathan and Elizabeth Browning, of Ogden, Utah. That son would grow to be the most prolific, if not the greatest, firearms inventor of all time, John Moses Browning.

Jonathan Browning owned a gunshop in Ogden and had made quite a name for himself as a gunsmith. As John grew up he worked in the gunshop with his father and soon became very adept at working with firearms himself. By his fourteenth birthday he had made two complete firearms using odds and ends found around the gunshop.

In 1878, Jonathan gave the gunshop to John, John applied for his first patent on May 12, 1879. The patent, the first of 128 patents on 88 different firearms he would receive, was issued to him on October 7, 1879. Jonathan died later that same year.

John and his half-brother Matt, who had become John's business manager, opened a new shop dubbed 'The Browning Brothers Factory' in 1880. Over the next three years the Browning brothers produced 600 pieces of the newly patented firearm, Winchester, having heard about the new gun, sent a sales representative to look at the gun. Winchester was so impressed with the design that they offered to buy the manufacturing rights. A deal was made and Winchester marketed the gun in 1885 as the Model 85.

The Model 85, also known as the High Wall, Low Wall and Single Shot, in its various configurations, was the first of many firearms designed by Browning but manufactured under the Winchester name. Browning designed firearms have been produced by Winchester, Colt, Remington, Stevens, and Ithaca in the United States and by Fabrique Nationale D' Armes de Guerre in Belgium.

John kept busy until his death inventing and modifying firearms. Some of the firearms are listed by their date of introduction.

1885	Winchester 1885. This is from the first patent issued to Browning.
1886	Winchester Model 86, Browning's first repeating rifle.
1887	Winchester Model 87, Browning's first successful lever action-repeating shotgun.
1890	Winchester Model 90, Browning's first pump action repeating rifle. Browning completes his first fully automatic machine gun, the Model 1895 that was manufactured by Colt.
1892	Winchester Model 1892 Lever Action. It used smaller caliber cartridges than the Model 86.
1893	Winchester Model 93 Pump Action repeating shotgun.
1894	Winchester Model 94.
1895	Winchester 95 Lever Action repeating rifle. Model 1895 Automatic gas operated machine gun, known as the 'Potato Digger.'
1900	Winchester Model 1900 single shot rifle. Winchester Thumb Trigger rifle. F.N. .32 caliber Model 1900, semi-auto pistol. F.N. .38 caliber Model 1900, semi-auto pistol.
1901	Machine Gun Model 1901, recoil operated.
1902	Winchester Model 36 single shot shotgun.
1903	The A-5, the first Automatic Shotgun, know as the 'Humpback.' Colt Model 1903 'Pocket' came in .32 and .380, semi-auto pistol using a blowback action. Model 1903 military semi-automatic pistol.
1904	Stevens Model 520 hammerless pump action shotgun.
1905	Semi-automatic pistol, short recoil style adopted by the United States Military in 1911. Semi-automatic pistol Model 'Vest Pocket' in .25 caliber.
1914	F.N. .22 caliber automatic rifle. Colt Woodsman. .22 caliber semi-automatic pistol.

- 1917 Browning Automatic Rifle, 'B.A.R.'
- Model 1917 Browning Heavy Water Cooled .30 caliber.
- 1918 .50 caliber version of the Model 1917.
- Browning .30ME2 air-cooled Model .30 caliber Machine Gun.
- 1921 Remington Model 17 shotgun, later produced by Ithaca as the Model 37.
- 37mm Aircraft Automatic machine cannon.
- 1922 Remington Model 24 Automatic .22 caliber Rifle.
- F.N. 19 Pump Action .22 caliber rifle.
- 1923 Model P35 (Browning Hi-Power) semi-automatic pistol in 9mm.
- 1926 Browning Superposed 'over/under' shotgun.

John Moses Browning died November 26, 1926 in Liege, Belgium. He was in Belgium helping to set up the production of the Browning Superposed shotgun. Browning's designs can be found throughout the world. He left behind a legacy of firearm development the world will likely never see again.



One of the most popular handguns around today is the Model 1911 and its clones. Today's 1911 began its life in 1898 chambered in .38 ACP. It went through several design changes and on March 11, 1911, the current style was approved and recommended by the Army to be accepted as a standard issue firearm. There have been a few changes in the design since 1911 but nothing that changed its functionality or reliability. The 1911 has been offered in .45 ACP, .38 ACP/Super, 9mm, .38 Special Wadcutter, 10mm and other calibers, but none have enjoyed the popularity of the .45 ACP.

Pictured above is a competition Springfield 1911. Custom parts include a compensator, dot sight, magazine well, competition trigger, competition hammer, heavy mainspring as well as many other components to make it operate faster and smoother.

Pictured at left is an AMT Government model 1911 with Pachmayr grips, magazine well, competition trigger and a Site Lite laser site.

(continued from page 116)

Semi-Automatic Pistol (a.k.a Model 1911) as its standard issue sidearm. This cartridge/sidearm combination was standard issue for more than 80 years, spanning actions from General "Blackjack" Pershing's 1917 expedition into Mexico through WWI, WWII, Korea, and Vietnam.

Although by far the most prevalent, Colt's Government Model Semi-Automatic Pistol and its clones were not the only firearms chambered for the .45 ACP. The cartridge was used in many guns in the United States and other countries throughout the world. Some of the more famous firearms in .45 ACP are: Smith and Wesson 1917 Army Double Action Revolvers, Colt's New Service Double Action Revolvers (Model 1917), Thompson Submachine Guns (favorite of gangsters and law enforcement officials of the 1920s and '30s), M-3 Submachine Guns (the "grease gun") and Reising Submachine Guns.

In addition to its long and distinguished service life with U.S. Armed Services, the .45 ACP continues to play a major role in target shooting competition. 1920 was the first year the .45 automatic pistol was included in the National Matches at Camp Perry. The National Matches are held every year at Camp Perry, Ohio to determine the National Champion in "bullseye" handgun and rifle shooting competition. In addition, there are many local, state and regional matches held around the country throughout the year that lead up to the National Matches at Camp Perry.

Prior to World War II, pistols issued for use in the National Matches by military competitors were usually new and specially selected, but were otherwise no different from standard issue sidearms. As the skill levels of the participants increased, so did their desire for more accurate firearms. Over the years many gunsmiths have contributed to the legend of the .45 Auto. Two of the most prominent are Frank Pachmayr and James Clark.

Frank Pachmayr started gunsmithing in the 1930's and is generally

regarded as the first commercial gunsmith to "accurize" the .45 Auto. James Clark also worked on improving the accuracy of the .45 Auto. He began his work with .45s in 1952, just one year before the National Matches resumed after more than a decade of recess due to World War II. James Clark would eventually become the first civilian shooter to win the National Championships at Camp Perry in 1958.

"Bullseye" competition shooters weren't the only competitors that took interest in the .45 ACP. In 1963, the Southwest Pistol League was founded to coordinate "combat" or what we refer to today as practical competition. Col. Jeff Cooper, one of the .45 ACP's strongest advocates, was instrumental in promoting practical shooting through his writings. His unique shooting and writing styles quickly gained popularity and subsequently brought worldwide exposure to practical competition.

In May 1976, the Columbia International Combat Pistol Conference was held in Columbia, Missouri. Practical shooting enthusiasts from around the world attended, including Col. Jeff Cooper and Ray Chapman. As a result of this conference, the International Pistol Shooting Confederation (IPSC) was formed to coordinate practical shooting on a worldwide basis.

Today in the IPSC "limited" class, large bore, single stacked handguns are favored. Many of the handguns that fit this description are chambered in .45 ACP which has been and will likely continue to be one of the most popular cartridges on the market.

Even though it is fast approaching its 100th birthday, the .45 ACP shows no sign of retiring.

The .45 ACP

The .45 ACP (Automatic Colt Pistol) cartridge was introduced commercially in 1905 and accepted by the U.S. Army in 1911, but it is possible to trace its roots back to the .45 Colt cartridge which was introduced in 1873. The .45 Colt cartridge was originally manufactured for Colt's "Peacemaker" Single Action Army Revolver. It had a 255 grain bullet and was loaded with 40 grains of black powder, producing about 810 fps (feet per second) velocity. The .45 Colt cartridge and the "Peacemaker" were standard U.S. Army issue from 1873 until 1892.

In 1892, the U.S. Army replaced the .45 Colt cartridge with the .38 Long Colt cartridge. They also replaced the "Peacemaker" with Colt's New Army/Navy Double Action Revolver. The new .38 Long Colt cartridge was loaded with a 150 grain lead bullet which produced about 770 fps velocity. This gun and bullet combination was used in the Spanish American War and the Philippine Insurrection with less than desirable results. The cartridge's lighter bullet and slightly slower muzzle velocity lacked the power needed to be an effective military cartridge. As a result, the Army brought the old "Peacemakers" and the .45

Colt cartridges out of storage and used them successfully until the end of the two conflicts.

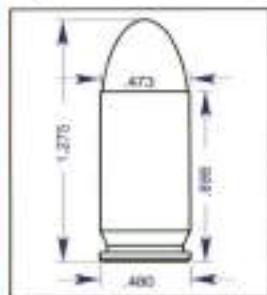
The ineffectiveness of the .38 Long Colt inspired the U.S. Army to search for a better standard issue cartridge and firearm. In 1904, the U.S. Ordnance Department set up a board of inquiry to look into the problem. Col. John T. Thompson (later promoted to Brigadier General) and the developer of the Thompson submachine gun and Col. L. A. LaGarde made up that board. The

board conducted extensive testing of a broad selection of handguns and cartridges. Their tests included firing rounds into the corpses of cows, horses and human cadavers to measure the damage. When testing was complete, the board determined that only weapons firing a .45 caliber bullet would be considered for adoption in the future.

Shortly after the board of inquiry's results were made public, Colt began to enlarge their Model 1900 (direct predecessor of the 1911) semi-automatic handgun to work with a .45 cartridge. John Browning, the United States' premier gun designer, is credited with the development of both the Model 1900 and the Model 1911 handguns for Colt.

There is some speculation as to who actually developed the .45 ACP cartridge. John Browning, Colt and Winchester (depending on the author) have been credited with developing this cartridge. One of the most common beliefs is that in mid-1904 John Browning and Colt worked on the development of a suitable pistol and cartridge combination to submit to the U.S. Ordnance Department. By mid-1905, the original cartridge load was designed with a 200 grain bullet at about 900 fps under John Browning's supervision at Winchester's ammunition plant.

It was not until January 1907 that the new pistol and cartridge were tested by the U.S. Ordnance Department. Still painfully aware of the failure of the .38 Long Colt, the U.S. Ordnance Department rejected the cartridge wanting a heavier bullet. Modifications were made to the cartridge. It was loaded with a 230 grain round nose jacketed bullet which produced about 850 fps velocity. In 1911, the modified .45 ACP was adopted by the U.S. Army as its standard issue handgun cartridge. At the same time, the U.S. Army also adopted the Colt's Government Model



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