

# ***UNLIMITED AMMO***

## ***HOW TO MAKE AND USE RELOADED BULLETS***



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## How to Make and Use Reloaded Bullets

### WELCOME

Today, more and more shooters are taking an interest in reloading. Based on the ancient tradition of making your own ammunition, reloading is back in style, thanks to gun rights debates and rising ammunition costs.

Yet saving money is just one part of the total package. Reloaders are also more self-reliant, more in-tune with their weapons, and less vulnerable to interruptions in the availability of store-bought ammunition.



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In this guide, you will learn the basics of reloading from start to finish and get the foundational knowledge you need to start reloading on your own.

The guide begins with an explanation of reloading for beginners and a look at the pros and cons. Next, it covers the basic principles of reloading, including what kind of guns and ammunition are best. A whole section is devoted to step-by-step reloading instructions. Finally, you'll get a line item breakdown of reloading costs to help you make the ultimate choice of whether or not reloading is right for you.

By the end of this report, you will be able to talk about reloading with an intelligent understanding of what it is and how it helps you as a gun owner. You'll have everything you need to get started and all the tools to figure out the total cost to the penny. In short, you'll be one step ahead of other gun owners and ready—if needed—to keep yourself in bullets no matter what.



There are many benefits to reloading your own ammo, including some that you may not expect. However, reloading is not for everyone. In the next few paragraphs, you'll learn how to look at both the upsides and the downsides of reloading.

## **BENEFITS OF RELOADING**

Reloading has financial, defense, and peace of mind benefits. They include:

- ✓ The ability to stockpile ammunition
- ✓ Cost breaks on ammo, especially for avid shooters
- ✓ Customization options for greater shooting accuracy
- ✓ Freedom from government and manufacturer's limits on ammunition buyer and shooting
- ✓ Peace of mind knowing you can keep yourself in bullets even if store shelves are bare
- ✓ Stress relief, as ammo making requires a focus that can take your mind off your daily life and turn reloading into a very relaxing project
- ✓ Personal satisfaction in your work creating high-quality homemade ammo

## **INTRODUCTION**

### **WHAT IS RELOADING?**

Reloading is a bit like recycling. Using the empty cases of fired rounds, you refill your bullets to either the manufacturer's specifications or your own special design for your gun. You start at the beginning and create a fresh bullet complete with new powder, primers, and bullets or shot.

Though the tools are simple enough, proper reloading practices take time and patience. You must give it 100% of your attention, follow the instructions carefully, and check your work thoroughly to ensure safe reloading of the various types of ammunition.

### **PROS AND CONS OF RELOADING**

On top of this, as you learn more about the reloading process, you will find that you also learn about aspects of weaponry that you may not have otherwise considered. You will learn about head spacing, overall cartridge lengths, bullet and powder weights, measuring in grains, and the many different primer options.

Your accuracy and efficiency as a shooter can also improve. In learning to reload their weapons and all the information that goes along with it, many people have found they develop closer relationships with their guns that let them become much better shooters.

In short, making the decision to reload provides you with more ammo to shoot. You save money by not paying the rising costs of factory ammunition and have a productive hobby to relieve stress. Reloading frees you from the confines of government rules and monitoring. Best of all, reloading your own ammunition provides you with an invaluable learning experience and gives you a great excuse to hit the range and try out your loads.

However, reloading is not entirely a bed of roses. While there are many, many advantages to reloading, there are a few disadvantages as well.

## **DRAWBACKS TO RELOADING**

The biggest drawbacks for reloading include equipment costs, time constraints, and personal safety risks. They include:

- ✓ High start up costs (\$400 - \$1000+) depending on your gun and tool choices
- ✓ Time constraints, since reloading requires hands-on work and focus to create quality bullets
- ✓ Safety concerns, since you are dealing with potentially explosive materials and must follow reloading guidelines precisely to stay out of the hospital
- ✓ Gun wear and tear, as poorly crafted reloads can damage your weapon

In addition, keep in mind that you should not use reloads as carry rounds. This is because the seals are not as water-tight as original factory rounds and may not work as well at keeping out moisture, which will impact the performance of the powder.

While these are the general points to consider, the pros and cons of reloading your own ammo can vary as much as the guns you own and the calibers you shoot. It is important to take the time to do as much research as possible and learn as much as you can about it, even before investing in your first piece of reloading equipment.

Figure your costs, value your time, and understand the risks before you begin.

## **WHY DO YOU WANT TO RELOAD?**

Reloading offers benefits to both serious shooters and those who enjoy the craftsmanship of making their own bullets. It is something that is easy to do, even though it has many steps that must be done carefully. Yet the reasons people get started reloading can vary dramatically.

Avid shooters often reload to cut their costs. If you shoot often, for sport, hunting, or just to stay in practice, your ammunition costs add up. Reloading can help you get more from every bullet you buy and lower the price of gun ownership.

Serious sharpshooters start reloading to build their accuracy and get more control over their weapon. Knowing exactly how many grains of powder are in the shells, tweaking the weights, and polishing the casings can all impact efficiency and accuracy. Reloading adds a whole other layer of variables to consider, helping achieve

more on the range or in the field.

Anyone interested in self-defense and long-term security may start reloading as a way to avoid shortages and bullet backorders. Whenever political changes cause gun sales to spike, ammo runs low, runs out, or shoots up in price. If you have the equipment to reload at home, you're insulated from these scares, price fluctuations, and threats of being out of bullets in a crisis.

If you own an antique or specialty weapon, reloading can be the only way to keep yourself in ammunition. Hard-to-find calibers and powder blends may be easily made at home, helping you extend the life of your weapon and protect your investment in a specialized gun.

Finally, in the event of a true crisis, there is no doubt that reloading is a valuable safety skill. You can make bullets in exchange for food, goods, or services in a crisis, as well as ensure that your own guns are loaded for self-defense at all times.

## Chapter 1:

# RELOADING BASICS

Reloading ammo is a simple practice. Once you understand the tools and supplies you need, the order of steps and how to go about the entire process safely, you are on your way to a practically unlimited supply of quality ammo.

### **WHAT KIND OF BULLETS CAN BE RELOADED?**

All center fire ammunition can be reloaded, including brass, steel and aluminum. It is just a matter of skill and equipment. However, just because it is possible to reload all kinds of bullets doesn't you should.

Aluminum, for example, is the softest metal used in ammunition. In fact, it is generally too soft to be used safely as a reload unless you are both truly meticulous and desperate for the bullet.

Steel is harder than aluminum, but it still presents challenges for reloading. The material is hard to reload without cracking the metal and compromising the safety of the shot.

Steel rusts quickly, meaning it has to be dried immediately after shooting to be reloaded. It gets dirty easier than brass and can also stick in the chamber, damaging your gun and potentially endangering you. On the other hand, steel is less expensive than brass.

Of the three metals, brass cases are preferred by reloaders. Brass cases are more elastic, which helps them go through multiple reloadings just fine. This enhanced durability plus the wide availability of brass makes it the safest and most popular metals to reload.

One note for all types—pay attention to the primers. Berdan-primed bullets are less expensive than boxer-primed bullets, but they are more difficult to reload. Thus, you'll want to consider both the sticker price in reloading and the price of your time dealing with more time-intensive reloading procedures.

## **CAN YOU RELOAD A CARTRIDGE MORE THAN ONCE?**

The short answer is yes. However, the number of times you can reload each cartridge varies depending on a few different factors.

Reloading depends on the integrity of the bullet or shot casing. Each time it is shot, the lifespan of a bullet drops. When the metal is worn enough, it cracks and separates. You want to stop using the case long before a critical breakdown like that.

In most cases, a rifle case should be discarded after five to seven uses. Many shooters simply toss their cases after the fifth reload without even taking the time to inspect it because five is generally the limit for necked rifle cases. It is very difficult to inspect the bottom of these

long cases for head separation that may not be noticeable from the outside and it is just not worth the risk.

Pistol cases, on the other hand, are much easier to inspect and can be used until you see a case mouth split. Therefore, a pistol case can be reloaded anywhere between seven to 15 times.

The number of times you can reload a cartridge ultimately depends on the case and the load that you use. Annealing and thinning of the case are two major factors in the life of the case. Usually, cases are fire-annealed and hardened in specific areas in order to make them flexible or stiff in the right ways.

Firing and working the cases repeatedly will eventually lead to poor performance when it comes to seating, resizing and fitting into the chamber properly. This is the reason it is never a good idea to dry cases in the oven after you wash them.

When you fire and resize a case, it stretches and becomes thinner. The cases have to then be gauged and trimmed. This extra metal has to come from somewhere, usually creating a weak point near the base of the cartridge. Upon close inspection, you will be able to tell when a case is likely to fail and should not be reloaded. The area close to the base will appear stretched, similar to a plastic bag.



When you reload ammunition, it is a good idea to do it in lots, keeping track of the number of times you have reloaded each lot. In addition, you should inspect the cases every time to check for any damage. You might also want to record the case length before and after you resize it.

Once you have trimmed your cases two to three times, you should not reload it anymore. If you have a band saw, you can split a few cases down the middle to see the thickness of the walls and educate yourself further about what happens each time you reload a round.

### **WHICH GUNS WORK BEST WITH RELOADED BULLETS AND WHICH ARE MORE LIKELY TO FAIL?**

If you are working within the recommended pressures for your gun (check the manual) then reloaded bullets should work just as well as new bullets. Exceeding recommended pressures will wear the gun out faster and may cause varying degrees of damage, especially if the gun is not designed to handle it.

One caveat to that is the use of unjacketed bullets. You should not shoot unjacketed bullets in guns that have polygonal rifled barrels, such as Glocks. They can lead up quickly, boosting the pressure in the gun and shortening the lifespan of the weapon.

High velocity bullets must be either partially or fully jacketed. An unjacketed bullet fired at a high velocity could become deformed and leave behind a detrimental amount of lead in the rifling grooves of the firearm. Lead deposits can lead to poor accuracy and may damage the feeding mechanism.

Guns that feature a gas-operated mechanism, such as the Desert Eagle, should not be loaded with unjacketed lead bullets. The lead particles sheared off when the bullets are fired could clog the gas release tap, which can malfunction.

### **WHAT TO DO IF YOUR RELOAD JAMS OR FAILS**

Jams and failures happen, even to careful reloaders. It can be a temporary, relatively safe situation like a casing that does not eject or something more dangerous that can damage your gun and potentially injure you. This section will look at some of the most common issues and fixes.

Cartridge malfunction, which is the failure of the powder or primer to function properly, can be caused by a number of different things.

- ✓ If the walls of the casing are fatigued or thin, the case will separate in two pieces close to the head. This is referred to as

case head separation and it commonly occurs with brass that has been reloaded too many times.

- ✓ If you pull the trigger and nothing happens, the powder or primer may have malfunctioned. Failure to discharge, or a dud, can be very dangerous and must be deactivated and properly disposed of immediately. (You can also recock the hammer and fire again, but it is usually best to remove and discard the round.)
- ✓ If there is an unexpected delay between the pulling of the trigger and the ignition of the propellant, known as hang fire, keep the weapon pointed in a safe direction for at least thirty seconds to a full minute. Then, remove the round and discard it.
- ✓ An incomplete discharge, or squib round, occurs with the shot does not have enough force and gets stuck in the barrel of the gun. When this occurs, don't fire again. Drop the mag and check for a bullet in the barrel. If you do have a bullet in the barrel, you can try to tap it out, but it would be best just to pay to take it to the gunsmith. Do not continue to use any reloads from that lot.

Other problems that you may encounter include:

- ✓ Failure to feed, eject or extract a cartridge
- ✓ Failure to fully cycle after the weapon has been fired
- ✓ Failure of a gas-operated or recoil-operated gun to lock back when the clip is emptied
- ✓ Overloaded rounds
- ✓ Blocked barrel

In these case, always keep your gun pointed in a safe direction. Put on the safety before investigating.

If the empty cartridge fails to eject and becomes vertically jammed in the ejection port, known as a smokestack, simply pull the slide back and allow the empty shell to fall out of the gun. If it is a feeding jam and two live bullets attempt to occupy the same space, drop the mag, pull back the slide and let the bullets fall out of the gun.

In the event of an expanded shell casting, unload the gun and insert a wooden dowel until it hits the stuck shell. Then, gently tap the shell out with a rubber mallet. In some cases, you may have to take the firearm apart in order to clear a jam.

## **WHAT ARE THE POTENTIAL COST SAVINGS?**

In addition to self-reliance and increased

accuracy, one of the main reasons to reload is money. The amount of money you save will vary according to the bullets that you use and the caliber that you shoot.

In general, fifty to sixty percent of the cost of a round is the brass case. Therefore, the way to save the most money possible is by reloading your spent casings. Brass casings and shotgun shells can be reused time and time again until they begin to show signs of deteriorating.

It is possible to save a considerable amount of money by purchasing your reloading supplies in bulk, such as primers, bullets, wads, pellets and powder. Primers are usually found in 1000-count packs. Bullets are generally available in packs of 250, 500 or 1000. Smokeless powders are available in most places in 1 to 15 pound containers.

However, you should also factor in your time and the situation. If stores are open and prices are normal, you can get a box of 50 Blazer 9mm ammo for about \$12 to \$13. That works out to around \$0.24 to \$0.26 per round. You would be hard pressed to load your own for less, especially costing the time cost. However, in emergency conditions, the ammo is much more valuable and your time is well spent on reloading.

The average reloader will pay anywhere

from \$700 to \$1000 to get started. Brass, primers, bullets and powder cost less if you buy in bulk, which will get you to the point of return on your investment sooner.

To figure your own costs, see the Appendix of this guide. A line by line chart is there to help you figure your cost per round based on all the elements you'll need to reload. This will help you make a smart choice for both your wallet and your peace of mind.

## **WHERE CAN YOU USE RELOADED BULLETS?**

You can use your reloaded ammunition practically anywhere you want these days. Even some public ranges now allow you to use reloaded rounds. However, some places are not able to get liability insurance unless they prohibit the use of reloaded ammunition, so be sure to ask ahead.

There is no problem shooting reloaded ammunition on your private gun ranges or when hunting. Anywhere the discharge of weapons is allowed, such as outside city limits, the use of reloaded ammunition is permitted.

Many people refrain from using reloaded ammo in their carry weapon. The seal on reloads is not as tight as a factory seal and may not prevent moisture in the powder.

## Chapter 2:

# RELOADING STEP-BY-STEP

Once you make the decision to reload, you need the right tools and techniques. This section will walk you through the basics and give you a few tips and tricks you can use along the way.

### EQUIPMENT NEEDED

The first item on your list needs to be a reloading press, which is the backbone of your reloading setup. Many different styles of presses are available, but there are two main categories: single stage and progressive.

A single stage press performs one operation with the pull of the handle. There are a few advantages to using a single stage press, such as:

- ✓ The capability to reload practically every cartridge available depending on press size
- ✓ Affordability, at only \$100 - \$150
- ✓ Availability of specialized attachments for performing additional tasks
- ✓ Ease of use
- ✓ Low maintenance requirements

The main downside to using a single stage reloading press is speed. With this type of press, the best you can hope for is about fifty rounds of ammo loaded per hour.

Progressive presses will give you better speed and allow you to load up to 150 rounds per hour. These presses are faster because they perform multiple operations on different cases each time you pull the handle, often producing a newly loaded cartridge with each pull. However, progressive presses are more expensive, require more maintenance, and take longer to learn to use than a single stage press.

Most beginners start with a single stage press. This gives you a shorter learning curve, lower start-up cost, and lets you see if reloading really works for you before you upgrade.

The next thing you need are die sets, which usually cost \$30 and up. Dies fit in the press and do the work on the cases. Die sets are specific to the ammo cartridge, but some sets will do two or more similar cartridges. For example, a .38 special die set can also be used to load .357 rounds.

A die set will usually consist of two dies for bottleneck cartridges and three for straight walled cartridges. In a set of two dies, the first removes the primer, resizes the case and expands the throat, while the second seats

the new bullet and crimps it in place. You will need to use lube during resizing to keep it from seizing the die.

In sets of three dies, the first resizes the case and removes the primer. The second die expands the case in preparation for the new bullet and the third die seats the bullet and crimps it into place.

Most dies will work in any press, but some presses are brand specific. Die sets are usually available in steel, carbide or titanium nitride. Titanium nitride and carbide dies do not require lube like the steel sets do, but they cost a little more.

The third item you need for your reloading setup is the shell plate or shell holder, which goes in the press to hold cartridges in place. For a single stage press, you can get a universal shell holder. However, progressive presses usually require brand specific shell plates. Shell plates cost more than shell holders, which only cost about \$7 or \$8 each. These items are cartridge specific, but they will typically work with multiple cartridges.

You also need a device to measure and dispense the powder. On the low end, you can go with a set of calibrated scoops. A progressive press usually comes with a hopper powder measure that you can adjust to accommodate the charge weight. Powder

measure attachments are also available to fit some single stage presses. A powder measure costs from \$25 to \$120.

Finally, you need reloading data. These are your reloading recipes that tell you how much of each ingredient you need per load. Reloading manuals are available from the various bullet manufacturers, but the best source is from the powder manufacturers' websites or in-store pamphlets.

As you reload, you will find a few other pieces of equipment that are nice to have, especially as you do more reloading, such as:

- ✓ Scale
- ✓ Dial caliper
- ✓ Case trimmer
- ✓ Case tumbler/vibrator
- ✓ Chronograph
- ✓ Primer flip tray
- ✓ Loading blocks
- ✓ Bullet puller

Specialty tools are also available. These tools perform a job that some of the already listed tools do, just more accurately. You may not need any of these tools, but they do come in

handy, such as:

- ✓ Specialty dies, including a universal decapper die, lube die, factory crimp die and small base dies
- ✓ Hand priming tool
- ✓ Powder trickler
- ✓ Digital scale/powder dispensing combo
- ✓ Primer pocket cleaning tool

The ideal setup would include a combination of the basic required equipment along with a few choice items from the other lists as well. If you stay with the hobby, you will build a nice reloading setup over time.

The equipment you purchase depends greatly on your budget. Some manufacturers offer starter kits that contain most of the required items. Most kits feature a single stage press, but progressive press kits are available. However, most kits do not include a shell holder or dies.

## **THE RELOADING PROCESS**

Reloading ammunition is a meticulous process. Decide how much ammo you want to reload and complete each step for an entire batch of loads.

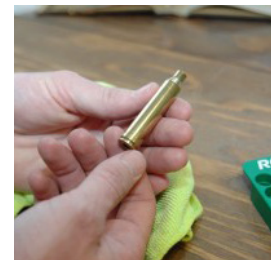
1. Check the cases for any defects and throw away any that have excessive bulges, dents or cracks. You also want get rid of any that have deformed primers, which is an indication of excessive pressure when fired. Use a soft cloth to rub the inside of the case to remove any dirt or powder residue. You can reach into the case using a neck brush.



2. Lubricate the case so it does not become stuck in the sizing die. Use a light coat of case lube and a lube pad. Roll several cases on the pad at the same time and reapply lube to the pad as needed. Use the neck brush to add a light coat of lube to the inside of the case neck.



3. Next, you need to resize the case and remove the spent primer. Put the case in the shell holder with the handle in the up position. Lower the handle to resize the case, removing the fired primer at the same time. Remove the case and repeat this step with all other cases in the batch.



4. Measure each of the cases with a case gauge or caliper. If necessary, use a trimmer to trim the length. Check the length of the case again after trimming.



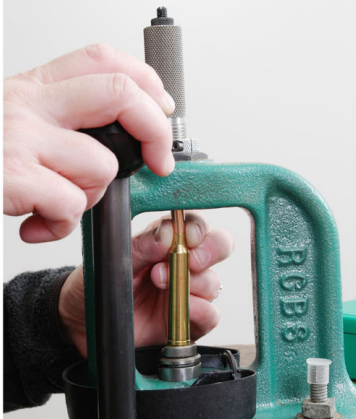
5. Now, it is time to insert a new primer. Raise the handle of the press to the highest position. Put the primer in the cup of the primer arm and insert a case into the shell holder. Push the primer arm into the ram slot and lower the case onto the primer. Remove the case and make sure the primer is flush or slightly lower than the base.



6. Next, add powder to the case. Use the type and amount of powder recommended in your reloading data. Weigh out the powder with a powder measure or calibrated dipper. Use a powder funnel to add the powder to the case. Return any unused powder to the container or discard because any powder left in your equipment can cause damage.



7. Seat the bullet with the seating die, which will push the bullet to the correct length in the case neck. You can crimp the case at the same time to keep the bullet in place. Use manufacturer's instructions on seating the bullet with or without crimping.



8. Reloaded ammo can be stored in cartridge boxes and kept in a cool, dry place. Clean your dies and apply a light coating of gun oil, and lubricate any moving parts of your press.



## TIPS AND TRICKS OF RELOADING

As you do more reloading, you are going to learn a few tips and tricks. Here are a few to get you started:

### CLEANING AND PREP

- ✓ Cleaning your ammo properly will

reduce potential errors as well as wear and tear on your firearms

- ✓ Add a few strips of used dryer sheet to your tumbler to cut down on dust
- ✓ Lizard bedding is the same as walnut media and is available much cheaper from your local pet store
- ✓ Add a little Nu Finish® car polish for extra shiny brass
- ✓ Trimming straight walled pistol brass is a waste of time

### CASTING

- ✓ Preheat ingots with a hot plate to prevent clogging in your bottom pour lead pot
- ✓ Apply a torch flame to the spout of your bottom pour lead pot to clear clogs
- ✓ Drop wheel weight allow bullets into water directly from the mold to make them harder
- ✓ Increase production by using two molds at a time, which is less likely to overheat
- ✓ Use a damp towel to cool sprue and prevent lead smearing on the mold and sprue plate
- ✓ To clean lead out of lube grooves and molds, heat and push out with a sharp graphite pencil



## CHRONOGRAPHS

- ✓ Replace steel rods with wooden dowels
- ✓ Using some type of homemade shield is wise

## LUBE

- ✓ Freeze lube to release from a PVC mold
- ✓ Use 2" plastic electrical conduit to produce lube sticks

## PRESS

- ✓ Set up a small lamp over your bullet seating station, which will allow you to inspect powder charges prior to seating the bullet
- ✓ If you stand while reloading, position pivot on press handle between 37" and 40.5" from floor; position it at 49" from floor if sitting on a stool

## BULLET PULLING

- ✓ Use a shell holder in place of a collet for easier handling with inertial bullet pullers
- ✓ Seat bullets deeper to break seal and make pulling easier with inertial puller

## SAFELY TESTING YOUR RELOADED BULLETS

When it comes to reloading ammunition, one of the main concerns should be personal

safety. In addition to practicing caution while handling primers and powders, avoiding distractions during the process and being careful not to overcharge cartridges, you must also practice extreme caution when testing the rounds that you load.

Before testing any ammo, be sure you are wearing proper eye and ear protection. Also, before shooting, do a final quality control inspection on each of the rounds. Look at each one to make sure there are no obvious defects, such as bullets seated too deep, cracked casings, improper primers, etc.

Set up a solid shooting platform, such as an anchored shooting bench. This is especially important if you are testing rifle rounds. In that case, you want to use a good rifle rest or rifle bags.

If you are testing for accuracy, you will need an accurate targeting system. You can do this by using a level with you set up your target.

Start slow and then gradually pick up the pace to maintain proficiency. Use a chronograph to help you find the ideal combination of bullet and charge.

Take your time while reloading, be cautious while loading your mags, and then work your magic when you get to the firing point. However, do not rush the first two steps, so you will continue to be happy with the results you obtain at the last one.

# CONCLUSION

In the last few pages, you've gotten the inside scoop on homemade bullets. While there's a lot that goes into the process, it's not anything you can't learn if you put your mind to it.

You may have decided to reload your own ammunition for any number of different reasons. For some, it's all about having an unlimited supply of bullets on hand, so you can shoot as often as you like. For others, it's the desire to have complete accuracy.

Other reloaders just want to save money, even if it's just a few cents per round. The craftsmanship of the process pulls in other shooters, who enjoy passing the time caring for every element of their weapon, right down to the shot.

Regardless of the reason you choose to reload, it is important to understand the process and all the equipment involved. Reloading is a precise process and it is best to do lots of research to ensure you know as much as possible before you invest in your first reloading press.

Once you've started, you'll quickly find that reloading can be addictive. Hone your skills, stay safe, and spread the word about the benefits of reloading.



# AMMUNITION COST CALCULATOR

DOUBLE-CLICK ON THE TABLE TO CALCULATE COST OF AMMUNITION:

ENTER YOUR VALUES IN THE LIGHT-GREEN CELLS

Number of Rounds You Plan to Reload	
Total Number of Bullets Purchased	
Total Cost of Bullets Purchased	
Individual Bullet Weight (grains)	
Total Pounds of Powder Purchased	
Total Cost of Powder Purchased	
Powder Weight for Each Round (grains)	
Total Cost of Cases Purchased	
Total Number of Cases Purchased	
Number of Times Cases Will be Loaded	
Total Cost of Primers Purchased	
Total Number of Primers Purchased	

EXAMPLE

1,000  
1,000  
\$39.47  
124  
2.000  
\$33.70  
12.6  
\$95.00  
1,000  
10  
\$16.37  
1,000

## COSTS

Weight of Purchased Bullets:		lbs.
Weight of Purchased Powder:		lbs.
Weight of Other Items:		lbs.

Total Weight:  lbs.

Shipping Costs:	
Tax Paid:	

Pounds of Powder Needed for Batch =

Batch Cost of Bullets =  
Batch Cost of Powder =  
Batch Cost of Cases =  
Batch Cost of Primers =

Per Round Cost for Bullets =  
Per Round Cost for Powder =  
Per Round Cost for Cases =  
Per Round Cost for Primers =

## COLOR KEY

Bullets	Brass	Powder	Primers
---------	-------	--------	---------

Batch Cost =
Batch Cost per Round =
Batch Cost per 20 Rounds =
Batch Cost per 50 Rounds =
Batch Cost per 100 Rounds =

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## RELOADING SUPPLY VENDORS

### RELOADING EQUIPMENT MANUFACTURERS:

[Dillon](#)

[Lee](#)

[Lyman](#)

[Hornady](#)

[RCBS](#)

### RELOADING SUPPLIES:

[Midway USA](#)

[Graf & Sons](#)

[Wideners](#)

[Cheaper Than Dirt](#)

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**Survival Life, LLC**

**4330 Gaines Ranch Loop, Suite 120**

**Austin, TX 78735**

**Website: <http://www.SurvivalLife.com>**

**E-Mail: [support@survivalife.com](mailto:support@survivalife.com)**