GUN TESTS®

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22-250 BOLT ACTIONS

Can a good varmint rifle also serve as a low-recoil bigger-game rifle? We test a Howa Model 1500 Youth, a Bergara B-14 Hunter short rifle, and a Browning X-Bolt Micro Midas to find out.

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BIG-BORE REVOLVERS

We ran a Taurus 44 Magnum against a 460 S&W Magnum and a 500 S&W Magnum from Smith & Wesson side by side at the range, and our shooters said they would go afield with one gun over the others. ● Page 14

2019 GUNS OF THE YEAR

We look through 12 months of handgun, rifle, shotgun, accessory, and ammunition evaluations and pick our favorites. ● Page 23



Taurus
Model 66
2-660041
38 Special/
357 Magnum

BEST IN CLASS REVOLVER '19



Springfield
Armory XD-S
3.3-inch
XDS93340BE
40 S&W

BEST IN CLASS PISTOL '19



Savage Arms 110 Storm 14361
7mm Remington Magnum

BEST IN CLASS RIFLE '19



Mossberg 590 Shockwave
Model 50657 20 Gauge

BEST IN CLASS SHOTSHELL GUN '19

DOWNRANGE: 2 ● FIRING LINE: 3 ● CUSTOMER SERVICE: 31 ● COMING UP: 32

DOWNRANGE

THANKS, BUT NO THANKS



Todd Woodard

Folks who live outside Texas often think that my home state is so pro-gun that nothing resembling gun-control legislation has a chance of passing. I wish that were true. In Houston, where the GUN TESTS editorial offices are located, Precinct Two Commissioner Adrian Garcia has requested that the Harris County Commission discuss and consider a resolution supporting so-called "universal background checks" (UBCs) on all firearm sales.

This hits pretty close to home, and I've even had some GUN TESTS readers in gun-restrictive states asking why I oppose "universal background checks" because it sounds so "reasonable."

It is not reasonable, in my view, to be forced to pay fees as high as $50 to $100 per transaction, complete extensive federal paperwork, and obtain government approval before selling or loaning my personally-owned firearms to immediate or extended family members, longtime friends, neighbors and co-workers, or fellow hunters, competitive shooters, and gun club members.

In their worst form, these laws mandate background checks on every transfer, sale, purchase, trade, gift, rental, and loan of a firearm between any and all individuals. All such transactions would need to be conducted through a federally licensed firearms dealer (FFL) because private individuals cannot access the national instant criminal background check system (NICS). All of our GUN TESTS firearms come into our various lead testers' hands with proper paperwork, but if "universal background checks" were instituted, we couldn't transfer firearms between testers or writers and photographers without FFL intervention for every transfer.

That's egregious enough, but the double standard of charging law-abiding people for the privilege of sharing guns between friends and relatives and not enforcing existing laws regarding transfers is particularly galling. According to a September 2018 report by the U.S. Government Accountability Office, 112,090 people were turned down for a gun purchase in FY 2017, and there were only 12 prosecutions by U.S. Attorneys Offices as of June 2018. When existing background check laws are not being enforced, why are there calls for expanding those laws to cover private firearms transactions?

This local effort to install UBCs would put the most populous county in Texas on record as supporting a California-style ban on all private firearm sales, so I will vigorously oppose it. This type of law unduly burdens law-abiding citizens and would be ignored by criminals, so, thanks, but no thanks. **GT**

GUN TESTS CREDO

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More on the Bond Arms Bullpup

And, Reader Russell takes issue with some of our legal self-defense advice regarding gun modifications. Because he's now in the Age of Arthritis, Reader Taylor wishes for the return of tip-up 380s.



Re "Slim-Line 9mm Contest: Ruger, Beretta, and Bond Arms," October 2019

Dear Editor: As an owner and frequent carrier of one of the first Bond Arms Bullpups, I enjoyed your thorough review of this interesting firearm. I started my law-enforcement career with revolvers, and the DAO trigger pull of the Bullpup reminds me of a really great DA revolver trigger. However, your testers gave it a one-half grade demerit because the slide does not lock back after the last round. As your description of the Bullpup operating system makes clear, the loading cycle begins with the slide closed when the device (called the "tongs") grasps the rim of the top cartridge in the magazine. As the slide moves to the rear, whether by firing or manual operation, it extracts the round "backward" from the magazine and raises it to align with the chamber as the slide moves forward into battery. If the slide locked back, two slide movements would be required: first, the slide would have to be closed to start the reloading process, then the slide would have to be racked a second time to extract a round from the magazine and load. Overall, a great review of a unique gun that packs many outstanding features into a tiny size — and it's made in Texas!

Full Disclosure: I am a lawyer, and represent Bond Arms from time to time. I bought my Bullpup with my own money, have no financial interest in the company, and will not be paid for this letter.

— John Popham

Re "10 Things Gun Owners Get Wrong About Their Self-Defense Rights," November 2017

In the "10 Things Gun Owners Get Wrong About Their Self-Defense Rights" e-article, I must contest the author's contention about lightened trigger pulls in point #8 concerning gun modifications, particularly the mention of a 3-pound trigger pull, which is far too light for conscientious self-defense. While it is true that a lighter trigger pull may make a gun more controllable, and thus the shooter better able to hit their intended target, no less an authority than Mas Ayoob says this is not so. Mr. Ayoob recommends a trigger no lighter than the factory standard lest a lay person be confronted with a prosecutor or lawyer portraying the shooter as someone who knows more than the manufacturer, hence putting the shooter on the defensive.

But the liabilities of a lightened trigger extend much further. Light trigger pulls have long been associated with unintended or premature discharges. The adrenaline dump is a stressful situation that not only increases one's strength tremendously, but also significantly diminishes one's fine muscle control. In combination, these factors argue

GUN TESTS REPORT CARD GRADING

Gun Tests Grade: A

A gun with this rating functions perfectly, shoots accurately, and exhibits comfortable, easy use for its owner. We may prefer one gun over others based on its unusual accuracy, superior performance, unusual features, or nice cosmetics. We recognize such a gun for these traits without regard to its cost.

Gun Tests Grade: B

We give this ranking to a gun that functions appropriately for its category, but which might not do as well in major areas as an **A**-ranked gun.

Gun Tests Grade: C

We may have reservations about some aspect of a gun's performance or pricing. We express those reservations so the reader can balance our concerns with his or her needs.

Gun Tests Grade: D

Some aspect of a gun's performance — in particular, safety, function, or accuracy — doesn't meet our standards and isn't easily resolved.

Gun Tests Grade: F

Some aspect of a gun's performance is dangerous, inappropriate for the category, or is likely to fail.

strongly against a light trigger. Both prosecutors in criminal cases and plaintiffs' counsel in civil cases know that there's no such thing as a "justifiable accident." Negligence can sustain a manslaughter charge in criminal court, and a wrongful death verdict in civil court. Thus, even in a proper self-defense shooting, the shooter can be held liable. Please bring this matter before your readers; their freedom may be at stake. **— Russell**

The original article appeared in the November 2017 issue and was written by former self-defense lawyer Michele Byington, pictured below. It appeared more recently as an e-blast on September 3, 2019. One of the "10 Things Gun Owners Get Wrong About Their Self-Defense Rights" was "8. Gun Modifications and Choice of Ammo May Cause More Legal Liability." The full segment read: "A lighter trigger pull, night sights, or a tactical flashlight are all popular modifications. These modifications can make a gun more comfortable and more effective defensive tools. Loading a handgun with full-metal-jacket bullets as opposed to jacketed hollowpoints does not make someone blood thirsty. Gun owners should not lose sleep stressing about the 'increased' legal liability of a modified handgun or the type of ammo used. It is not outside the realm of reality to imagine a prosecutor stating, 'Your client is a killing machine waiting to happen with that 3-pound trigger pull!' In a self-defense scenario where an individual used a modified handgun to protect himself, as an attorney, I would not be bothered by that fact. There are several safeguards that may be utilized to attempt to keep that information from the jury during trial. The argument made to a judge prior to the jury being seated is that the modified handgun had absolutely nothing to do with why the defendant used deadly force. The focus must be on the circumstances surrounding why the defendant used deadly force — not the tool used. Whether it be a baseball bat, a knife, or a gun, the only question that must be answered is: Did the defendant act reasonably, thus justifiably, in using deadly force in self-defense? It's the use of deadly force that is on trial; not the gun. Even if it does come out to the jury that a person used a modified handgun, there may be gun owners on the jury who have made similar modifications to their own self-defense tools. Or, an expert may testify to the efficiency and other benefits of a modified handgun. At the end of the day, choose the weapon and ammo that is best for you and your hands."

— Todd Woodard



Re "Magnum Revolvers: 6-, 7-, and 8-Shooters from Taurus, S&W," October 2019

I'm a long-time subscriber, but this is the first time I remember feeling compelled to write. I bought two brand-new Smith & Wessons in 2018, a 629 and a 642, both from the website GrabAGun. Both were delivered with heavy trigger pulls. The 642 would have the cylinder fail to turn 20% of the time, and on the 629, the trigger would stick to the rear during live fire.

I am an armorer on several systems (admittedly not S&W, but



the skills transfer) and was able to get them squared away on my own. To S&W's credit, when I called them they immediately offered to send me shipping labels and take care of the problem. My gripe is that for what I paid, I felt that I shouldn't have to be an armorer to get the guns working when both had only four- and five-star reviews (I later found out why). Also of interest was the fact that I also dry-fired them around 300 cycles each to smooth them out and was promptly told by the tech at S&W that I should never dry fire their products. Surprised, I asked for some clarification and he doubled down and said I should never dry-fire any Smith & Wesson revolver.

On another disappointing note, I left two-star reviews on GrabAGun on those products, and the reviews were immediately taken down or never posted. I submitted them again and those also disappeared. I sent a message to GrabAGun asking why my reviews were never posted, and they did not respond. Clearly, they are only interested in top-tier reviews and will punt any dissenters.

I'm sad to see your Smith 27 was delivered with rust and a super-heavy trigger, and I'm starting to wonder about their quality control these days. I'm also sad to know that I cannot trust GrabAGun's reviews and have to rely on other sources. **— Kevin**

Thank you for including a 7-shot medium frame. Perhaps this is the best overall compromise of capacity, size, and usability in the panoply of 357/38 holster wheelguns — just enough more than a standard 6 shot, but not the wheel of cheese of an 8 shot.

— AR on Gun-Tests.com

Re "Downrange: The Good, the Bad, and the Ugly," April 2019

Could it even be possible, in a country this size, to find a pro-gun, pro-2nd-Amendment Democrat? Could we refine that, to one who is well educated, politically savvy, and determined to become our president? What an advantage he or she would have!

— Slow Walker
on Gun-Tests.com

Well, the current crop of Democrat presidential candidates don't qualify, but there are some D's out there who aren't reflexively anti-gun. A couple that come to mind are U.S. Senators Jon Tester (Montana) and Joe Manchin (West Virginia). I don't know what their goals are regarding even higher office. — tw

The "Universal Background Check" law is more about gun registration than it is background checks. We already have a state universal background check law here in Washington state, and all our pistol and semiauto-rifle transfers, including private sales info, is kept indefinitely at the Department of Licensing in Olympia. Couple this to the fact that we also have a Red Flag Law in place, pretty much makes the Second Amendment null and void.

— 2FINN
on Gun-Tests.com

Re "Firing Line, Lefties Sound Off On Holsters," November 2019

Being an ambidextrous shooter, it's good to hear that there's more availability of left-hand holsters, and I definitely like the Kydex.

— Original Tasmanian
on Gun-Tests.com

Whither a 380 ACP or 9mm Tip-up?

Todd: Those who grew up in the Age of Aquarius are now living in the Age of Arthritis. Tip-up pistols provide a solution for weaker arthritic hands, but are currently only available in 22, 25 and 32 calibers. The Beretta 86 in 380 provided at least a marginally effective defensive pistol. It has not been manufactured for years, and now often sells for more than $1,000 at auction. If some company



could make a tip-up in 380 ACP or 9mm, it would find a large market.

— Taylor, Hero's Arms,
South Hero, Vermont

The tip-up models from Beretta are indeed easy to operate. The 84 and 85 models are chambered for 380 ACP. The Model 86 is likewise chambered for the 380 ACP, but has a redesigned front end with a tip-up barrel that hinges at the muzzle to open the breech. This allows the shooter to load a cartridge directly into the chamber, and not have to operate the slide. I am happy to float the idea to the GUN TESTS *readership so they can pester Beretta to maybe reintroduce the 86 in 380 ACP or some other chambering. I'm thinking 22 Magnum might also be popular. — tw*

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We welcome mail from our readers. To send us comments or questions about previous articles in the magazine, email us at: **GunTestsEditor@icloud.com.** *If you'll include the month and year of the article you're writing about, it's a big help. Also, please include your name, address, and phone number. We won't publish your personal information other than your first name, but we may need to contact you about material in your letter.* **GT**

22-250 Bolt-Action Rifles from Browning, Howa, and Bergara

Can a good varmint rifle also serve as a low-recoil starter bigger-game rifle? We test a Howa Model 1500 Youth, a Bergara B-14 Hunter short rifle, and a Browning X-Bolt Micro Midas to find out.

In the March 2018 edition of GUN TESTS, we evaluated a Browning A-Bolt Micro Hunter in 7mm-08. We gave that rifle two grades: the first was an A- for adults and a C+ for youths. An A- is a good grade for a good firearm, but we also observed that it was "too much rifle and recoil for younger shooters." We wondered if we went to a smaller caliber in the same format rifle, could that reach an A grade range for a youth shooter? In fact, we wondered about doing that with a number of rifles chambered for the soft-shooting but very accurate 22-250 Remington.

Most parents, coaches, or instructors start young, small-statured, or recoil-sensitive shooters out with smaller chamberings. The vast majority of us probably started out with a 22 LR and progressed from there. Conventional wisdom commonly suggests that a 243 Winchester would make a good transition cartridge to bring the new shooter up to a round with enough energy to properly harvest a deer or similarly-sized animal, and it often does. However, in 10 years as a professional instructor, the writer and lead tester has frequently seen that the 243 produces too much noise and recoil for the inexperienced shooter, at least in the early part of his or her shooting career. What could be better than the 243 Win. for this application? We wondered if a good 22-250, with properly constructed bullets, could serve double duty as a varmint and deer rifle (in those states where the round is legal for deer). If so, such a rifle would make a well-received gift for the recoil-sensitive shooter who is interested in taking his or her first deer.

We also recognized that "inexperienced" does not necessarily mean youth or female. Inexperienced shooters come in all shapes and sizes, so our collection of rifles for the test needed to as well. So, in this evaluation, we tested the Howa Model 1500 short action youth model, $529; a Bergara B-14 Hunter short rifle, $825; and a Browning X-bolt Micro Midas, $880. The Browning X-Bolt Micros Midas has a short stock with additional spacers provided. The Howa can be purchased with a youth- or an adult-length stock (we got both), and the Bergara B-14 Hunter comes with a traditional full-length stock.

The Round

The 22-250 Remington is essentially a 250 Savage case necked down to 22 caliber, with the early design work going back to the 1930s. It was legitimized in 1965 when Remington adopted the cartridge as one of the standard loadings for the 700-series rifles. Almost every major rifle manufacturer currently lists models in this chambering. It is fast, easier on barrels and cases than cartridges like the 220 Swift, and accurate enough to be used in some benchrest circles.

One question we asked at the outset, were we asking a 22-250 rifle to do things for which it was not designed? Set up as a varmint rifle, it is most commonly used to take small, thin-skinned animals, a job that it does extremely well. Because the rifle was intended to shoot lightweight bullets, barrel rifling twist was established accordingly. The twist of the rifling in the barrel spins the bullet, making it gyroscopically stabilized – just like an old top. Twist is measured in how many inches of barrel the rifling takes to make



From top, our test rifles were a Bergara B-14 Hunter short rifle, a Browning X-bolt Micro Midas, and a Howa Model 1500 short action youth model. We thought all three were excellent rifles.





The Leupold VX Freedom 4-12x40 scope provided good, clear glass and a Tri-Moa reticle that has holdover marks that could come in very handy on longer shots. Our test loads included, left to right, the Black Hills Gold 36-grain Barnes Varmint Grenade hollow-point flat-base lead-free, the Black Hills Gold 50-grain Hornady V-Max, the Barnes Vor-TX 50-grain Triple Shock X flat-base, the Federal 55-grain Power-Shok soft point, and Winchester's 64-grain PowerPoint soft point.

one complete revolution. The smaller the numbers, the faster the twist. For example, old 223 Remington rifles were set up with 1-in-10-inch twists (denoted as 1 in 10 or 1:10). That did well with 55-grain bullets. But the heavier (actually, the longer) the bullet is, the faster the twist must be to stabilize that bullet. Most manufacturers now rifle their 223 barrels with at least a 1:9 inch twist and, frequently, with a 1:7 inch twist, allowing them to accurately shoot bullets to 77 grains and, sometimes, even heaver.

For our purposes, many, if not most, 22-250s have the same problem. Twists of 1 in 14 inch and 1 in 12 inch are common in current rifles, and they work extremely well with lightweight varmint bullets. Those same bullets are also generally unacceptable for deer-sized animals. For that, we need heavier bullets, specifically designed for that animal. That also means we need a faster twist to stabilize the bullets. And we want the rifles to still be able to shoot the varmint-weight bullets well. No problem, right? Both of these factors guided our rifle selection as well as the ammunition tested. The Howa, for example, has the traditional 1:12-inch twist, while both the Browning and the Bergara sport 1:9 twists. To see how the various twists handled a range of bullet weights, we tested Black Hills Gold ammunition loaded with 36-grain Varmint Grenade bullets as well as their offering with 50-grain Hornady V-Max bullets. Then we stepped up in weight for three more loads specifically designed to hunt deer-sized animals. Those were the Barnes Vor-TX 50-grain TSX, 55-grain Federal Power-Shok, and 64-grain Winchester PowerPoint.

Last, a good rule of thumb says that, for a projectile to be properly effective on a deer-sized animal, it must deliver at least 1000 foot-pounds of energy at the point of impact. Foot-pounds of energy is a factor of bullet weight and speed. Ballistic coefficient (how streamlined that projectile is) affects how far that bullet maintains its energy. We used the Applied Ballistics Mobile app to compute downrange energy, looking at the maximum distance each rifle can produce the proper energy with each cartridge. For the Browning Micro Midas shooting the Barnes 50-grain Vor-TX, the Federal 55-grain soft point, and the Winchester 64-grain soft point respectively, the effective maximum ranges would be 90, 130, and 125 yards. The yardages for the Howa Model 1500 Youth would be 100, 135, and 155 yards. The yardages would be 105, 135, and 150 with the Bergara B-14 Hunter.

Also, we wanted to compare the rifles at the butt. Our expectations on the foot-pounds of recoil energy of a mid-sized 243 versus a similar rifle in 22-250 were proven out in the shooting. According to a formula from an engineer, our Howa Youth Model 1500, shooting the 64-grain Winchester load, generated 4.282 foot-pounds of recoil energy. A Howa 1500 243 Win. with almost identical weight, shooting a 100-grain bullet, would generate 8.105 foot-pounds of recoil energy. That is still pretty light recoil from the 243, but it is almost double that of the 22-250.

How We Tested

All shooting was done at American Shooting Centers (amshootcenters.com), located in George Bush Park near the western edge of Houston, Texas. This range has rifle positions that allow the shooter to reach out as far as 600 yards, so our testers have a great place to play, learn, and test. Shooting was done in mid-summer in Houston. That means it was hot and humid, so breaks were scheduled accordingly to allow barrels to cool. We shot multiple three-shot groups with each type of ammo in each firearm. Group size, muzzle velocity, and standard deviation, as well as muzzle energy and recoil energy, were tabulated and are found in the article. Please note that three-shot groups are almost guaranteed to be smaller than five-shot groups and our results reflect that.

We went Leupold all the way for optics and mounts, using the company's Picatinny/slotted rails, 1-inch low rings, and the VX-Freedom 4-12x40 scope ($455). This is a second-focal-plane scope with a 1-inch-tube, clear, crisp glass, and a Tri-Moa reticle. This reticle provides 10 marks on the lower half of the vertical reticle, each subtending 1 minute of angle at 12 power.

BROWNING X-BOLT MICRO MIDAS 035346209 22-250 REMINGTON, $879

GUN TESTS GRADE: A (OUR PICK)

This is a trim rifle made for the small-statured or still-developing hunter.



Action	Bolt, matte blued steel
Overall Length	38.4 in.
Overall Height w/o Scope Mount	5.7 in.
Weight Unloaded	6.1 lbs.
Weight Loaded (64 grain, 5 rounds)	6.25 lbs.
Barrel	20 in. long, 1:9 twist; matte blue steel, free floated, sporter contour
Magazine Capacity	4
Magazine Type	Internal, with floorplate
Stock	Satin-finished black walnut, bedded, no grip cap, 18-lpi checkering, blued sling swivel studs
Stock Drop at Comb	0.7 in.
Stock Drop at Heel	0.5 in.
Stock Buttplate	Inflex recoil pad
Stock Length of Pull (no spacers)	12.5 in.
Receiver Scope-Base Pattern	8 screw X-Bolt
Sight Radius	NA
Trigger Pull Weight	4.75 lbs.
Safety	2 position, on tang
Warranty	None written
Telephone	(800) 333-3288
Website	Browning.com
Made In	Japan/USA



The Micro Midas comes with three additional ¼-inch spacers in case your shooter grows a bit more and needs more stock length of pull.



The button on the bolt handle allows the shooter to work the bolt while the trigger is locked.



Browning goes above and beyond with scope rings that attach with eight screws instead of the standard four. The glass will stay put.

The satin-finished black walnut is very pleasing to the traditional shooter's eye.





The Browning Micro Midas's out-turned bolt knob makes it very easy to grasp and work the action smoothly.

22-250 REMINGTON RANGE DATA

Black Hills Gold 36-grain Varmint Grenade	**Browning Micro Midas**	**Howa Model 1500 Youth**	**Bergara B-14 Hunter**
Average Velocity	3660 fps	3772 fps	3783 fps
Muzzle Energy	1071 ft.-lbs.	1138 ft.-lbs.	1144 ft.-lbs.
Average Group	0.92 in.	0.77 in.	1.01 in.
Black Hills Gold 50-grain V-Max Polymer Tip	**Browning Micro Midas**	**Howa Model 1500 Youth**	**Bergara B-14 Hunter**
Average Velocity	3465 fps	3527 fps	3520 fps
Muzzle Energy	1333 ft.-lbs.	1382 ft.-lbs.	1376 ft.-lbs.
Average Group	0.80 in.	1.00 in.	1.24 in.
Barnes VOR-TX 50-grain TSX-FB	**Browning Micro Midas**	**Howa Model 1500 Youth**	**Bergara B-14 Hunter**
Average Velocity	3481 fps	3515 fps	3526 fps
Muzzle Energy	1345 ft.-lbs.	1372 ft.-lbs.	1380 ft.-lbs.
Average Group	0.78 in.	0.87 in.	0.64 in.
Federal Power-Shok 55-grain Soft Point	**Browning Micro Midas**	**Howa Model 1500 Youth**	**Bergara B-14 Hunter**
Average Velocity	3465 fps	3520 fps	3528 fps
Muzzle Energy	1466 ft.-lbs.	1514 ft.-lbs.	1520 ft.-lbs.
Average Group	0.99 in.	2.44 in.	1.22 in.
Winchester Power Point 64-grain Pointed Soft Point	**Browning Micro Midas**	**Howa Model 1500 Youth**	**Bergara B-14 Hunter**
Average Velocity	3116 fps	3222 fps	3207 fps
Muzzle Energy	1380 ft.-lbs.	1475 ft.-lbs.	1462 ft.-lbs.
Average Group	0.47 in.	0.93 in.	1.32 in.

All groups were fired at 100 yards from a solid benchrest position. We used a Labradar chronograph to measure velocity. Ammo from LuckyGunner.com: Black Hills Gold 22-250 Rem. M223N15 36-grain Barnes Varmint Grenade hollow-point flat-base lead-free, ($33.50/20). Ammo from MidwayUSA.com: Black Hills Gold 22-250 Rem. 1C22250BHGN1 50-grain Hornady V-Max ($33.15/20). Ammo from BudsGunShop.com: Barnes VOR-TX 22-250 Rem. 22008 50-grain Triple Shock X flat-base lead-free ($27.34/20); Federal 22-250 Rem. 22250A 55-grain Power-Shok soft point ($17.66/20); and Winchester 22-250 Rem. X222502 64-grain Power-Point soft point ($19.14/20).

That should provide plenty of holdover points for a rifle intended for 150-yard-max hunting. The reticle also shows 10 marks to the left and right of the vertical bar, giving the shooter good reference holds for windage. Could any of these rifles do everything? Let's find out.

Browning X-Bolt Micro Midas 035346209 22-250 Remington, $879

Sometimes, when you opt for a smaller version of an existing platform, you are forced to sacrifice features to save weight or length. Not so with the Browning Micro Midas. This svelte little rifle comes loaded with all of the features found on the full-size X-Bolt, just in a smaller package, weighing only 6.1 pounds unscoped on our scales.

The slightly smaller blued action mounts a 20-inch blued-steel barrel with a 1-in-9-inch twist. In our sample, the barrel was free-floated, at least the thickness of a business card, the full length of the forend, stopping about a half inch in front of the receiver. Most actions have two screw holes for mounting scope bases both in front of and aft of the ejection port. The Micro Midas gives you four in each location. Bases should stay mounted solidly on this rifle. As a side note, our initial information said that on a standard short-action X-Bolt, one-piece bases would work on the Micro Midas, but that was not the case. The screw-hole pattern is the same for both actions, but the Micro Midas is not as long. We solved the problem by buying a two-piece set of bases, $32 (Leupold 65416).

The three-lug bolt has a short 60-degree throw, requiring less movement of the hand to operate and

keeping the bolt knob well clear of the scope. It comes with a plunger ejector and a pivoting extractor. The bolt knob has been flattened and angled slightly outboard at the front, allowing the bolt to be easily and quickly worked using the bolt technique our testers favor. The bolt release is a pivoting lever on the left side of the receiver, and the two-position safety is mounted on the tang. Pushing the safety forward unlocks the trigger and the bolt, making them ready for operation. Conversely, moving the safety to the rear locks both systems. There is a compression-type button on top of the bolt handle that, when pushed, allows the bolt to be retracted with the safety engaged. The rotary magazine is made of a composite material and holds four rounds. The magazine dropped freely when it was supposed to and, aided by a well-recessed release, stayed locked up when it was supposed to.

The gold-plated trigger is protected, is made of a matte-finished alloy, and is held in place with two hex-head action screws. The unscoped rifle balances right on the front action screw. The "Feather Trigger" is user adjustable by removing the bottom metal and adjusting a single screw. The stated factory goal is a 4-pound trigger. Ours was a bit heavier than that averaging 4.75 pounds with about 6 ounces of variance. The trigger is adjustable down to as low as 3 pounds. If this were our rifle, we would take it all the way down. That being said, there was virtually no take up required before sear release, almost no overtravel after release, and a very clean, predictable break on compression of the trigger.

The satin-finished Grade 1 black-walnut stock is very pleasing to our traditionalists' eyes. The forend is trim for easy carry, and there is a slight swell to the palm. Other than the bolt being right-handed, the stock does not favor a shooter using either hand — both should be able to use this rifle well. The stock sports 18 lines-per-inch cut checkering extending for about 75% of the length of the forend and covering most of the sides of the grip area. We think the well-executed checkering is sharp enough to grant a good

HOWA MODEL 1500 YOUTH HGR61203 22-250 REMINGTON, $529

GUN TESTS GRADE: A (BEST BUY)

With youth- and adult-length stocks available, this is a great rifle for young or mature hunters.



Action	Bolt, matte blued steel, two lugs
Overall Length (Youth stock)	41.1 in.
Overall Length (Adult stock)	42.4 in.
Barrel	22 in. long; 1:12 twist, matte-blued steel
Overall Height w/o Scope Mount	6.4 in.
Weight Unloaded	7.25 lbs.
Weight Loaded (64 grain, 5+1 rounds)	7.5 lbs.
Magazine Capacity	5
Magazine Type	Internal, with floorplate
Stock	Hogue OverMolded synthetic, sling swivel studs
Stock Drop at Heel	0.8 in.
Stock Buttplate	1-in.-thick rubber recoil pad
Stock Length of Pull	12.6 in. youth; 13.9 in. adult
Receiver Scope-Base Pattern	Howa
Sight Radius	NA
Trigger Pull Weight	3.3 lbs.
Safety	Two-position rocker switch, right side
Warranty	None written
Telephone	(800) 5-LEGACY
Website	LegacySports.com
Made In	Japan

Hogue builds in pillar sleeves and extra reinforcement to make the OverMolded a strong and accurate stock.



Our testers had to work at it to make it happen, but we believe the design of the floorplate could allow the floorplate to be released inadvertently.





Right: A mere $80 for the extra adult-size stock can complete a hunting setup that's great for the whole family.

purchase on the rifle without being so sharp as to be abrasive. The stock ends with a small Inflex 1-inch-thick recoil pad that is soft enough to aid with the impulse on the already soft-recoiling 22-250. The comb is slanted to move away from the shooter's face, which helps lessen felt recoil even more. Length of pull is 12.5 inches, great for the smaller-statured shooter. When the shooter grows, three quarter-inch-thick spacers are included, allowing the length of pull to be increased to 13.25 inches. The expected sling swivel studs are included.

We wondered how much energy would be lost with the 20-inch barrel on the Browning Micro Midas versus the 22-inch tubes on the Bergara and the Howa. We weren't surprised when the muzzle velocities dropped between 30 and 100 fps, depending on the load. Even with the lower velocities, our self-imposed maximum range (requiring a minimum of 1000 foot-pounds of energy at impact distance) did not change much, according to our Applied Ballistics app. This Micro Midas performed flawlessly and shot very well indeed.

The Black Hills 36-grain Varmint Grenade averaged 0.92 inch for three shots, with a smallest group of 0.79 inch. The Black Hills 50-grain V-Max averaged 0.80 inch with a small group of 0.47 inch. The Barnes Vor-TX was even a bit better, averaging 0.78 inch, with a smallest group of 0.45 inch. The Federal 55-grain Soft Point averaged 0.99 inch, with a small group of 0.59 inch. The Winchester 64-grain PowerPoint caused some frustrations for us out of the Bergara, but not here. The average group size was 0.47 inch, with a smallest three-shot group of 0.27 inch.

Our Team Said: All of the rifles shot most of the five different types of ammunition well. The Browning shot them all well. Our testers thought the rifle's small size, along with the ability to add up to three-quarters of an inch on length of pull would make this rifle an excellent choice for smaller or still-developing shooters.

Howa Model 1500 Youth HGR61203 22-250 Remington, $529

Howa has created a solid rifle, made in Japan and imported by Legacy Sports International of Reno, Nevada. We have used samples of their products many times, as recently as the August 2019 issue, for several reasons: they are frequently a price-competitive brand, they work, and they tend to be very accurate. This rifle was no exception.

Our Howa 1500 Youth Model offered yet another solution for fitting the rifle to a smaller shooter. It came with a youth-sized stock. But there is also a full-sized stock available, for an extra $80, that makes the rifle a perfect fit for dad as well. The Youth Model still ships with a 22-inch matte-blue steel sporter-profile barrel, but the Youth stock takes a full 1.25 inches off the length of pull.

The matte-blue-finished receiver contains a two-lug bolt, also with a matte-blue finish and requires an expected 90 degrees of movement to open the bolt. The bolt is a push feed with a pivoting extractor and plunger ejector. The safety is a two-position rocker switch on the right side of the receiver. Forward is Fire. To the rear is Safe, a position that locks the sear and the bolt. The bolt release is a compression type at the left rear of the receiver. Pushing down on the tab allows the bolt to be retracted from the receiver.

The bottom metal is made of alloy, while the magazine follower is composite, all of which is held in place by two action screws. The floorplate latch is on the forward curve of the trigger guard and concerned us a bit since it protrudes — a little — from the trigger guard, perhaps making it vulnerable to an inadvertent release. We had to work at it, but in a very few of our bumps that could happen naturally in the field, the floorplate came open with less than an intentional action. Still, we did not think that was a highly likely occurrence.

All fives types of ammunition fed perfectly whether from the magazine or just being dropped into the receiver. The curved metal trigger required approximately 0.18 inch before we hit the pressure wall and required less than another 0.125 inch movement to trip the sear and complete its movement. Average pull weight was 3.3 pounds with about 6 ounces of variance. Balance point of the unscoped rifle was right on the front action screw.

This Youth Model comes equipped with a special Hogue stock. These stocks have a rigid fiberglass skeleton that's OverMolded with synthetic rubber injected at extremely high pressure. This creates a permanent bond between rubber and insert. Add in two bedding pillars to that and the result is a stiff, accurate, free-floating stock on which a shooter can get a solid grip. The comb slants up slightly to the rear. The pistol grip is contoured with a slight swell. Both the pistol grip and the forend have a pebble-grained texture to help with a secure grip. The forend also flattens to a beavertail style to help with bench shooting. The stock is capped by a fairly stiff 1-inch recoil pad. The customary pair of sling-swivel screws are included, with one each mounted in the buttstock and forend.

At the range, we dropped rounds into the action and cycled the bolt. We fed cartridges from the magazine and cycled the bolt. We worked the bolt slowly and we worked the bolt quickly. No matter how we worked it, this Howa rifle fed, shot, and ejected every round.

This rifle has the slowest twist rate of the three tested, so we weren't surprised when it liked the lighter-weight bullets. The Black Hills 36-grain Varmint Grenade was a clear favorite, with a small three-shot group of 0.53 inch and an average group size of 0.77 inch at 100 rounds. The Black Hills 50-grain V-Max shot a small group of 0.67 inch with an average of 1.00 inch even. The Barnes 50-grain Vor-TX was another favorite with a small group of 0.63 inch and an average of 0.87 inch. Then we moved up in weight

BERGARA B-14 HUNTER B14S104 22-250 REMINGTON, $879

GUN TESTS GRADE: A

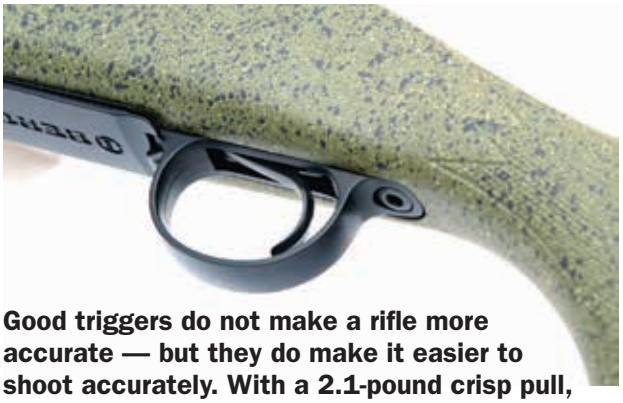
Designed with the full-sized hunter in mind, this rifle would be a great companion on a coyote hunt, or with the right bullets, in a deer camp.



Action	Bolt, B-14 two-lug system, sliding plate extractor, coned bolt nose and breech
Overall Length	41.5 in.
Barrel	22 in. long, 1:9 twist, #4 taper
Overall Height w/o Scope Mount	6.25 in.
Weight Unloaded	7.1 lbs.
Weight Loaded (64 grain, 4+1 rounds)	7.25 lbs.
Action Finish	Matte blue
Barrel Finish	Matte blue
Magazine Capacity	5
Magazine Type	Internal with floorplate
Stock	Glass-fiber-reinforced polymer with SoftTouch finish; sling swivels
Stock Drop at Comb	0.7 in.
Stock Drop at Heel	0.75 in.
Stock Buttplate	1-in.-thick rubber recoil pad
Length of Pull	13.5 in.
Receiver Scope-Base Pattern	Remington 700
Sight Radius	NA
Trigger Pull Weight	2.1 lbs.
Safety	2-position rocker
Warranty	Lifetime
Telephone	(877) 892-7544
Website	Bergara.online/us/
Made In	U.S.A./Spain



On top, the Bergara uses Remington 700-pattern mounts. The barrel fan from Wiebad.com ($40) really helped cool the barrel down more quickly.



Good triggers do not make a rifle more accurate — but they do make it easier to shoot accurately. With a 2.1-pound crisp pull, our testers think this Bergara had one of the best factory triggers we've seen in a long time.



Bergara offers a kit whereby you can convert this internal-magazine rifle to one with a detachable box magazine.



Though not absolutely necessary on a light-kicking rifle, the Bergara sports a stylish and very functional recoil pad.

to the 55-grain Federal Soft Point, and the groups blew open. Our small group was 2.05 inches, and the average was 2.44 inch. We wondered if the slower twist rate was sufficient to stabilize the heavier bullet. We wondered just long enough to shoot the 64-grain Winchester PowerPoint, and life settled down again. That cartridge shot a small group of 0.76 inch with an average of 0.93 inch.

Our Team Said: We have heard it remarked that rifles are a lot like spouses in that they each have a personality, and you don't really know what that personality is until you spend some time with them. We found out that this particular rifle just did not like the Federal ammo. The others did. That's why we test. We were pleased that the standard 1:12 inch twist of the Howa stabilized the 64-grain Winchester load. This rifle would offer outstanding versatility for the family with large and small shooters. Even adding the cost of the second stock, the Howa 1500 still represents an excellent value.

Bergara B-14 Hunter B14S104 22-250 Remington, $879

Starting out in Bergara, Spain, this company has invested decades in learning to build some of the finest barrels in the world. A number of tier-one U.S. manufacturers use Bergara barrels because they are accurate and economical, two words that don't normally go together. With the B-14 Hunter, a shooter can enjoy one of Bergara's outstanding barrels mounted in a rifle that, except for the barrel, was manufactured totally in the U.S.

The Bergara B-14 Hunter is the full-sized entrant in this comparison. The matte-blue-steel action mounts a matte-blue-steel 22-inch barrel with a No. 4 contour, a 1:9 twist and a nicely recessed crown. The barrel channel on the stock is tight, but it will allow a standard business card to pass between the barrel and stock as far as the front of the receiver. The bolt has a polished body. It is a standard two-lug system with a coned bolt nose and breech to ensure smooth feeding and extraction of the cartridge. The bolt sports a plunger ejector and what Bergara calls a sliding plate extractor. The safety is a two-position rocker switch on the right side of the receiver. Forward is Fire. The rear position locks the trigger but does not lock the bolt. The bolt release is a pivoting horizontal bar on the left rear of the receiver.

Our testers readily admit to being trigger snobs, and the Bergara trigger was a joy to shoot if you like lighter triggers. There is no take up on the trigger and only a hair over one-eighths inch total travel upon compression. The average amount of pressure required to complete compression averaged 2.125 pounds, with less than an ounce variance. The alloy bottom metal even has a metal follower and an internal box magazine that holds four rounds. Bergara offers different bottom metal that can convert the rifle to a detachable-box magazine. The floorplate release is also on the front of the trigger with this rifle. However, this release is somewhat small and located far enough down the face of the trigger guard that normal bumps and bangs were not releasing the floorplate inadvertently. We had to be very intentional to get the floorplate open. The receiver is drilled and tapped for scope bases using a standard Remington 700 pattern, which is very easy to find.

The B-14 Hunter rifle features a molded synthetic stock made of glass-fiber-reinforced polymer. During the molding process, steel pillars are inserted and molded permanently into place, giving the shooter a very stable bedding surface. The base color is green with tan and black specks. The Bergara stock is finished with what they call a SoftTouch coating. It is a slightly softer surface, as the name implies, but still has a bit of a tacky feel to make sure the shooter can easily hold on to the rifle. The stock has pressed checkering on the pistol grip area and about 60% of the forend. Single sling-swivel studs are mounted at the front and the rear. The almost straight-combed stock is capped by a recoil pad about 1 inch thick.

There weren't any surprises during this shooting session. Our Bergara worked perfectly in feeding, firing, and extracting every round we asked it to. Once again, this is a hunting-weight barrel that can heat up fairly quickly. Groups would start to open up a bit when we let that happen.

The Black Hills 36-grain varmint grenade had an average group size of 1.01 inch with a smallest group of 0.72 inch. The Black Hills 50-grain V-Max averaged 1.24 inch, with a smallest group of 0.98 inch. The Barnes 50-grain Vor-TX offering averaged 0.64 inch with a smallest group of 0.40 inch. The Federal 55-grain soft point also did well, with an average of 1.22 inch and a smallest group of 0.46 inch. That average includes a 2.16-inch group that had two shots touching and a third shot 2 inches away. We didn't call it a flyer, so we included it. Our challenge turned out to be the Winchester 64-grain soft point. Some of the groups were outstanding, and some not so much. This cartridge had, by far, the largest standard deviation for the muzzle velocities at 41.9 feet per second. Other standard deviations were in the teens and twenties. When we got three shots close together in muzzle velocity, we shot three groups under 0.75 inch. When the velocities spread out, groups enlarged to between 1.5 and 3.25 inches. Still, this load averaged 1.32 inch with a smallest group of 0.56 inch.

Our Team Said: This rifle had consistent accuracy helped by a very good trigger. As with all the rifles tested in this group, felt recoil was very mild. Our testers thought the Bergara would make an outstanding choice as a varmint or close-range deer rifle for the full-sized new shooter.

Written and photographed by Joe Woolley, using evaluations from Gun Tests *team testers.* GT

HANDGUN COMPARISON

Big-Bore Hunting Revolvers From Smith & Wesson, Taurus

We ran a Taurus 44 Magnum, a 460 S&W Magnum, and a 500 S&W Magnum side by side at the range, and our shooters said they would go afield with the Performance Center 460XVR over the others.

Our test team has years of hunting experience with 44 Magnum wheelguns and single-shot pistols. This is a very versatile round with plenty of hunting-cartridge options to choose from, plus it also allows the user to fire 44 Special rounds, which greatly reduces felt recoil and allows for more pre-hunt training. The 500 S&W Magnum and 460 S&W Magnum are relatively new cartridges compared to the 44 Magnum, being introduced in 2003 and 2005, respectively. They have been in the field for well over 10 years, so we wanted to use the established 44 Magnum as a baseline to see what the newer cartridges could do. With that in mind, we procured a Taurus Raging Hunter in 44 Magnum, a S&W Performance Center Model 460XVR in 460 S&W Magnum, and an S&W Model S&W500 in 500 S&W Magnum so we could shoot them side by side.

Not a lot of people have shot the 500 S&W Magnum and 460 S&W Magnum, and there are several reasons for that. There are not many handguns chambered in the cartridges, and the ones that are chambered in the rounds are pricey. The high cost of ammo and tales of vicious recoil round out the rest of reasons why there are not a lot of 460 and 500 shooters.

The 500 S&W Magnum and 460 S&W Magnum are only chambered in a few revolvers made by S&W and Magnum Research BFR single-action revolvers. The T/C Encore and Pro Hunter single-shot pistols



The S&W Model S&W 500 (left) had the largest bore diameter and plenty of power, but less versatility than the 460 and 44 mags. The Taurus Raging Hunter (middle) offers a lot versatility, but limited range. The S&W Performance Center Model 460XVR (right) offers versatility, accuracy, and range. We'd opt for the 460 Magnum for hunting anything on four legs in North America.

also have barrels chambered in 460 and 500. The cost per cartridge averages from $1 to $3.20 a round, depending on the brand of ammo and the bullet loaded. And then there is the recoil, which if you believe everything you read online, is like taking hold of the devil's tail. In our opinion, the recoil is very tolerable. Kudos to S&W for producing revolvers with such powerful cartridges that are relatively easy to shoot. We have fired lightweight 44 Magnum revolvers that are much more punishing. Do not get us wrong, these revolvers are not for neophyte shooters. There is a proper way to grip and fire these revolvers without accidentally shooting a hole in the ceiling during recoil or knocking a dent in your forehead, which are some of the online rumors. Stuff happens, so be aware and grip accordingly.

There is a correct way to hold these revolvers. The X-frame offers a lot of surface area to grasp, but do not grip anything but the grip. The flash from a fired shot emitted from the gap between the front of the cylinder and forcing cone has the cutting power of a plasma torch. Look at the photo of the rag we used to cover the shooting rest bag. It is blackened and torn to shreds due to the blast. The two S&W revolvers are especially heavy — 71.4 ounces for the 500 and 84.2 ounces for the 460 sans optic and rings — and have long barrels. You need some sort of support to wring out the best accuracy from them. The Raging Hunter is much easier to handle and is easily fired with two hands. Maybe Thor could hold the S&Ws with two hands and hit an elk at 100 yards, but we would use shooting sticks. In fact, shooting sticks make shooting all of these revolvers easier and more accurate.

Revolvers by design have a center of bore axis above the shooter's grip. This causes the revolver's muzzle to flip back during recoil. To reduce muzzle flip, you need to grasp the grip as high up as you can. Our small-to-average-size-hand testers found this was a bit uncomfortable with the S&W grips compared to the Taurus grip. The higher the grip, the closer you are the barrel bore's center axis. You also need to keep your arms extended using an isosceles stance rather than a Weaver stance. With this grip and stance, big-bore handguns are much easier to control during recoil. With that said, most testers maxed out at two full cylinders of the 460 and 500. Savor the recoil, we say, because these revolvers can produce some excellent accuracy and downrange power.

How We Tested

We tested for accuracy using a rest to support the barrels just forward of the cylinder and a sand bag under the grip. This set up allowed a solid platform and allowed us to grasp high on the grip. To simulate hunting scenarios, we used a Primos Gen 3 Trigger Stick tripod shooting rest ($150; MidwayUSA.com). We really liked the Primos Trigger Stick because it allows the user to smoothly pan down range and is fast to open and set up using the trigger feature. It is outfitted with a rubberized V-yoke on which to silently rest a rifle or handgun. It also comes with a camera mount. The legs are aluminum with rubber gripping feet. We also tested a Bog-Pod RLD-3 ($70; MidwayUSA.com) tripod, which has rubber feet, adjustable legs with adjustment marks, and rubber V-yoke. It, too, can be used standing, kneeling, or sitting. It came with a carry case. We recommend you invest in shooting sticks, like the Primos, when handgun hunting because they offer a rock-solid rest and rapidly adjust to standing, kneeling, or sitting positions. We accuracy tested at 25 yards, but we also tested at 100 yards. The reality is, the 460 and 500 are flat shooting and quite capable of long-range accuracy without making the shooter do a lot of work.



The Federal Premium 275-gr. Barnes Expander load in 460 S&W Mag gave excellent results. This 25-yard group measures 1.25 inches.

Cartridge Comparison

The 44 Magnum was introduced in 1955 and for decades was the world's most powerful cartridge. It also become iconic thanks to the Dirty Harry movies. Bullet weights are available from 160 to 340 grains, with 240-grain bullets being the sweet spot for this cartridge. There is an embarrassment of riches in the variety of 44 Magnum ammo choices that range in a per-round cost of 78 cents a round (Prvi Partizan; MidwayUSA.com) to $2.05 a round (Underwood; MidwayUSA.com). The cartridge is also compatible with less powerful, reduced-recoil 44 Special ammo for more trigger time. Remember when using compatible ammo, the zero will change. Our suggestion is to zero the revolver to the cartridge to be used in the field and use Kentucky elevation with the less-powerful ammo. We tested the Taurus using 44 Magnum ammo from Black Hills (240-grain jacketed hollow point), Grizzly (300-grain wide flat nose gas check, or WFNGC), Hornady Custom (240-grain XTP), and SIG V-Crown 240-grain JHP. The 44 Special ammo we used was Hornady's Critical Defense 165-grain FTX. On average, all of the 240-grain 44 Magnum ammo had a muzzle velocity of 1300 fps and muzzle energy of about 850 foot-pounds. With a zero at 25 yards, a 240-grain bullet will drop about 7 inches at 100 yards.

The 460 S&W Magnum is a versatile cartridge and has the title of the fastest production revolver chambering. It is based on the 454 Casull cartridge and uses a case that is 0.417 inches longer. Bullet weights

TAURUS RAGING HUNTER MODEL 2-440085RH 44 MAGNUM, $683

GUN TESTS GRADE: A

The Raging Hunter comes optic ready and offers the versatility of the 44 Mag cartridge. The cost is reasonable even if the trigger is not that crisp. This is the revolver to buy if you want to get into handgun hunting and spend a lot of cash.



Action Type	DA/SA
Overall Length	15.75 in.
Barrel Length/Twist	8.37 in./1:18
Barrel Muzzle Device	Ported gas chamber
Sight Radius	9.87 in.
Height Unboxed	7.1 in.
Height As Tested	7.87 in.
Maximum Width	1.8 in.
Weight Unboxed/Unloaded	55.0 oz.
Weight As Tested	57.7 oz.
Weight As Tested/Loaded	61.9 oz.
Cylinder Gap	0.007 in.
Capacity	6
Frame Finish	Matte black/matte stainless
Barrel/Cylinder Finish	Matte black/matte stainless
Frame Front Strap Height	2.75 in.
Frame Back Strap Height	4.0 in.
Grip	Textured rubber, finger grooves
Grip Thickness (max)	1.3 in.
Grip Circumference (max)	5.75 in.
Front Sight	Ramp, removable
Rear Sight	Adj., notch
Optics Ready	Rail
Trigger Pull Weight (DA)	15.0 lbs.
Trigger Pull Weight (SA)	7.8 lbs.
Trigger Span (DA)	3.75 in.
Trigger Span (SA)	3.25 in.
Safety	Transfer bar
Warranty	Unlimited lifetime
Telephone	(305) 624-1115
Website	TaurusUSA.com
Made In	Brazil

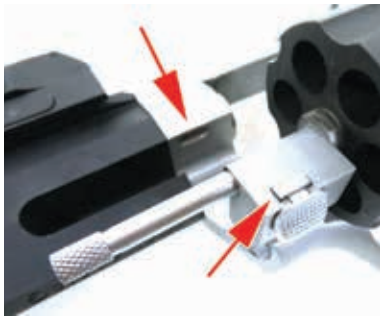


There is enough frame on the Taurus to rest it in the shooting sticks.



We liked the grips on the Taurus better because they allowed us to grasp higher up on the grip.

The RH uses two cylinder catches; one on the side of the frame and one on the crane. The latch on the crane locks into a slot milled into the frame.





We like the Crimson Trace reflex sight paired to the Raging Hunter.



The Taurus uses a ported chamber at the muzzle to help control recoil and muzzle flip. The front sight is a black post that is pinned into the barrel sleeve.



Crane-to-frame lockup was tight.

TAURUS RAGING HUNTER 44 MAGNUM RANGE DATA

Manufacturer	Black Hills	SIG V-Crown	Grizzly Cartridge	Hornady Custom
Bullet Weight/Style	**240-gr. JHP**	**240-gr. JHP**	**300-gr. WFVGC**	**240-gr. XTP**
Average Velocity	1264 fps	1375 fps	1325 fps	1460 fps
Muzzle Energy	852 ft.-lbs.	1008 ft.-lbs.	1170 ft.-lbs.	1136 ft.-lbs.
Smallest Group	1.60 in.	1.43 in.	1.96 in.	0.87 in.
Average Group	2.05 in.	2.35 in.	2.48 in.	1.13 in.

TAURUS RAGING HUNTER 44 SPECIAL RANGE DATA

Manufacturer	Hornady Critical Defense
Bullet Weight/Style	**165-gr. FTX**
Average Velocity	1092 fps
Muzzle Energy	437 ft.-lbs.
Smallest Group	2.00 in.
Average Group	2.15 in.

To collect accuracy data, we fired three-shot groups from a bench using a rest. Distance: 25 yards. We recorded velocities using a ProChrono digital chronograph set 10 feet from the muzzle.

are available from 200 to 360 grains, with 275-grain bullets being the sweet spot. There are a number of ammo brands producing the load, with a cost per round of $1.49 (Hornady Custom; MidwayUSA.com) to $3.75 a round (Buffalo Bore; MidwayUSA.com). The rounds we tested included Federal Premium 275-grain Barnes Expander and Grizzly 460-grain WLNGC (wide long nose gas check). There are many more 460 cartridge options available. Both the Federal and Grizzly loads clock at the muzzle with 1800 fps and 1980 foot-pounds of energy. Compared to the 44 Magnum, that's more than 200 fps faster and 80% more energy. What makes the 460 S&W Magnum so versatile is it is also compatible with other cartridges, such as the 45 Schofield, 45 Long Colt, and 454 Casull. To see how these other compatible loads worked out, we also tested the 460 with 45 Long Colt from Grizzly in +P and 335-grain WLNGC and SIG V-Crown 230-grain JHPs. We also tested Grizzly 454 Casull 265-grain WFNGC ammo. With a zero at 25 yards, a 460 S&W Magnum 275-grain bullet drops about 3 inches at 100 yards. That's less than half the drop of the 44 Magnum, and it is using a heavier bullet.

For 500 S&W Magnum ammo, bullet weights range from 275 to 700 grains, with 325-grain bullets generally considered to be the favorite. The cost per round ranges from $1.73 (Federal Fusion; MidwayUSA.com) to $4 round (Buffalo Bore; MidwayUSA.com). We used Federal Premium loaded with 275-grain Barnes Expander bullets, Federal's 325-grain with a Swift A-Frame bullet, and Grizzly loaded with a 440-grain WFNGC. These cartridges ranged in muzzle velocity from 1550 fps to 1800 fps and energy ranged from 1680 foot-pounds to 2340 foot-pounds. That's easily a 200-fps gain in speed over the 44 Magnum with larger and heavier bullets, and similar speed as the 460, but with 17% more energy. There is also a 500 S&W Special load that is a less powerful round and sort of a reverse evolution from the 500 S&W mag. The more powerful round came before the less powerful round, unlike the 44 Special evolving into the 44 Mag. We could not find 500 S&W Special loads to test. With a zero at 25 yards with 325-grain bullets, it drops about 2.5 inches at 100 yards. As you can see, the speed and power increases exponentially from the 44 Magnum to the 460 and to the 500. You can also see in the data table the velocity of the 460 and 500. With either of these cartridges you can hold dead center from 0 to 100 yards with little impact of trajectory on accuracy. In other words, no hold over required.

Iron sights are appropriate for the Raging Hunter in 44 Magnum due to the cartridge's range limitation and the size of the Raging Hunter. Iron sights on the 460XVR and S&W500 almost seemed superfluous, much like sights on a bolt-action centerfire hunting rifle. Running these revolvers without an optic is like test driving a Ferrari in a parking garage. An optic allows the user to get the most out of these guns. We mounted a Crimson Trace red dot on the Taurus and used Weaver variable-power scopes on the two S&W revolvers, then took them to the range. Here's what we found.

Taurus Raging Hunter Model 2-440085RH 44 Magnum, $683

This was a recent price at CheaperThanDirt.com. The Raging Hunter is basically a Raging Bull with the vent rib replaced with a Picatinny rail. This makes the Raging Hunter much more versatile for the user who plans on mounting an optic. Our sample came in a cardboard box with a manual and lock. It had a two-tone matte finish that was well executed. The barrel, cylinder, trigger, hammer, and sights were black and the frame was stainless. The grips are Taurus' excellent semi-finger-groove rubber models

SMITH & WESSON MODEL S&W500 163500 500 S&W MAGNUM, $1082

GUN TESTS GRADE: A-

This is the revolver to buy if you want the world's most powerful production revolver. Cartridge choice is limited. We found this revolver to be accurate and offer plenty of punch both ways.



Action Type	DA/SA
Overall Length	15.0 in.
Barrel Length/Twist	8.37 in. / 1:18.75
Barrel Muzzle Device	Ported compensator, fixed
Sight Radius	10.5 in.
Height Unboxed	6.5 in.
Height As Tested	9.5 in.
Maximum Width	1.9 in.
Weight Unboxed/Unloaded	71.4 oz.
Weight As Tested	83.5 oz.
Weight As Tested/Loaded	89.5 oz.
Cylinder Gap	.008 in.
Capacity	5
Frame Finish	Satin stainless
Barrel/Cylinder Finish	Satin stainless
Frame Front Strap Height	2.5 in.
Frame Back Strap Height	4.0 in.
Grip	Textured rubber, finger grooves
Grip Thickness (max)	1.3 in.
Grip Circumference (max)	5.5 in.
Front Sight	Ramp, fixed
Rear Sight	Notch, adjustable
Optics Ready	No
Trigger Pull Weight (DA)	15 lbs.
Trigger Pull Weight (SA)	4.8 lbs.
Trigger Span (DA)	3.5 in.
Trigger Span (SA)	3.0 in.
Safety	Internal hammer block
Warranty	None written
Telephone	(800) 331-0852
Website	Smith-Wesson.com
Made In	U.S.A.





Above: When shooting it as a field firearm, we placed the frame of the S&W 500 in the V-yoke of the Bog-Pod and kept both hands on the gun.



The S&W 500 doles out some intense recoil, but it is manageable. Right: The S&W500 uses a three-ported compensator to aid with recoil and muzzle flip — it does work.



Left: The hammer offered plenty of texture to rotate the massive cylinder.



The S&W 500 has a ball detent in the frame that locks up with the crane. Good thing: The S&W 500 is touted as the world's most powerful production revolver.



Crane-to-frame lockup was tight. Federal Premium loaded with 275-grain Barnes Expander bullets showed excellent accuracy.

S&W S&W500 500 S&W MAGNUM RANGE DATA

Manufacturer Bullet Weight/Style	Grizzly Cartridge 440-gr. WFVGC	Federal Premium 275-gr. Barnes Expander	Federal Premium 325-gr. Swift A-Frame
Average Velocity	1555 fps	1747 fps	1821 fps
Muzzle Energy	2363 ft.-lbs.	1864 ft.-lbs.	2393 ft.-lbs.
Smallest Group	1.53 in.	1.21 in.	2.15 in.
Average Group	2.26 in.	1.26 in.	2.25 in.

To collect accuracy data, we fired three-shot groups from a bench using a rest. Distance: 25 yards. We recorded velocities using a ProChrono digital chronograph set 10 feet from the muzzle.

with the red cushion insert at the backstrap. These grips fit a wide number of hand sizes and do a good job of filling the area behind the trigger guard, helping to absorb recoil.

To cut down on weight, Taurus uses a steel barrel with an alloy sleeve that fits over the barrel. This gives the Taurus great balance. The barrel also features a ported chamber at the muzzle — like all Taurus 44 Magnum revolvers — which help with recoil and muzzle flip. We found this feature does reduce muzzle flip and recoil. A Picatinny rail is machined into the top of the slab-sided barrel and allows mounting options for a variety of optics.

We put on a Crimson Trace CTS-1300 red dot reflex sight ($199; CrimsonTrace.com), which comes with a low-profile Picatinny rail mount. This sight uses a 3.5-minute-of-angle round aiming dot with seven levels of brightness adjustment. We liked the externally accessible battery tray and ease of mounting it on the Taurus. Two buttons labeled with up and down arrows allow the user to adjust dot brightness. It is made of aluminum and comes with a cover. The red dot did not affect the balance of the revolver and was an excellent addition.

The sights on the Raging Bull featured a pinned front sight and an adjustable rear. The rear-facing surface of the sight was smooth and shiny, and we would prefer a serrated surface to cut glare. The black-on-black sights are traditional, but a fiber-optic front sight would be better, in our opinion.

The weight allows the user to tote it in a hip or shoulder holster. Plus, the Raging Hunter felt more like a handgun compared to the S&W pistols. The Raging Hunter incorporates two cylinder latches, one on the side of the frame and one on the cylinder crane. The two latches seem like over engineering, but they ensure the crane is snuggly mated to the frame and locked. The lock up was tight. We found we could open the cylinder with two hands, using our thumbs to operate the cylinder latches. Rounds fed and ejected easily from the chambers.

The trigger was crunchy, not as smooth as the triggers on S&W revolvers. Still, the Taurus trigger was serviceable, and for hunting situations, single action would mostly be used. Shooting distance with optics and using a double-action trigger is not a recipe for accuracy.



The S&W 500 is quite accurate. This three-shot group at 25 yards was with Federal Premium loaded with 325-grain Swift A-Frame bullets. The top hole is actually two shots.

Going hot with the Taurus, we found the recoil easy to cope with, even if the weight of the revolver was shaved down to 55 ounces without the red dot. The red dot brought the weight up to 58 ounces, or 3.6 pounds. We could adjust the red dot from the size of a pin prick to a small tick. We used 44 Special loads to zero in the red dot at 25 yards, then moved to the 44 Magnum ammo. Groups averaged 2.25 inches across all ammo. With Hornady Custom 240-grain XTP loads, we shot a best group that measured 0.87 inches. With Black Hills and SIG 240-grain JHPs, we fired best groups of 1.6 and 1.4 inches, respectively. The bonecrushing 300-grain lead Grizzly bullets had a best group that measured 1.96 inches. Overall, we were quite impressed with the accuracy results. Moving to 100 yards, our groups opened up to 3.5 to 4 inches, and we think if far range is in your scenario, a scope would be better than a red dot. Still, this is good accuracy for the price.

Our Team Said: The Raging Hunter is made to hunt, with all the right features. The 44 Magnum cartridge is easy to find and offers a variety of options. If you want to get into handgun hunting, the Taurus is an excellent choice. Revolver and optic cost less than either of the S&W revolvers. For hunting whitetails and black bears from tree stands or pigs from a blind, this is a great choice.

Smith & Wesson Model S&W500 163500
500 S&W Magnum, $1082

This was a recent price at BudsGunShop.com. The S&W500 is touted as the most powerful production

SMITH & WESSON PERFORMANCE CENTER MODEL 460XVR 170262
460 S&W MAGNUM, $1369
GUN TESTS GRADE: A

The 460XVR is very versatile, with the ability to shoot a variety of calibers. It comes optics ready. With this revolver, you can hunt any North America game, even dangerous game, with confidence. The recoil is stout and snappy, but manageable.



Action Type	DA/SA
Overall Length	18.0 in.
Barrel Length/Twist	10.5 in./1:100-1:20
Barrel Muzzle Device	Ported muzzle brake
Sight Radius	12 in.
Height Unboxed	6.5 in.
Height As Tested	8 in.
Maximum Width	1.9 in.
Weight Unboxed/Unloaded	84.2 oz.
Weight As Tested	93.3 oz.
Weight As Tested/Loaded	98.1 oz.
Cylinder Gap	0.005 in.
Capacity	5
Frame Finish	Satin stainless
Barrel/Cylinder Finish	Satin stainless
Frame Front Strap Height	2.5 in.
Frame Back Strap Height	4.0 in.
Grip	Textured rubber, finger grooves
Grip Thickness (max)	1.3 in.
Grip Circumference (max)	5.5 in.
Front Sight	Ramp, fiber optic, removable
Rear Sight	Notch, adjustable
Optics Ready	Rail
Trigger Pull Weight (DA)	13.0 lbs.
Trigger Pull Weight (SA)	4.8 lbs.
Trigger Span (DA)	3.5 in.
Trigger Span (SA)	3.0 in.
Safety	Internal hammer block
Warranty	None written
Telephone	(800) 331-0852
Website	Smith-Wesson.com
Made In	U.S.A.



The S&W 460XVR using 460 S&W Magnum loads shows some extreme blast and muzzle flip. It's all very manageable with the right grip and stance. The multi-ported muzzle brake worked well and was loud, offering a lot of concussion.





A Picatinny rail on the top side of the barrel allows easy mounting of an optic. We liked this feature. We also liked the fiber-optic front sight.



The crane-to-frame lock up was very tight. You can barely see the seam between the mating parts.



Note the detent ball in the frame (arrow), which locks up solidly with the crane.

S&W 460XVR
45 LONG COLT RANGE DATA

Manufacturer	Grizzly Cartridge +P	SIG V-Crown
Bullet Weight/Style	**335-gr. WLNGC**	**230-gr. JHP**
Average Velocity	1180 fps	855 fps
Muzzle Energy	1036 ft.-lbs.	373 ft.-lbs.
Smallest Group	0.80 in.	0.81 in.
Average Group	0.88 in.	0.87 in.

S&W 460XVR
454 CASULL RANGE DATA

Manufacturer	Grizzly Cartridge
Bullet Weight/Style	**265-gr. WFNGC**
Average Velocity	1723 fps
Muzzle Energy	1747 ft.-lbs.
Smallest Group	1.69 in.
Average Group	1.95 in.

S&W 460XVR 460 S&W MAGNUM RANGE DATA

Manufacturer	Federal Premium	Grizzly Cartridge
Bullet Weight/Style	**275-gr. Barnes Exp.**	**360-gr. WLNGC**
Average Velocity	1890 fps	1870 fps
Muzzle Energy	2182 ft.-lbs.	2796 ft.-lbs.
Smallest Group	1.25 in.	2.26 in.
Average Group	1.62 in.	2.28 in.

To collect accuracy data, we fired three-shot groups from a bench using a rest. Distance: 25 yards. We recorded velocities using a ProChrono digital chronograph set 10 feet from the muzzle.

revolver in the world, and looking at the range data we would agree. This revolver ushered in the massive S&W X-Frame revolver. Everything about the 500 is supersized, except the grip. The grip retains the same proportions as K- and L-Frame revolvers. Like all other S&W revolvers, the 500 uses a hammer block internal safety to prevent the revolver from firing if accidentally dropped.

The cylinder latch is similar to other S&W revolvers and is pushed forward to open the cylinder. We also found a ball detent built into the frame that fits into a spot in the crane for a tight lock up. We needed to push the massive cylinder out of the frame because the ball detent kept the cylinder in place, even when the cylinder latch was disengaged.

The S&W500 looks like many other S&W stainless revolvers. It uses a full under lug under the barrel for more weight, and because of the cartridge, you want that extra weight to absorb recoil. There are decorative serrations on the top of the barrel, and the model name is engraved on the right side of the frame, just in case you forget you are holding a 50-caliber pistol.

The front post sight is black and pinned so you can replace it with a fiber-optic post if you plan to use open sights. The rear sight is adjustable for windage and elevation. The rear-facing part of the sight is serrated to stifle sun glare. The muzzle device is a slotted compensator that directs gas up to counteract muzzle flip. We think it does a great job of that.

The cylinder is fluted and massive. The five chambers look like they want more chambers for company, but the steel between the chambers ensures it defeats the pressure the 500 S&W Magnum round produces.

The trigger in DA mode was smooth, but we doubt we would use it unless a grizzly bear was running toward us. Single-action mode is best for hunting and accuracy, which we found this hand cannon offered.

Loading the 500 S&W Magnum rounds into the chamber was like loading rifle cartridges. The rounds are long and heavy and slid into the chambers with ease. To unload, point the muzzle up and push down on the extractor rod. The cylinder will easily regurgitate the empties. We did not encounter any stuck cases.

We removed the rear sight and installed a Weigand model SSWHPMNTS mount ($70; JackWeigand.com) and used three Weigand model 3MRNG1S scope rings ($69). The mount fit like a glove in the machined groove on the top of the X-Frame. Three screws locked it to the frame. The mount is a mini-Picatinny. The rings were packaged with friction stickers to keep the scope in place. We used blue Loctite on the base screws. In the rings, we mounted a Weaver Classic 2.5-8x28mm handgun scope ($387; WeaverOptics.com). It has a matte-black finish, covered turrets, and a Dual-X reticle. Parallax is set at 50 yards. The magnification ring was easy to turn. Eye relief is 24.5 to 16.5 inches, which is plenty of space between you and the scope's eyepiece. You need that distance to avoid scope bite. We liked this scope for its simplicity. Mounting was simple and fast. The total cost of gun, optic, and mount was $1608.

Going hot with the 500, we did encounter muzzle flip. By grasping up on the grip, we were able to reduce flip and better manage recoil. We also found the finger-groove grips were not as comfortable to hold since some testers' fingers were not in the grooves. We prefer a grip with no finger grooves so we could easily and comfortably position our hands.

The Federal Barnes 275-grain bullets clocked at

1747 fps had plenty of recoil, and when we moved onto the Federal Swift pushing a 325-grain bullet at 1821 fps, recoil became snappier. The Grizzly 440-grain bullets at 1555 fps were also stout. At 25 yards, the Federal Barnes averaged 1.26-inch groups, and the Federal Swift and Grizzly rounds were even at 2.25-inch groups. Moving to 100 yards, the nice single-action trigger and rest helped us squeeze out 2.5-inch groups with the Federal Barnes and 3-inch groups with the other ammo.

Our Team Said: If you need to have the most powerful revolver in production, then this is your option, and in our opinion, it is a pretty good choice. The weight and crisp single-action trigger make it easy to shoot. The grip forced the user to hold it in a specific way; we'd like a grip that allows us to grasp higher up. You need a harness holster to tote this beast because it weighs 5.2 pounds.

Smith & Wesson Performance Center Model 460XVR 170262 460 S&W Magnum, $1369

This is a recent price from BudsGunShop.com. The 460XVR revolver came in a soft nylon case with a sling and swivels. At 5.25 pounds with an optic, this is a heavy revolver, hence the sling. The barrel has a matte-stainless finish, and the cylinder and frame have a slightly more polished look. The grip is a Hogue rubber finger groove with palm swells.

The trigger was exceptionally smooth, with the single-action mode being crisp. Thumbing back the hammer did not take a lot of effort, even with the massive cylinder.

The frame has a ball detent built in so the front and rear of the cylinder are locked in place. Opening the cylinder was easy, and extraction of empties required a gravity assist to dislodge the long empty cases.

The metal in the X-Frame and cylinder is heat treated differently than the S&W500 X-Frame due to the pressures of the 460 cartridge. Each of the five chambers is separated by nearly 0.25 inches of steel, and the chambers are designed to use spitzer-style bullets, which are typically used in rifles, offer a better ballistic coefficient than typical pistol bullets. The cylinder has a diameter of 1.9 inches. It is massive.



Even though the Primos Gen 3 Trigger stick has a grip, we kept both hands on the 460XVR to control recoil and avoid cylinder flash.

To gain the fastest production revolver title, the barrel needs to be long and a minimum of 8.375 inches. Our sample is 10.5 inches in length. What is interesting about the bore is the rifling. It has five groove, gain-twist rifling. Since the bullet is coming out of the cylinder at 2300 fps and shoved into the forcing cone with tremendous force, typical rifling cannot stabilize the bullet, so accuracy is affected. Gain twist rifling starts out with 1:100 inch twist rate to stabilize the bullet and quickly changes to 1:20-inch twist rate.

The barrel on our sample has a multiport muzzle brake. It was loud when fired. The Performance Center sculpts the barrel with a taper and milled a Picatinny rail on the top. A sling swivel can be attached under the barrel. We like this set up because there was no need to buy a scope mount. The rear sight is fully adjustable, and the front is a fiber optic. These are the best sights out of all three revolvers tested. However, to wring out the real accuracy and range on this revolver, you need an optic.

We mounted the same scope we mounted onto the S&W500, a Weaver Classic 2.5-8x28mm handgun scope and used Weaver solid-steel Grand Slam extra high rings. This is a nice set-up for this revolver. We half expected either the 500 or the 460 cartridge would knock the snot out of the scope, but that was not the case. These Weaver scopes are very rugged. Total setup cost was $1756.

We sighted in with SIG V-Crown 230-grain JHP and found recoil and accuracy to be quite acceptable. Moving to Grizzly 45 LC +P loads and 335-grain slugs, we fired a best group that measured 0.80 inches and noticed an increase in recoil. Farther up the power ladder, the 454 Casull loads from Grizzly with 265-grain bullets were snappy with plenty of recoil. The 460 cartridges offered even more snappier recoil. The velocity of the 275-grain Barnes bullet in Federal ammo had similar velocity as 360-grain bullet in the Grizzly ammo, 1890 fps and 1870 fps, respectively. We could feel the difference between the two rounds and see a difference in accuracy. The Federal Barnes grouped, on average, 1.62 inches and the Grizzly 2.28 inches. At 100 yards we were getting 2.25-inch groups with the Federal Barnes load and close to 3.75 inches with the Grizzly load.

Our Team Said: The 460XVR is a stout and snappy shooter with exceptional accuracy. It is also versatile, with the ability to shoot less-powerful cartridges. If you want to get into handgun hunting and cost is not a factor, then we'd buy this revolver.

Special thanks to Eastern Outfitters (EasternOutfitter.com) of Hampstead, NC, for their assistance.

Written and photographed by Robert Sadowski, using evaluations from Gun Tests *team testers.* **GT**

2019 Guns & Gear Top Picks

Which pistols, revolvers, rifles, shotguns, accessories, and ammunition were our picks in the past year? We look back at the previous 12 months to highlight the winners.

Toward the end of each year, I survey the work R.K. Campbell, Roger Eckstine, Robert Sadowski, David Tannahill, Tracey Taylor, and John Taylor have done in GUN TESTS, with an eye toward selecting guns, accessories, and ammunition the magazine's testers have endorsed. From these evaluations I pick the best from a full year's worth of tests and distill recommendations for readers, who often use them as shopping guides. These choices are a mixture of our original tests and other information I've compiled during the year. After we roll high-rated test products into long-term testing, I keep tabs on how those guns do, and if the firearms and accessories continue performing well, then I have confidence including these firearms in this wrap-up. — *Todd Woodard*



Taurus Model 66 2-660041 38 Special/ 357 Magnum



Springfield Armory XD-S 3.3-inch XDS93340BE 40 S&W



Savage Arms 110 Storm 14361 7mm Remington Magnum



Mossberg 590 Shockwave Model 50657 20 Gauge

























SPRINGFIELD ARMORY XD-S 3.3-INCH XDS93340BE 40 S&W, $378

GUN TESTS GRADE: A (BEST BUY)
BEST-IN-CLASS PISTOL

The XD-S was completely reliable, accurate enough for personal defense, and exhibits good features, including a useful trigger action and good sights. While the grip was raspy, it did the job well. The pistol is supplied with both a flush-fit and an extended magazine.



See full review September 2019

Action Type	Double-action-only
Overall Length	6.3 in.
Overall Height Compact Magazine	4.4 in.
Overall Height Extended Magazine	5.0 in.
Maximum Width	0.9 in.
Weight Unloaded	23.0 oz.
Weight Loaded	26.2 oz.
Slide Material	Forged steel, Melonite finish
Slide Retraction Effort	15.0 lbs.
Frame	Black polymer
Front Strap	1.9 in.
Back Strap	2.75 in.
Barrel Length	3.3 in. steel, Melonite finish, 1:16 twist
Grips	Textured Polymer
Grip Thickness (Maximum)	0.9 in.
Grip Circumference	5.75 in.
Magazines	(1) 6-round flush fit; (1) 7-round X-Tension
Rear Sight	Steel with white-dot insert
Front Sight	Fiber optic
Sight Radius	5.5 in.
Trigger Pull Weight	6.5 lbs.
Trigger Span	2.6 in.
Safeties	Lever set into trigger face, grip safety
Warranty	Lifetime
Telephone	(800) 680-6866
Website	Springfield-Armory.com
Made In	Croatia

TAURUS MODEL 66 2-660041 38 SPECIAL/357 MAGNUM, $371

GUN TESTS GRADE: A
BEST-IN-CLASS REVOLVER

A capable performer. The only medium-frame revolver tested, the Model 66 is well suited to personal defense and home defense, and would make a good field gun for protection against animals. It is suitable for concealed carry with proper load selection.



See full review October 2019

Action	Single/Double Action
Overall Length	8.8 in.
Overall Height	10.5 in.
Maximum Width (Cylinder)	1.4 in.
Weight Unloaded	38.0 oz.
Weight Loaded	41.0 oz.
Barrel Length	4.0 in.
Capacity	7
Frame	Carbon steel, medium
Cylinder Material	Steel
Front Strap Height	3.0 in.
Rear Strap Height	4.5 in.
Grips	Rubber, pebbled
Grip Thickness (Max)	1.1 in.
Grip Circumference (Max)	5.0 in.
Front Sight	Fixed post
Rear Sight	Adjustable
Sight Radius	6.0 in.
Trigger Pull Weight Single Action	6.0 lbs.
Trigger Pull Weight Double Action	10.25 lbs.
Trigger Span Single Action	3.15 in.
Trigger Span Double Action	3.5 in.
Safety	Transfer bar
Warranty	Lifetime
Telephone	(800) 327-3776
Website	TaurusUSA.com
Made In	Brazil

SAVAGE ARMS 110 STORM 14361 7MM REMINGTON MAGNUM, $849

GUN TESTS GRADE: A (BEST BUY)

BEST-IN-CLASS RIFLE

The AccuStock with AccuFit and the AccuTrigger make this rifle easy to shoot well and absorb the recoil of 7mm rounds. The action was not as slick as the others, but it was plenty smooth.



See full review January 2019

Action Type	Bolt, push feed
Overall Length	41 to 44.5 in. (depending on insert)
Height Unboxed	4.5 in.
Height As Tested	7.5 in.
Width Stock	1.87 in.
Weight Unboxed/Unloaded	7.25 lbs.
Weight As Tested	8.60 lbs.
Weight As Tested/Loaded	8.66 lbs.
Barrel Length/Twist	24 in.; 1:9.5 RH
Barrel Finish	Matte stainless
Barrel Muzzle Device	None
Stock	Synthetic w/aluminum bedding block; adj. comp and LOP
Stock Buttpad	Rubber
Stock LOP	12.75 to 13.75 in.; 4 inserts
Stock Comb	Adj.; 5 risers
Stock Sling Attachments	2 studs
Trigger Pull Weight	Adj., 3.8 lbs. factory set
Trigger Style	Single stage
Trigger Guard Material	Aluminum, enlarged
Safety	3-position button
Magazine	2-rd. detachable box
Magazine Release	Ambi. lever, front of magazine
Bolt	2-lug bolt; 90-degree lift
Bolt Release	Receiver latch
Sights	None; drilled and tapped
Accuracy Guarantee	None
Warranty	1 year
Telephone	(800) 370-0708
Website	SavageArms.com
Made In	U.S.A.

MOSSBERG 590 SHOCKWAVE MODEL 50657 20 GAUGE, $455

GUN TESTS GRADE: A

BEST-IN-CLASS SHOTSHELL-FIRING FIREARM

The Shockwave in 20 gauge substantially reduces felt recoil, which all users appreciated. We liked the strapped forend, which offered good grip security. Mossberg 500 or 590 users will easily adapt to this one.



See full review March 2019

Action Type	Pump
Chamber Size	3.0 in.
Overall Length	26.37 in.
Capacity	5+1 (2.75-in. shells), 4+1 (3-in. shells)
Weight Unloaded	4.95 lbs.
Weight Loaded	5.75 lbs.
Barrel Length	14.375 in.
Finish	Matte blued
Choke	Cylinder bore
Grip	Bird's head-style, textured polymer
Forend	Ribbed polymer w/ strap
Front Sight	Brass bead
Trigger Pull Weight	5.8 lbs.
Safety	Ambidextrous thumb
Warranty	Limited lifetime
Telephone	(800) 363-3555
Website	Mossberg.com
Made In	U.S.A.

The Shockwave is based on Mossberg's robust Model 590 action scaled down for 20 gauge. It was slick out of the box. The controls are like other Model 500 and 590 shotguns with an ambidextrous safety button on top.



GLOCK 45 9MM LUGER, $546

GUN TESTS GRADE: A

The Glock 45 is fast from concealed carry. The action allows a trained shooter to make fast hits, and the piece is reliable. We especially like the bright front-dot sight.



See full review January 2019

Action Type	Double action only
Overall Length	7.4 in.
Overall Height	5.5 in.
Maximum Width	1.3 in.
Weight Unloaded	24.0 oz.
Weight Loaded	31.4 oz.
Barrel Length	4.0 in.
Slide Material	Steel
Slide Retraction Effort	16.1 lbs.
Receiver Material	Polymer
Finish	Tenifer
Front Strap Height	2.4 in.
Rear Strap Height	4 in.
Grip Panels	Pebbled polymer
Grip Thickness (Max.)	1.3 in.
Grip Circumference (Max.)	6.1 in.
Magazine	(3) 17 round
Rear Sight	Dual-dot tritium
Front Sight	Single-dot tritium, bright orange
Sight Radius	5.9 in.
Trigger Pull Weight	5.4 lbs.
Trigger Span	2.45 in.
Safeties	Trigger lever, firing-pin block
Warranty	1 year
Telephone	(770) 432-1202
Website	USGlock.com
Made In	Austria

REMINGTON 1911 R1 ENHANCED THREADED BARREL 96339 45 ACP, $675

GUN TESTS GRADE: A

This was a well-outfitted gun for the money. If we were in the market for a new 1911, we'd consider the threaded-barrel model over the company's other offerings that lack the feature.



See full review February 2019

Action	Semi-auto single action
Overall Length	9.75 in.
Overall Height	6.0 in.
Maximum Width	1.25 in.
Weight Unloaded	41.0 oz.
Weight Loaded	46.6 oz.
Barrel	5.5 in., stainless steel; thread pitch .578-28
Magazines	(2) 8-round black-steel single stack
Slide	7.5 in. long, 1-piece machined carbon steel
Slide Retraction Effort	15.5 lbs. uncocked; 9 lbs. cocked
Frame	Matte-black carbon steel
Grips	Checkered black-and-brown laminate
Grip Thickness (max)	1.4 in.
Grip Circumference (max)	6.0 in.
Sight, Front	.0.256 in. post, white dot, dovetailed
Sight, Rear	1-dot, windage adj., suppressor height
Sight Radius	6.6 in.
Trigger	4.0 lbs. pull weight
Trigger Span	2.8 in.
Safeties	Frame-mounted left side lever; beavertail
Warranty	Limited 2 year
Telephone	(800) 243-9700
Website	Remington.com

BERETTA APX CARRY JAXN920 9MM LUGER, $398

GUN TESTS GRADE: A (BEST BUY)

The Beretta APX Carry builds upon the proven Nano and borrows from the full-size and compact APX pistols. The result is a desirable combination of features, including good reliability and practical accuracy.



See full review October 2019

Action Type	Locked breech, striker fired, DAO
Overall Length	5.63 in.
Overall Height	4.16 in.
Maximum Width	1.0 in.
Weight Unloaded	19.8 oz.
Weight Loaded	22.4 oz.
Slide Material	Forged Steel
Slide Retraction Effort	16.0 lbs.
Receiver Material	Polymer
Finish	Black
Front Strap Height	1.3 in.
Back Strap Height	3.0 in.
Barrel Length	3.0 in.
Grip Thickness (Max)	0.9 in.
Grip Circumference (Max)	5.6 in.
Magazine	(1) 6- and (1) 8-round
Rear Sight	Drift adjustable
Front Sight	Removable front post
Sight Radius	4.5 in.
Trigger Pull Weight	5.7 lbs.
Trigger Span	2.6 in.
Safety	Lever in trigger, firing-pin block
Warranty	1-year limited
Telephone	(800) 573-4445
Website	Beretta.com
Made In	USA

RUGER PC CARBINE 19100 9MM LUGER, $649

GUN TESTS GRADE: A

The PC Carbine is versatile, with modular magazine-well inserts for Ruger and Glock pistols. It is also a takedown, so it's appropriate for survival or prepper scenarios. Accuracy was okay, and the factory peep sight convinced us a red dot was the best sight choice.



See full review April 2019

Action Type	Semi-Automatic, blowback
Overall Length	32.0 to 34.37 in.
Overall Height	6.0 in.
Overall Height (w/optic)	7.25 in.
Weight Unloaded	6.8 lbs.
Weight Loaded (17-rnd. mag.)	7.2 lbs.
Receiver	Aluminum alloy
Barrel	16.12 in. long; 1:10 RH twist, threaded, fluted
Muzzle Device	None
Stock	Synthetic, rubber buttpad, adj. LOP
Length of Pull	12.62 to 14.12 in.
Magazine	(1) 17-round
Sights, Front	Protected blade
Sights, Rear	Adj. ghost ring
Trigger	5.1 lbs., single stage
Safety	2-pos. crossbolt button
Telephone	(888) 220-1173
Website	Ruger.com
Made In	USA



The carbine takes down into two components and does not require any tools. The carbine needs to be disassembled to replace the magazine well, but that process is straightforward and simple. The takedown mechanism is robust and quick to use. It takes about a quarter-turn before the barrel can be pulled from the receiver.

ROSSI R92 MODEL 920442093 44 REMINGTON MAGNUM, $560

GUN TESTS GRADE: A

The R92 is a modern take on the iconic Winchester Model 1892 rifle. This rifle offers nostalgia with modern refinements. What made the original '92 great for hunting and defense is what makes the R92 great for hunting and defense.



See full review May 2019

Action Type	Lever-action, exposed hammer
Overall Length	37.25 in.
Overall Height	7.0 in.
Weight Unloaded	5.6 lbs.
Weight Loaded (10-round mag.)	6.0 lbs.
Receiver	Stainless steel
Barrel	20 in. long; 1:30 RH Twist
Finish	Bright stainless
Stock	Smooth hardwood, steel buttpad
Length of Pull	13.25 in.
Magazine	10-round tube
Front Sight	Blade
Rear Sight	Adjustable buckhorn
Trigger	4.3 lbs., single-stage
Safety	2 position
Warranty	1 year
Telephone	(800) 948-8029
Website	RossiUSA.com
Made In	Brazil



Notice the circular cut in the Rossi loading port. This makes it easier to load cartridges in the magazine tube. We fit 11 rounds in the tube. At the range, the Rossi is quite capable of MOP (minute of pig) with SIG V-Crown ammunition.

BROWNING X-BOLT HELL'S CANYON LONG RANGE MCMILLAN BURNT BRONZE 035395291 6MM CREEDMOOR, $2400

GUN TESTS GRADE: A

A little long for the deer blind, this is a superior varminter that could shoot in competition.



See full review August 2019

Action Type	Bolt, 3 lugs
Overall Length	47.5 in.
Barrel Length/Twist	26.0 in.,1:7 in.
Overall Height w/o Scope Mount	6.3 in.
Weight Unloaded	8.06 lbs.
Weight Loaded (108 grain, 4+1 rounds)	8.31 lbs.
Sight Radius	NA
Action Finish	Cerakote
Barrel Finish	Cerakote
Magazine Capacity	4 rounds
Magazine Type	Detachable rotary box, flush fit
Stock	McMillan Game Scout carbon fiber
Drop at Comb	1.1 in.
Drop at Heel	1.2 in.
Bedding	Aluminum pillar
Buttplate	Pachmayr Decelerator, rubber
Length of Pull	13.75 in.
Receiver Scope-Base Pattern	20-MOA Picatinny
Trigger Pull Weight	3.56 lbs.
Safety	2-position, tang mounted
Warranty	None written
Telephone	(800) 333-3288
Website	Browning.com
Made In	Japan/USA



Left: If the goal was a reduction in felt recoil, Browning's muzzle brake was the icing on the cake, spoiling us when compared to the other two rifles. We also credited the geometry of the McMillan stock.

IVER JOHNSON PAS COPPERHEAD 12 GAUGE, $401

GUN TESTS GRADE: A

The Iver Johnson pump-action shotgun has good features that were overshadowed by the snake-scale-like finish. The action is smooth enough and never failed to feed, chamber, fire or eject. Overall, this is a solid, reliable shotgun that gets a solid A rating.



See full review September 2019

Action Type	Manual pump , dual action rails
Chamber Size	3.0 in.
Overall Length	38.5 in.
Overall Height	5.0 in.
Capacity	4+1
Weight Unloaded	5.9 lbs.
Weight Loaded	6.8 lbs.
Barrel Length	18.5 in.
Metal Finish	Snake-scale-pattern aluminum alloy
Choke	Cylinder
Grip	Pistol style, with ridges
Buttstock	Synthetic with recoil pad
Buttstock Length of Pull	14.1 in.
Forend	Ribbed synthetic with belled back
Front Sight	Post
Rear Sight	None
Trigger Pull Weight	7.2 lbs.
Safety	Crossbolt, rear trigger guard
Warranty	Limited 1 year
Telephone	(321) 636-3377
Website	IverJohnsonArms.com
Made In	Turkey



All of the shotguns loaded through an under-the-barrel port (arrow above) into a tubular magazine. Here, the shooter shoves a shell onto the ramp, then further into the tube until the magazine is filled.

REMINGTON 870 YOUTH MODEL 25561 20 GAUGE, $330

GUN TESTS GRADE: A- (OUR PICK)

The Remington had advantages out of the box. These included ideal weight and a smooth action and trigger. When we compared the Remington 870 20-gauge Youth Model to the other shotguns, however, the Remington did not dominate. As an example, the other shotguns each have a magazine capacity of four shells. When you already have a limited magazine capacity and you are keeping the piece at home ready with the magazine loaded but not the chamber, this may be important. Despite its higher price, the Remington shotgun is not drilled and tapped for a red dot or shotgun scope. This was somewhat overshadowed by the Remington's performance on the firing range. This was the smoothest shotgun tested and one that ran combat drills very smoothly indeed. We would purchase the Remington for home defense.



See full review February 2019

Action Type	Pump, dual extractors, twin action bars
Chamber Size	3.0 in.
Overall Length	40.5 in.
Capacity	4+1
Weight Unloaded	6.2 lbs.
Barrel Length	21.0 in.
Barrel	Blued steel
Receiver	Blued steel
Choke	Modified
Buttstock	Wood laminate with recoil pad
Buttstock Length of Pull	13.0 in.
Forearm	Wood, Laminate
Sights	Single bead
Trigger-Pull Weight	6.6 lbs
Warranty	Limited Lifetime
Telephone	(605) 347-4686
Website	Remington.com
Made In	USA

Shooting Accessories Picks

CYA IWB, $38

This holster for the Glock 43 is available from CYASupply.com. The holster was tested in flat dark earth, carbon fiber, and black finish. This allowed three raters to test this holster independently. The holster is secure, providing the wearer uses a quality gun belt; the same is true with all the holsters. Retention is good. Ideally, the holster should demonstrate a good, tight fit that isn't easily overcome with a slow draw but which is fast when a hard tug is given. The CYA holster performed in that manner. We held the holster and an unloaded gun upside down and shook the holster. Retention did not fail. The holster is provided with an Allen wrench to tighten the holster and adjust tension. It came out of the box properly set. Comfort is as good as any other holster. One rater had recently had a hernia operation and found that the holstered Glock 43 did not impede his movement. And, although skeptical at first, he found speed and access superior to the IWB holster he had worn behind the hip.



CYA IWB

GUN TEST GRADE: A (BEST BUY)

Wright Leather Works Banshee, $108

This holster is available from WrightLeatherWorks.com. The Banshee is what Wright calls a pancake-style IWB. Pancake holsters are designed to hug the body and offer excellent concealment. Adding reinforced spines and IWB belt loops to the pancake results in a viable IWB holster. The Banshee features a high sweat guard or body shield and a reinforced holstering welt. The holster features good stitching and easy-on-and-off loops, but it may be ordered with tuckable deep-concealment straps. The Banshee isn't as tightly molded as some holsters, so the holster has a flat profile. Retention is good, yet the holster offers a fast draw, with a minimal break-in period. There are three holes in each holster wing that allow a wide range of adjustment for angle and cant. A neutral to severe angle is possible with these adjustable belt loops. We tested the holster in several renditions including examples for the Government Model 1911, Commander 1911, Browning Hi-Power, and Smith & Wesson J-frame 2-inch-barrel revolver. The design worked well for each handgun.



Wright Leather Works Banshee

GUN TEST GRADE: A (OUR PICK)

Safariland Six-Shot Speedloader, $12.68

The Safariland speedloader is all plastic and seems durable. A set that one of the raters has had in use for perhaps a decade showed fraying and chips from being dropped around the outer edges, but it still worked fine. The Safariland loader differs from the HKS. There is no unlocked position achieved by turning the knob. If a gun load isn't in the loader, it is unlocked.



The ammunition is loaded, and the knob is pushed up and to the right. While we did not have access to the internals, this appears to spring-load the speedloader for a rapid release of the gun loads. We dropped several Safariland speedloaders and were not able to dislodge the gun load. We had on hand six loaders, and the total number of drops for loaded speedloaders was 18 without failure or losing the gun load. Loading in the revolver cylinder is the same as the HKS. The release is both different from the HKS and fast and positive. The cartridges are pressed into the chambers and the body of the Safariland loader is pressed forward. There is no turning of the knob; the gun load is released into the chambers without any other motion. The Safariland speedloader never failed to work properly in more than a dozen loads with each individual speedloader on hand. We like this system. A tiny bit more effort is needed to prepare the Safariland device, but loading the revolver with this speedloader is fast, positive, and natural. This advantage might be a lifesaver, and we like it very much.

Our Team Said: The Safariland costs more than the HKS, but the former is faster, and it costs less than speedloaders that do not work any better or do not work as well.

GUN TESTS GRADE: A OUR PICK

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Federal Hunter Match 22 LR 40-Grain HP 720

At a good price of $39.99/500 from TargetSportsUSA.com, this load achieves 1030 fps from the Smith & Wesson revolver's 6-inch barrel. The combination of energy, expansion (see image below), and penetration makes this a good choice. We liked the performance of this load. The nickel-plated cases should make for reliable function and non-stick extraction in any firearm, particularly self-loading handguns. Penetration was deep for the 22 at 15 inches, and the bullet reliably expanded to .27 to .29 caliber. Federal's advertising claims this rimfire load was developed for use in long-range hunting with the rimfire. We think that the design and performance are excellent.



GUN TEST GRADE: A

Walker's Razor Slim, $70

These earmuffs are available at the WalkersGameEar.com site. The Walker's Razor muffs are comfortable to wear, with no C-clamp effect on the head and ear cups that are sized in-between the Venture Gear and Champion units. The outside of the ear cups are also tapered so there is less knocking of the ear cup against the stock when mounting a long gun. The Razor uses two microphones so the headset can be worn with microphones facing front or rear.



See full review July 2019

The $30 Rescue Essentials Tactical Ankle Medical Holster featured Velcro closure, MOLLE loops, two pockets and a voluminous nylon and elastic pouch. There was also a velour liner for added comfort. This was a sturdy, hard-use piece of equipment that proved to be a secure kit, providing easy access for emergency trauma gear.

GUN TEST GRADE: A



Walker's Razor Slim

The volume control is a gnarly knob with excellent serrations that offer great texture when operating with or without gloves. The headband is padded and made of a synthetic material that is easy to wipe clean. The outside of the headband is

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— *continued from page 31*



a cloth material. The battery compartment offers easy access. The auxiliary jack input comes with a rubber plug so there is no chance of moisture getting into the electronics. In our opinion, the Walker's was the most comfortable to wear of all the units tested. We still used ear plugs with them at the indoor range. We also felt the Razor was more friendly to eyewear and that maybe was due to the soft ear cushions in the cups. There was a slight bit of hiss when we turned the volume high. With the wind blowing a brisk 5 mph during one outdoor range session, we could hear the wind in the microphone. Some of our testers who have used Howard Leight earmuffs for years appreciated the Walker's Razor design.

Our Team Said: The Walker's Razor is well suited for the recreational shooter and hunter. This unit is less bulky than the Venture Gear and the Champion units. We liked the auto shut off on this unit as a measure to prevent battery drain.

GUN TESTS GRADE: A

COMING UP IN GUN TESTS

● Part of owning a firearm is being responsible for the care and storage of it while not in use. Safely storing firearms in lockers or safes is important, especially for those with children or anyone not familiar with gun safety and handling living in the home. While we can all dream of having a 50-gun safe bolted to the floor, some situations call for a smaller, simpler option. The safes in this test were chosen with size in mind for safe storage and access control when space and portability are paramount: the Boyt Secure Vault, the GunVault NanoVault 200, the Liberty Safe HD-90, the Hornady RAPiD Safe 2600, and a GunVault MultiVault Biometric.

● Single-Action Rimfire Revolver Shoot-out: Inexpensive revolvers go head to head. Tested: Chiappa 1873, Heritage Rough Rider, Ruger Wrangler, and Traditions Rawhide Rancher.

● Guns For Older and/or Disabled Shooters: Choosing a handgun is a daunting proposition for some folks. We offer a number of excellent choices and certainly eliminate bad choices by focusing on what's best for home defense and general shooting.

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