





Ruger's SR-556

**Ready To Run,
Right Out of the Box**

While it may be a bit late to the party, Sturm, Ruger & Co. has redefined America's most popular semi-automatic rifle, imbuing it with a shootability that has become the company's hallmark.

BY GLENN M. GILBERT, Shooting Editor

Countless firearm manufacturers are making AR-15-style rifles, and for good reason. Almost every gun owner who doesn't have one wants one; and almost everyone who has one wants another one—or more. As a result, manufacturers large and small have back orders that stretch into next year and I don't have to tell anyone who reads this magazine that gun stores can't keep them in stock even when they are priced well above the MSRP.

Years ago, when I answered "Dope Bag" letters, one of the most frequent questions we received was "How can I improve the accuracy of my Mini-14?" I always offered Accuracy Systems as an excellent source for this type of work, but it was difficult to restrain myself from advising, "If you want an accurate semi-automatic rifle or carbine in .223 Rem., why not buy an AR-15. They'll shoot 1½ m.o.a. out of the box with match or varmint loads, and most of them will shoot much better than that."

I am always pleased when a fellow shooting enthusiast recognizes the capability and utility inherent to the AR-15 design. And I am especially thrilled when a manufacturer like Ruger so clearly sees the light and warmly embraces the AR-15 platform as it has with its new SR-556. Like Jesus of Nazareth, I'll take all converts and welcome them to the fold, no matter whether they join the flock at dawn, at midday or at dusk. In the past, Ruger has seemingly been embarrassed by the success of its semi-automatic rifles. Only in the past few years has Ruger taken steps to improve the accuracy and utility of its most popular semi-automatic rifle, the Mini-14.

With the SR-556, Ruger has taken a bold leap into the pool. One look at the gun and you can see that Ruger makes no apologies for the SR-556. It is what it appears to be: a semi-automatic rifle in .223 Rem. that accepts standard, AR-15 30-round detachable magazines. More than that, it has all of the bells and whistles we associate with a top-of-the-line gun, including a six-position, M4-style collapsible stock, a quad-Picatinny rail, fold down iron sights and of course, a muzzle brake.

But with this gun Ruger has designed and built more than just another tricked-out AR-15-style rifle. For its SR-556, Ruger dispensed with the standard direct-gas-impingement operating system of the AR-15 built around a gas tube and developed a short-stroke piston system of its own design. Piston guns are in many ways a microcosm of the broader market for AR-15-style rifles. Even though they are expensive, suppliers can't keep up with demand. Piston guns are rapidly growing in popularity, either as complete guns or as conversion kits, because they offer the promise of a gun that is less prone to carbon build-up in the receiver and hence more reliable.

In reality, piston guns certainly run cleaner and cooler, but their superiority in terms of more reliable operation remains unproven. That a gun with a piston-based operating system should have better potential reliability than one built around a gas tube that dumps carbon directly into the bolt carrier seems to be self-evident. Generally, that may be true, but when you replace the AR-15's gas tube with a piston without a lot of testing and development, you can create more problems than you solve.

The trouble centers around the AR-15's bolt. Its weight and other design elements are optimized for best reliability in combination with a gas tube. If energy

is transferred to the bolt indirectly by means of a piston or tappet rod rather than directly through a gas tube, the weight of those components can rob the bolt of the energy necessary to cycle reliably. That is not to say that a piston AR can't work, just that converting an AR into a piston gun is a lot tougher than it looks.

Since I opened up that can of worms, let me start this examination of Ruger's SR-556 by describing its new operating system and the bolt that goes with it. The SR-556 has a short gas piston and a patented four-position gas regulator. Located at the front of the gas block, the regulator is knurled so the user can adjust it by hand. Should the regulator bind from heat or fouling, the knob has a circular through-cut so it can be turned with a cleaning rod or punch. The four positions are indexed 0, 1, 2, and 3. At the 0 position, the regulator completely closes off the gas port so the action can only be cycled manually. Positions 1, 2 and 3 indicate successively larger apertures for increased gas flow through the gas block from the gas port to the piston.

The SR-556 manual states that most ammunition will cycle the gun properly with the regulator set at number 2 aperture. Users should select the smallest aperture consistent with reliable functioning. Using a larger aperture than necessary offers no measurable advantage, and the only result will be accelerated wear. The largest aperture, indicated by the number 3 setting, should be reserved only for use with significantly underpowered commercial ammunition or for when the gun is heavily fouled. At the lower settings, a vent at the bottom of the gas block bleeds excess gas and carbon.

All of the components of the operating system, including the piston, transfer rod, bolt and bolt carrier, are chrome-plated for greater wear and corrosion resistance, as well as enhanced lubricity.



SHOOTING RESULTS (100 YDS.)

.223 REM. CARTRIDGE	VEL. @ 15' (F.P.S.)	ENERGY (FT.-LBS.)	GROUP SIZE IN INCHES		
			SMALLEST	LARGEST	AVERAGE
FEDERAL 55-GR. SIERRA GAME- KING HPBT	2966 Avg 22 Sd	1,074	1.28	2.03	1.66
WINCHESTER 55-GR. BALLISTIC SILVERTIP	3015 Avg 18 Sd	1,110	1.13	1.86	1.43
M855 BALL 62-GR. FMJ	2876 Avg 21 Sd	1,139	1.83	2.64	2.21

AVERAGE EXTREME SPREAD

1.70

MEASURED AVERAGE VELOCITY FOR 10 ROUNDS FROM A 16" BARREL. RANGE TEMPERATURE: 61° F. HUMIDITY: 57%. ACCURACY FOR FIVE CONSECUTIVE, FIVE-SHOT GROUPS AT 100 YDS. FROM SANDBAGS. ABBREVIATIONS: FMJ (FULL METAL JACKET), HPBT (HOLLOW-POINT BOAT TAIL), Sd (STANDARD DEVIATION).



RUGER SR-556

MANUFACTURER: STURM, RUGER & CO. (DEPT. AR), 411 SUNAPEE ST., NEWPORT, NH 03773; (603) 865-2442; WWW.RUGER.COM

CALIBER: .223 REM./5.56x45 MM NATO

ACTION TYPE: GAS-OPERATED,

SEMI-AUTOMATIC CENTER-FIRE RIFLE

RECEIVER: HARD-COAT ANODIZED, FORGED ALUMINUM UPPER AND LOWER,

BARREL: 16¼", MANGANESE-PHOSPHATE-COATED COLD-HAMMER FORGED 41V45 STEEL, CHROME-LINED BORE

RIFLING: SIX-GROOVE, 1:9" RH TWIST

MAGAZINE: 30-ROUND DETACHABLE BOX

SIGHTS: TROY INDUSTRIES BATTLE SIGHTS; FLIP-UP FRONT POST DENTENT ADJUSTABLE FOR ELEVATION (1-MINUTE CLICKS); FOLDING REAR APERTURE FINGER-ADJUSTABLE FOR WINDAGE (1/3-MINUTE CLICKS); PICATINNY RAIL FOR MOUNTING SCOPE/RED-DOT SIGHTS

TRIGGER PULL: SINGLE-STAGE; 6 LBS., 14 OZS.

STOCK: SIX-POSITION ADJUSTABLE; LENGTH OF PULL, 14" (EXTENDED); DROP AT HEEL, 3/4"; DROP AT COMB, 3/4",

OVERALL LENGTH: 36" (BUTTSTOCK EXTENDED) 32" BUTTSTOCK FOLDED

WEIGHT: 7 LBS., 15 OZS.

ACCESSORIES: THREE 30-ROUND MAGPUL MAGAZINES, OWNER'S MANUAL

SUGGESTED RETAIL PRICE: \$1,995

The firing cycle is also worth describing in detail. When the SR-556's trigger is pulled, a portion of the expanding propellant gases pass through a port in the barrel and flow through the gas block. Energy produced by the expanding gases drives the short gas piston rearward. The piston pushes the transfer rod, which then strikes a flat-faced lump on the top of the bolt carrier. The lump is an integral part of the bolt carrier so there are no carrier key screws that can break or work loose. As the carrier travels rearward, it rotates the bolt, unlocking it from its seat in the barrel extension. An M4-style buffer and recoil spring in the tubular receiver extension return the bolt and carrier into battery. A coil return spring wrapped around the transfer rod returns the transfer rod and the gas piston to their original positions at the start of the firing cycle.

Externally the SR-556 has a mix of familiar AR-15-style features and new enhancements added to improve its utility and performance. The lower receiver is forged from aircraft-grade aluminum. The right side of the

receiver has a fenced magazine release button and the left has a two-position safety lever with a standard 90-degree throw. A neoprene pistol grip from Hogue is standard. Its three finger grooves and the hand-filling contour of its backstrap aid shooting comfort and stability. An M4-style, six-position collapsing buttstock is fitted to the lower receiver extension. The toe of the stock has a slip ring for attaching a sling, but no corresponding front mounting point is supplied with the gun. The flat-top upper receiver is also forged aircraft-grade aluminum. It has an integral picatinny rail, spring-loaded dust cover and a forward-assist plunger. Considering it retains the non-reciprocating charging handle of the original AR-15, I think the latter feature is a necessity.

A 10"-long Troy Industries quad rail is precisely fitted to the upper receiver. The gaps between the mounting points at the top of the receiver, the one-piece Troy rail and the gas block are commendably small. Additionally, there are no steps at any of the

Taking apart the Ruger SR-556 reveals a mix of old and new. It uses a standard, AR-15-style lower and upper receiver, bolt, firing pin and charging handle. Ruger states that the transfer rod, housed in the fore-end, should not be removed by the user. The gas piston and its four-position regulator are housed within the gas block (inset). An integral lump on top of the bolt carrier (right) has a flat face that redirects energy from the piston and transfer rod to the bolt assembly.



joints, so the hard points of all three assemblies are all on the same plane. They are also numerically indexed to aid zero retention when optics and shooting assemblies are removed for cleaning, travel, storage or repair. For comfort, the rail is supplied with three slip-on handguards that help prevent the hard points from abrading the support hand. Circular vents between the rails help the fore-end shed heat.

The quad-rail fore-end leaves the SR-556's barrel free-floating along its entire 16¼" length. Cold-hammer forged in-house by Ruger from chrome-moly vanadium 41V45 steel, its bore is chrome-plated for longer wear and corrosion resistance. Ruger chose a 1:9" rifling twist, which should be sufficient to stabilize all but the heaviest bullets available for the .223 Rem. A brake clearly inspired by Ruger's own Mini-14 is threaded to the muzzle. Forward of the gas block, the barrel's exterior diameter measures 0.702"

The SR-556 is supplied with folding front and rear sights, which are also sourced from Troy Industries. Both units are adjustable. The front post

The trigger of Ruger's SR-556 is a single-stage unit. The trigger of the test gun broke at 6 lbs., 14 ozs. with little discernible creep or overtravel.

is adjustable for elevation in 1-m.o.a. increments and the rear aperture is adjustable for windage in 1/3-m.o.a. increments.

The non-adjustable trigger is a single-stage unit. The trigger of the test gun broke at 6 lbs., 14 ozs. with little discernible creep or overtravel.

In order to test the SR-556's accuracy potential, I mounted a Leupold M8 Compact scope with rings from Warne. As the accompanying table shows, its accuracy was comparable to most factory AR-15-style



RUGER SR-556

carbines we've tested. It showed a decided preference for lighter bullets, particularly the 55-gr. Ballistic Silvertip load from Winchester.

The gun is supplied with three top-of-the-line 30-round-capacity polymer magazines from MagPul. There were no failures to feed fire or eject with the supplied magazines or any of the aftermarket magazines from Midway USA or Brownell's that I chose for my range session.

Once the accuracy testing was completed I swapped the Leupold scope for an EOTech HWS in order to get a measure of the SR-556's handling qualities. The weight of the quad rail, gas piston mechanism and thick barrel put the point of balance forward of the receiver. Accordingly, the SR-556 swings a little slower than a comparable direct-gas M4-style carbine, but it is also more stable and smooth when transitioning from target to target. Since it was a little front-heavy, I found that a forward grip like the Crimson Trace MVF515 helped me support the additional weight. As expected, the receiver stayed cool even during the most demanding rapid-fire drills. The gas block and the front of the rail got hot, but I never found that impeded proper gun handling or shooting comfort.



Controls include a two-position safety lever and a bolt stop paddle. The magazine follower automatically engages the bolt stop when the last round is fired.

With all of its standard features and its new gas system, it is no surprise that the SR-556 comes in at the high end of the price range for AR-15-style rifles. But if you consider the cost of a complete piston gun or even a conversion kit, I would say that the SR-556 represents a significant value. In the end, Ruger may be a latecomer to the black rifle party, but from looking at the SR-556 it is clear that it has shown up ready to celebrate. The SR-556 is the result of a great deal of consideration, research and planning. Admittedly, it is something I thought I would never see, a black rifle that is uniquely a Ruger. 🦋