

1 MINUTE PER REVOLUTION

POF'S NEWEST PISTON GUN
DELIVERS AR-10 PERFORMANCE
IN AN AR-15 PACKAGE

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With every man and his dog making ARs these days, it takes something rather unusual to make it into the pages of RECOIL. Patriot Ordnance Factory has been teasing the 7.62 NATO Revolution for some time now, and we were given a sneak peek over a year ago while it was in its direct impingement (DI) form. Now that a piston-driven production version has been released, we decided to see if it lived up to the hype.





The Revolution's main claim to fame is that it manages to cram 7.62 performance into a 5.56 form factor. Separate the receivers, and you'll find that the Revolution upper will drop right onto a Mil-spec mousegun lower. The reverse isn't true, however, as extra material in the 7.62 lower's bolt hold open catch prevents a 5.56 upper from seating all the way — we were tempted to break out the Dremel just to prove a point but figured the guys at POF might not appreciate us hacking up their baby for a photo op. Still, the pinholes are in the same locations, relative to both calibers.

This similarity in size carries over to the bolt carrier group. While we've all gotten used to Armalite and DPMS pattern BCGs having a fatter forward section in order to accommodate a bigger case head, the Revolution's carrier

Revolution's short-stroke piston BCG next to a DI AR15's. Although they're the same external dimensions, there's a lot of work that went into opening up that bolt face. And yes, we'd rather shoot them than clean them.

Bottom left: Viewed from above, changes to the stock AR-10 lower receiver geometry become apparent when placed next to its little brother.



drops straight into an AR-15 upper. The bolt won't slide into an AR-15 barrel extension, giving the first clue that POF's engineers have managed to squeeze every last drop of performance out of the available real estate.

These days, we're blasé that the small frame AR platform can be chambered in some pretty outrageous calibers, but there's always a limit as to how much horsepower can be wrung out of a cartridge that still fits into its magwell. There's no getting away from the facts that a 5.56 case head measures 0.378 inch in diameter, and Carpenter 158 steel has a tensile strength of 160,000 psi. Reality imposes finite limits; once you start removing material in order to fit larger shells, you eat way at both bolt lifespan and any safety margin. A x39 or Grendel case is about the widest that can safely slide into the space between the AR-15's bolt lugs, at a cost of reduced chamber pressure and life expectancy. To expect a 0.473-inch diameter .308 case running at 62,000 psi to function in Stoner's smaller design is a big ask.

SCIENCE!

To achieve the goal of fitting the larger round into a smaller space, some serious number crunching went on behind the scenes, along with the application of advances in materials science. According to our calipers, bolt lugs were made 10 thousandths of an inch wider and 5 thousandths longer. The area immediately behind the lugs grew in diameter, and a bigger extractor sneaked in, while more material was also added between the lugs. In short, every possible way to add strength back into the bolt was exploited, without increasing the overall size when mated to its barrel extension.

Finally, as stronger steel than was available in the 1950s is now a reality, a "super alloy" was selected as the billet from which the bolt would be cut. Which one? Well, we posed that question to POF's founder, Frank DeSomma who was understandably reticent. "Look, if someone wants to buy my gun and perform spectrographic analysis on the bolt, then I can't stop them, but I'm not going to hand over that infor-



mation on a plate. I will say that we've tested it down to negative 110 degrees, and had less than 5-percent reduction in strength, which might give a clue."

Another major sticking point for the AR-10 has been the location and size of its gas port. Proof Research came out with their CAMGAS system last year, shifting the port closer to the muzzle for reduced dwell time and smoother operation, while others resort to Band-Aid solutions such as heavier buffers in order to delay unlocking through increased inertia. If the problem isn't addressed by whatever means, then premature unlocking can occur, leading to the telltale symptoms of case head swipe, difficult extraction, or, in some cases, the extractor's ripping entirely through the rim.

With an AR-15-sized BCG, the Revolution was already behind the curve

Inside the trigger guard lies the Revolution's ambi bolt hold open button. Note: QD pockets in receiver endplate.

with respect to the amount of inertia its reciprocating parts could apply to the unlocking conundrum, so POF took a different approach. Recognizing that adding weight to the carrier and buffer was the exact opposite tactic of that employed by three-gunners in order to reduce recoil, their engineers embraced the less-is-more philosophy, sent the carrier to fat camp, and concentrated on tuning the gas system. As a result, the Revolution is one of the smoothest-shooting .308s we've ever picked up.

Its short-stroke piston is the same as found in the rest of the company's lineup. But in this case a rifle length gas system is teamed with a 16-inch barrel, leaving a scant 2.75 inches or so between gas port and muzzle, minimizing the amount of time the gas system is pressurized and eliminating premature unlocking problems.

Further damping recoil from the 7.62 round is an effective muzzle brake, featuring three lateral ports and measuring a full inch in diameter. It's brutally efficient at redirecting gases as they emerge from the muzzle, though it increases dust signature if fired when not completely level. We tried it in brokeback prone and lost the target in the resulting haboob. Other neat touches include a fluted, medium profile barrel, encased in a 15-inch-long M-Lok handguard.

This forms part of the insurance policy the user buys in order to mitigate any risk from stuffing a .308 where a .223 should go, as there's an additional top rail machined into it which slides over the one found on the upper receiver, reinforcing this area. Its oversized, heat sink barrel nut is likewise strengthened by a solid sec-

tion of handguard, giving a bit more reassurance regarding the thickness of its skinny chamber walls under the barrel extension.

Moving to the lower receiver, the user benefits from a full set of ambi controls, including bolt hold open. This is the one feature that most ARs lack, and need, as its value only becomes apparent when it's most important — i.e., that time when you're trying to get the weapon back up and running during stoppage drills. It's so much more convenient (and faster) to rack the charging handle with your support-

Filthy after its baptism of fire, it just keeps chugging along. Trijicon's 1-8 proved to be equally robust.

side hand while locking the bolt to the rear without changing your master grip, something that right-handed shooters struggle with on a conventional setup. In this instance, a wide button extends into the trigger guard and is actuated by pressing upward with the trigger finger of either hand.

When it comes time to change mags, lefties gain back a little advantage. Due to its wider magwell, the Revolution's right-side magazine release button sits below the receiver's surface, and the fence surrounding it lacks the smooth radius found on

the AR-15. It works fine with nekkid digits, but it's a little tight when wearing gloves and could use opening up slightly. Lighting off primers is taken care of by POF's drop-in, single-stage trigger, which is non-adjustable and breaks cleanly at 4 pounds, 8 ounces, with a short, tactile reset.

ROUNDS DOWNRANGE

As this was a .308 masquerading as an AR-15, we decided to take it up on its pretensions and drag its ass to a carbine class. Dan Brokos (featured elsewhere in this issue) invited us



along to a vehicle and urban CQB course he was teaching to the fine gentlemen of the Statesville, North Carolina, police department's Emergency Response Team, so we elected to take our test gun with us. The testing protocol was simple; everything the SWAT team was doing with their patrol carbines (which ranged from privately purchased 16-inch guns to select-fire 10.5's), we'd attempt to do with a 7.62x51, shooting 175-grain M118LR. Game on.

We'd usually prefer mounting a light to the right of the POF's four-position gas plug, but got lazy and stuck it up top in the Pic rail. It worked just fine and didn't obscure the scope.

Not wishing to be handicapped by optics, Trijicon's 1-8x28 Accupower scope was added to the mix, along with an older Leupold Deltapoint in a Burkett offset mount. Rounds were fed from either PMAGs or Lancer 20 rounders, and a SureFire X300 occupied the 12 o'clock position for the low-light portion of the class.

For five days, the class shot from every position you could think of, from, through, under and over vehicles, around cover, through glass, and from

100 yards to muzzle contact distance. We applied oil at the start of the course, then the gun wasn't touched for maintenance until it was broken down in the studio for this article. We ran an entire case of ammo through it, then added a few boxes of various flavors and bullet weights when we got home, just for good measure. These ranged from 150-grain factory loads to our favorite 110-grain Nosler coyote destroyers, handloaded over 48 grains of IMR 8208 XBR.





M118LR produced sub-MOA groups. We had two stoppages, both of which were failures to strip the first round from a fully loaded magazine, resulting in the case partially entering the chamber — after this, we downloaded to 19 rounds and had no other issues. The Revolution kept up with guys running 55-grain ammo and in Brokos' 10 shot Stance Check drill, allowed us to keep all rounds in the A zone at 10 yards with an elapsed time of 2.18 seconds. Figure 0.25 for reaction time, 0.3 to bring the gun up from low ready

From the side, the Revolution's receiver looks oddly truncated, like an obnoxiously loud Labrador with a docked tail.

and find the sights, then we're in the realm of 0.16 splits, which for a battle rifle is pretty damn good. What's not so good is the effect on everyone around you. Behind the gun is a great place to be; either side isn't. When using the rear of a Toyota for cover, we blew out the taillights with its muzzle blast. 5.56 carbines made signature carbon prints on the hood when shooting junkyard prone. The Revolution made divots.

We think there's about a ½ pound of fat still to be trimmed from the Revolution, be it from the barrel or upper

receiver. At 7.3 pounds, the 16-inch version still has a little way to go before it can truly claim to be a 10 in 15 clothing, but in the meantime, it's an absolute blast to shoot. We're looking forward to picking up a variant with a 14.5-inch barrel and shorter handguard, which at a hair over 7 pounds will no doubt bring a smile to even the most jaded user. While its non-NFA, pinned-and-welded status prevents us from adding a can, it'll be fun to shoot at a three-gun match. At least, it'll be fun for us. For the rest of the squad, not so much. **R**

SPEC BOX

PATRIOT ORDNANCE FACTORY REVOLUTION

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| CALIBER 7.62 NATO | ACCESSORIES PRS Atlas Bipod BT46 \$320 Trijicon AccuPower 1-8x28 \$1,700 SureFire X300U-A \$399 |
| BARREL LENGTH 16 inches | |
| OVERALL LENGTH 34.75 inches | |
| WEIGHT (UNLOADED) 7.3 pounds | |
| MAGAZINE CAPACITY 20 rounds | |
| MSRP \$2,700 PRICE AS FEATURED \$5,119 URL pof-usa.com | |