

TECH STUFF

We test and select premium components for the rifles we build but that doesn't mean they are the most expensive on the market. Rather, we have selected components that provide premium performance for each price point. This is a continuous process, so over time we may drop some components and will certainly add new ones.

So . . . why different price points? Simple -- every shooter deserves accuracy, but not everyone demands competition winning accuracy or features, and not everyone has the budget for a truly custom rifle.

Every rifle we build is guaranteed to give sub-MOA results with match ammo. However, some shooters want better than just sub-MOA, or they want to shoot at extreme distances, or want to reduce weight as much as possible. Our least expensive rifles deliver groups of less than 1" at 100 yards reliably in less expensive .223 Wylde and .308 chambering with 416R stainless steel barrels using 12X range optics. Moving up to premium optics, competition chambering, custom hand loads, longer barrels, or carbon fiber barrels will extend the effective range or reduce weight (or both) at a higher cost. You decide what's important to you, and we'll match a rifle package to your needs.

AR BARRELS and RECEIVERS

Our standard series rifles use barrels machined from **416R Stainless Steel** and each is proof fired and MPI tested, ensuring the best in quality and accuracy. They are generally a heavier contour than standard barrels, so are somewhat heavier. That's not an issue with most competitors but hunters and sport shooters may prefer a fluted steel barrel. It offers the same construction, testing and accuracy, but the fluting reduces weight, adds surface area for improved heat radiation – and also looks great.

Carbon fiber barrels are considered a top-shelf choice. They use 416R stainless barrel cores surrounded by either a carbon fiber wrap or carbon fiber sleeve. They are accurate, weigh less, conduct heat readily – and cost a lot.

Why stainless instead of the chrome-moly steel found on most AR rifles? The military specs chrome-moly for extended barrel life under extreme conditions. It's also cheaper than 416R stainless. 416R stainless is proven for accuracy. Sub-MOA performance requires stainless steel barrels. Each barrel has had the head spacing verified by the manufacturer and is checked by us prior to assembly.

We use **billet receivers** machined from **7075-T6** aluminum in our premium rifles. Our standard series use 7075-T6 aluminum forgings, which are as strong as billet, but considerably less expensive, or 6061-T6 aluminum which is less expensive still. Most competitive shooters prefer 7075 aluminum (and the military requires it) but 6061-T6 will last most people a lifetime.

Our billet receivers can offer full ambidextrous controls if desired. All will have ambi selectors and charging handles. All upper receivers include an integrated MIL-STD 1913 (Picatinny) rail. Handguards are machined from 6061-T6 aluminum, are free-floating, and accept M-LOK compatible attachments.

OTHER AR COMPONENTS

We use **drop-in triggers** from multiple manufacturers because they offer reliable, lighter pull weight (less than half of a typical AR fire control group), smooth feel, and short reset at a reasonable cost. They are available in various pull weights, as both single-stage or two-stage designs. Most of our rifles are built with single-stage triggers in the 3-3.5 lb range. Adjustable triggers are available.

Buffer tubes and buttstocks all offer adjustable length-of-pull and collapse for storage and transport. Buttstocks that adjust for height and cast are available. We offer grips by Ergo, Magpul and others.

Buffer weights and springs are selected based on caliber and barrel length. We install adjustable gas blocks and adjust gas blocks for reliable cycling while minimizing felt recoil. Adjustable gas blocks allow each shooter to tune the rifle for specific ammo or the addition of a silencer if desired. Our rifles have also have threaded barrels to allow installation of the preferred muzzle device.

Bolt Carrier Groups are machined from 8620 steel; available either in **QPQ nitride** (melonite) or **NiB** (nickel-boron) coated to reduce operating friction; and make cleaning quick and easy. All are shot peened and case hardened, and gas keys are staked per Mil-Spec. Bolts are machined from 9310 steel and also NiB or nitride treated.

ASSEMBLY & TEST

All rifles are **assembled and tested by us**. Receivers are lapped for optimum barrel fit, with barrel and receiver axes aligned during barrel installation with barrel nut properly torqued. Barrel extensions are installed with an interference fit into the upper receiver. Airflow through the gas system is checked during gas block installation. Buffer springs and weights and initial gas block adjustments are set based on prior testing, then adjusted as necessary during break-in and proof-testing of each rifle. Proof testing will be done with various match-grade ammo based on prior test results, our hand loads, or ammo supplied by the customer.

We generally use heavier buffers than the typical AR. Buffer weights and gas block adjustments are selected to slow down the cycling time, allowing the bolt to remain in battery longer. This ensures the bolt doesn't move until after the bullet has left the barrel, and reduces felt recoil. We also install muzzle brakes on every rifle. The combination results in a softer shooting rifle with less muzzle rise which makes follow-up shots quicker, generally improves accuracy, and is easier on the weapon.

Every rifle goes through a barrel break-in, which generally consists of an initial bore cleaning, firing a few shots of lightly loaded ammo, cleaning, firing again, etc. as recommended by the barrel manufacturer. The rifle will be set up with one of our test scopes or one selected by the customer, then test fired to verify sub-MOA accuracy. The gas block will be adjusted during this period.

Multiple bullets & loads may be tested to determine the optimum ammo for the particular rifle. The best bullet and load data along with a proof target would then be supplied, along with a proof target. Please keep in mind this is very time consuming and will result in additional charges.

OPTICS

Almost anything is possible here. Premium glass can easily cost as much as the rifle. In fact, many serious shooters spend more on the optic. We prefer to offer the rifle and scope as a package, with a scope selected based on the rifle specs and input (such as MOA or MRAD reticle preference) from each customer. That way, you are guaranteed a sub-MOA rifle out of the box. We will sell rifles without optics, or if you have a scope you want to use, you can send it to us and we will set up your new rifle with your current scope. Again, when you take it out of the case, it will be ready to shoot.

TRAINING

We will be offering training classes tailored to the unique challenges on long range shooting under competition conditions. The instructors will be either active duty or retired military marksmen who are also PRS competitors. It will consist of both classroom and range sessions. Class sizes will be small and individual attention is guaranteed.

BOLT-ACTION RIFLE TECH INFORMATION

The process is much the same as with our AR's. We use actions, barrels, triggers stocks or chassis that we know are reliable and will meet or exceed your expectations, based upon the information you provide. The differences will depend on the stated purpose for the firearm and shooter – and we will go over options with you prior to quoting a configuration or price. Generally, competition rifles will have longer, heavy contour barrels and be installed in a chassis; while hunting rifles will focus on light (for caliber) weight, often relying on carbon fiber components for hunters who will be hiking in search of game. There will typically be a greater variation in caliber for hunting rifles.

ASSEMBLY AND TEST

The process is much the same. It is basically a matter of taking time to ensure tight tolerances, and smooth reliable function. Barrel break-in, accuracy testing or ammo development are the same. Obviously, there is no gas system or buffer adjustment required. Triggers on competition bolt-action rifles may be adjusted for less pull weight than recommended for AR rifles or bolt-action hunting rifles.

OPTICS AND TRAINING

Optics for hunting are generally lower magnification and may include low-visibility options such as thermal imaging. Training is the same, although loading and making-safe operations will vary. Accessories will depend on the intended use and configuration of the firearm; this is one area where the AR stands out since there is such a variety, and they fit essentially every AR. However, many accessories, such as bags, tripods, etc. are platform independent.