



## Les Baer Custom Ultimate Super Varmint

*As any shooter or varmint hunter will tell you, an accurate rifle must be greater than the sum of its parts. For exactly this reason, Baer Custom Ultimate AR rifles are hand-built so that all parts fit precisely right out of the box.*

When Les Baer recently set his sights on developing a high-quality AR-15-type line of match rifles bearing his name, the quality/performance bar had already been moved to very high levels. An AR with the Baer name must exceed, not just meet, this constantly improving standard.

In similar manner to pistol manufacture, Baer found it necessary to control the various rifle manufacturing processes from the beginning so as to build the quality into the rifle from the



start and not add it on later. Baer began with forged aluminum alloy upper and lower receivers CNC-machined in-house to match-grade tolerances so that they fit together precisely and tightly. In addition, Baer decid-

ed to manufacture the gas block, carrier, bolt and extractor as outside suppliers could not meet the quality standards sought. The gas block is of his own design, and the bolt carrier is another patented, fluted Baer

design. Another critical item Baer had to make in-house was an adjustable, free-floating handguard and locking ring. To assure accuracy, Baer added one

### SHOOTING RESULTS

.223 Rem. Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Recoil (ft.-lbs.)	Smallest (inches)	Largest (inches)	Average (inches)
Norma No. 223BD 55-gr. HP	2986 Avg. 13 Sd	1,089	1.8	0.46	0.69	0.61
PMC No. 223SMA 52-gr. HP	2895 Avg. 27 Sd	968	1.7	0.46	0.81	0.80
Federal No. P223K 52-gr. HP	3066 Avg. 31 Sd	1,086	1.8	0.44	0.73	0.58
Average Extreme Spread:						0.66
Measured average velocity for 10 rounds from a 20" barrel. Range temperature: 59° F. Humidity: 34%. Accuracy for five consecutive, five-shot groups at 100 yds. from a sandbag. Abbreviations: Sd (standard deviation), HP (hollow point).						



The *American Rifleman* has used the phrase "Dope Bag" at least since 1921, when Col. Townsend Whelen first titled his column with it. Even then, it had been in use for years, referring to a sack used by target shooters to hold ammunition and accessories on the firing line. "Sight dope" also was a traditional marksman's term for sight adjustment information, while judging wind speed and direction was called "doping the wind."

**WARNING:** Technical data and information contained herein are intended to provide information based on the limited experience of individuals under specific conditions and circumstances. They do not detail the comprehensive training procedures, techniques and safety precautions absolutely necessary to properly carry on similar activity. Read the notice and disclaimer on the contents page. Always consult comprehensive reference manuals and bulletins for details of proper training requirements, procedures, techniques and safety precautions before attempting any similar activity.

**MANUFACTURER:**

Les Baer Custom, Inc.  
(Dept. AR), 29601 34th  
Ave., Hillside, IL 61257;  
(309) 658-2716;  
www.lesbaer.com

**CALIBER:** .223 Rem.

**ACTION TYPE:** gas-operated, semi-automatic, center-fire rifle

**RECEIVER:** match-type, forged aluminum alloy match-grade upper and lower

**FINISH:** Baer Teflon-S

**OVERALL LENGTH:** 38½"

**BARREL:** Baer 0.900"-diameter stainless, cryo-treated, 18", 20" (tested), 22" and 24"

**RIFLING:** conventional, eight-groove 1:12" RH twist

**MAGAZINE:** 10-round, detachable, double-column AR-15-type

**WEIGHT:** 10 lbs.

**SIGHTS:** none, Picatinny rail top, scope and rings optional,

**TRIGGER:** Jewell, two-stage, 2-lbs. pull.

**STOCK:** black synthetic butt and pistol grip; length of pull 13½"; drop at heel, 2"; drop at comb, 2"

**ACCESSORIES:** one magazine, soft carry case, Versa-Pod

**SUGGESTED RETAIL PRICE:** \$1,989

two-stage trigger, a QMI Gold titanium firing pin and a Versa-Pod detachable bipod. Baer includes an excellent soft case as part of the package with all his rifles. All Baer rifles are equipped with a Picatinny rail top on the upper receiver. A scope and rings are an extra-cost option.

As any competition shooter or varmint hunter knows, the performance of a high-quality rifle must be greater than the mere sum of its parts. Recognizing this, Baer painstakingly custom builds each rifle so all parts fit precisely. This allows Baer to guarantee that all Custom Ultimate AR .223 rifles will shoot five-shot groups of 1/2 m.o.a. or less using company-specified ammunition.

From an out-of-the-box, first-impression perspective, the high standard of fit and finish of the Baer Super Varmint AR .223 rifle seems obvious and reassuring. There is no need to break-in this rifle as it is already broken-in. Out of the box, functioning was flawless with all bullet weights tried except for one brand of 40-gr. loads that failed to feed due to low port pressure. Whereas some other brands offer initially stiff controls, a regimented break-in procedure and endless fine tuning, the Baer offers immediate gratification with no fuss. The trigger had zero take-up with gradual loading and a crisp, very predictable let-off. Bolt and magazine release levers worked smoothly, and bolt glide was notably smooth.

With an all-up weight of more than 12 lbs. with scope and rings, perceived recoil was

negligible, which made follow-up shots easy. Indeed, the Baer rifle was a delight to fire. By spacing our shots at a measured pace, the rifle could be fired for sustained periods approaching one hour before cooling became necessary.

We found accuracy excellent with match ammunition in the lighter bullet weights as summarized in the accompanying table. Note that our rifle was equipped with a standard 1:12" rifling twist rate, making it unsuited for bullets much over 60 grs. However, faster rifling twist rates suitable for use with heavier bullets are available from Baer.

We particularly liked the detachable Versa-Pod bipod. It attaches to a handstop at the front of the fore-end. The unit is solid and easy to fold or attach/remove. We also liked the Picatinny rail on the top of the upper receiver. That enables the shooter to move the scope back and forth in order to obtain the best eye relief and a comfortable viewing position.

Baer offers two versions of the Super Varmint rifle that differ in the configuration of the front handguard—one version has a four-way Picatinny rail system and the other a knurled tubular unit, the general shape of which will be familiar to most competition shooters. We found the latter more useful for varmint hunting as varmint hunters do not need the Picatinny rail feature, and it costs approximately \$90 extra. In addition to the Super Varmint reviewed here, Baer makes civilian and military/law enforcement M4 versions, and purpose-built competition rifles.

Of course a high order of workman-



*Les Baer ARs come with integral Picatinny rails on the tops of their upper receivers (top) in the "flat-top" style. Baer's quality control was obvious as, out-of-the-box, all the controls including the charging handle were smooth and operated perfectly.*

ship, fit, finish and performance does not come cheap. A Baer customer should expect to pay a premium of 50 to 80 percent for a Custom Ultimate rifle. However, when weighed against the extra cost of accessorizing, fine tuning and breaking-in a competitive rifle, the premium diminishes substantially or disappears altogether. Seen in this light, Baer Custom Ultimate rifles are well worth the cost.

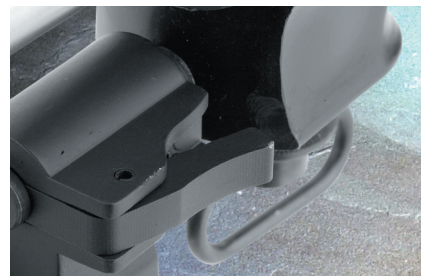


of his benchrest-quality, 416 series stainless steel barrels, which are hand-lapped to a 3 to 5 micron finish and cryo-treated. Baer also found it expedient to redesign the pistol grip while adding extra material under the trigger guard corner. All metal parts except the barrel received a Teflon-S Bear Coat finish.

Three things were purchased from outside suppliers: a Jewell



*Baer Custom Ultimate rifles are equipped with a precision-machined, free-floating handguard and a match-grade stainless steel barrel both made in-house by Baer (above l.). Although the Baer Custom Ultimate rifle is basically an AR-15, Baer manufactures the upper and lower receiver, bolt, carrier (above), extractor, gas block and barrel in-house to match tolerances.*



*Baer upper and lower (top) receivers mate tighter than those of any similar rifle we have tested. This is one possible explanation for the gun's excellent accuracy. One of the features we liked was the Versa-Pod. It attaches to a modified handstop at the front of the rifle's fore-end. A lever on the Versa-Pod (above) allows instant removal of the bipod.*



# Winchester Super X2 3" Field

A ny survey of currently cataloged semi-automatic shotguns that carry the label "field" model will produce a collection dominated by guns whose space-age finishes and synthetic stocks are as hardy as they are dull. While there is a lot to be said for the durability of these modern finishes and materials, people don't always want what is most practical.

For many hunters, carrying afield a shotgun made from blued steel and walnut provides

a unique satisfaction. For one thing, there is the nostalgia factor. Hunting recalls an earlier and simpler, if not always easier, way of life. For some, plastic guns can cloud their window to the past. Another factor that is very real, yet hard to define, is the idea that some hunters can be trusted with attractively finished firearms afield. They have the habits and discipline of the old school. They will clean their guns and oil them. They will not leave them in a truck overnight.

For those who long for the appearance and feel of walnut, there are plenty of older guns around, but because they were made when lead ruled the day, few could handle today's steel shot loads.

With the introduction of its new Super X2 Magnum 3" Field, U.S. Repeating Arms Co.—the makers of Winchester rifles and shotguns—clearly recognizes the demand for a new semi-automatic shotgun with classic lines and walnut stocks that will shoot modern ammunition. It is right at home with grandpa's guns, yet it will outperform them.

What sets the Super X2 Field 3" Magnum apart—aside from the length of the chamber—is that it is a classically styled gun with a high-polish blue barrel, and a high-gloss walnut stock and fore-end. Unlike the Super X2 3½" Magnums, the steel bolt, bolt head, bolt handle, bolt release and cartridge carrier are polished and left in the white. Like the Super X2 3½", the Field's barrel is made in New

Haven at USRAC's U.S. plant, while the rest of the gun is made at Fabrique Nationale in Belgium, and, as with the X2 3½" Magnum, Browning Gold shotguns and the Hi Power pistol, assembly is performed in Portugal.

The gas-operated 3" Field handles shells from 1½-oz., 2¼" target loads to the heaviest 3" magnums without any need for adjustment, and the self-regulating gas system is identical in operation to that of the 3½" Magnum. Gas is bled off from two ports in the barrel and presses rearward on the two-piece piston assembly. The aluminum piston, which has 16 holes around its circumference in two rows, travels rearward and passes its energy on to a polymer buffer that contains the operating rod, which consists of a single steel pin on the buffer's left rear. The rod impinges on the left front of the bolt carrier, moving the bolt and carrier to the rear to extract the spent shell.

Light loads simply push the piston to the rear while heavier loads activate an internal valve in the piston that acts much like

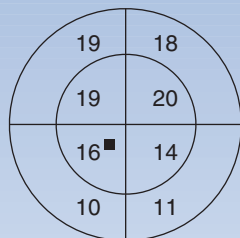


*The Super X2 3" Field has a two-piece bolt (top) identical in design to the earlier 3½" Magnum save for the fact it is polished steel. The Field accepts Browning/USRAC Invector Plus choke tubes.*

a pressure-relief valve. The gas from hotter loads compresses a heavy coil spring inside the piston, which then vents the excess out the holes around the piston's circumference. The gas is vented up through two relief cuts in the top of the fore-end that run along the sides of the barrel. A coil return spring surrounds the polished magazine tube and pushes the buffer and

## X2 3" FIELD

AVERAGE OF 10 PATTERNS  
AT 40 YDS.

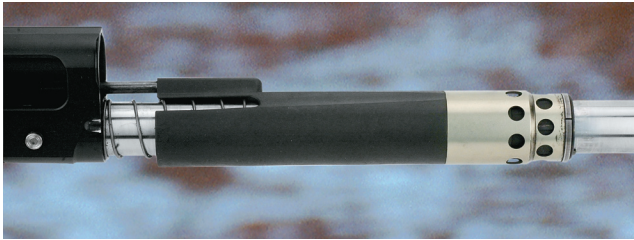


Improved Cylinder Choke

- = Point of Hold
- Winchester Supreme
- Double-X Magnum
- 12-ga., 2¾" — 1½ oz.

No. 6 copper-plated lead  
Average Pellet count: 280  
Measured Velocity @ 3'—1389 f.p.s.  
Remaining Energy Per Pellet @ 40 yds.: 1 ft.-lb.

Total Hits	127 (45%)
21.2" Inner Circle	69 (25%)
30" Outer Ring	58 (20%)



*The 3" Field employs a two-piece piston assembly. Light loads simply push the piston to the rear, while gases from heavier loads compress a spring inside the piston, which then vents the excess.*

then the piston back into position after firing.

The Super X2 3" Field's receiver measures 8 $\frac{3}{8}$ " long—as opposed to the 3 $\frac{1}{2}$ " Magnum's 8 $\frac{3}{8}$ "—and is made of matte-finished 7075T6 aluminum. The receiver contour is stepped down at its rear to allow for a thin wrist on the stock. The bolt head travels on a carrier that moves on rails inside either side of the receiver. When fully closed, the top rear of the bolt locks up into a recess cut into the top of the steel barrel extension. There is a single hook extractor on the right side of the bolt. The recoil spring is in a tube in the buttstock, and a link pinned to the bottom rear of the carrier compresses it during recoil, after which the assembly travels forward again under spring tension to close the action. The gun's ejector is on the inside of the receiver's left side and is in the form of a round, stationary button.

The trigger guard assembly—retained by two pins—contains the fire control parts, including the hammer, trigger, sear and disconnector, as well as the shell carrier, which is powered by a coil spring. The safety is a round, Winchester-style button at the rear of the trigger guard. It blocks both the trigger and the hammer when in the "on" position, and it is engaged by pressing it from left to right. When in the "off" position a red annular ring is visible. The button can be reversed for southpaws, and the procedure for that is detailed in the owner's manual.

Loading is by depressing the cartridge carrier and loading shells into the tubular magazine under the barrel in the conventional manner. Depressing the

cartridge stop on the lower right of the inside of the receiver just forward of the bolt release allows shells in the magazine to be removed without the need to cycle them through the action. The polished, white steel bolt release is a button on the receiver's right below the front of the action port. Depressing it drops the release's tail out of engagement with the bolt allowing the bolt to travel forward.

Our sample was equipped with an American walnut stock and fore-end with a medium brown, reddish tone and slight figure. The fore-end is hand filling and is actually wider than the synthetic stock of the 3 $\frac{1}{2}$ " Magnum. The pistol grip itself has a wide radius and, although it is a full pistol grip design with a cap, it handled more like a semi-pistol grip because of its more open design. The machine-cut checkering on the fore-end and pistol grip are quite fine for a mass-produced gun, measuring 18 lines-per-inch. The stock is tipped with a 1"-thick, black rubber recoil pad bearing the Winchester name. It proved effective in dampening perceived recoil.

The Super X2's vent rib is 1/8" thick, longitudinally

grooved along its top to reduce glare and rises to a height of 3/8" above the barrel 3/4" from the front of the receiver to lie flat against the top of the barrel at the muzzle. The rib is dovetailed at the front, contact welded at each of the 12 posts and fixed by an Allen screw at the rearmost post. The 0.375"-wide rib is topped by a 0.127" white plastic bead mounted 0.62" back from the muzzle.

The Super X2 is backbored like most guns in the Browning line and accepts Browning's Invector Plus choke tubes. Full, modified and improved cylinder tubes are supplied along with a spanner. Additionally, a wide range of other tubes are available. The backbored barrel measures 26" long. Magazine capacity is four 2 $\frac{3}{4}$ "-length shells or three 3". A plug that reduces the magazine capacity to two rounds complies with federal waterfowl regulations.

The Super X2 3" Field was pattern-tested with Winchester Supreme High Velocity field loads with copper-plated lead shot. Pattern quality was better than average, and results are shown in the accompanying table. Functioning was tested with a variety of field and target loads down to 1 oz. The Super X2 cycled everything as light as 1 $\frac{1}{2}$  oz., but its behavior with 1 oz. loads was unpredictable, some worked fine while others failed to cycle consistently.

Winchester bills the Super X2 3" Field as an all-around gun, and one of our staffers had the chance to try it on a hunt in northern Mississippi. Late season ducks were hunted in the mornings from blinds and flooded timber and quail and



## X2 3" FIELD

### MANUFACTURER:

Fabrique Nationale  
Herstal SA, Parc  
Industriel des Hauts  
Sarts, 3e Ave., 4040  
Herstal, Belgium

### IMPORTER:

U.S. Repeating  
Arms Co. (Dept. AR),  
275 Winchester Ave.,  
Morgan, UT 84050;  
(801) 876-2711;  
www.winchester-guns.com

### MECHANISM TYPE:

gas-operated semi-automatic  
shotgun  
GAUGE: 12, 3"  
OVERALL LENGTH: 47"  
BARREL LENGTH: 26"

(tested), 28"

### WEIGHT:

7 lbs., 14 ozs.

### MAGAZINE CAPACITY:

four 2 $\frac{3}{4}$ ", three 3"

### TRIGGER:

single-stage,

5-lbs. pull

### STOCK:

American walnut:

length of pull, 14 $\frac{1}{4}$ "; drop at

heel, 2"; drop at comb, 1 $\frac{1}{4}$ "


### ACCESSORIES:

full, modified and improved cylinder Invector Plus choke tubes, tube wrench, magazine plug

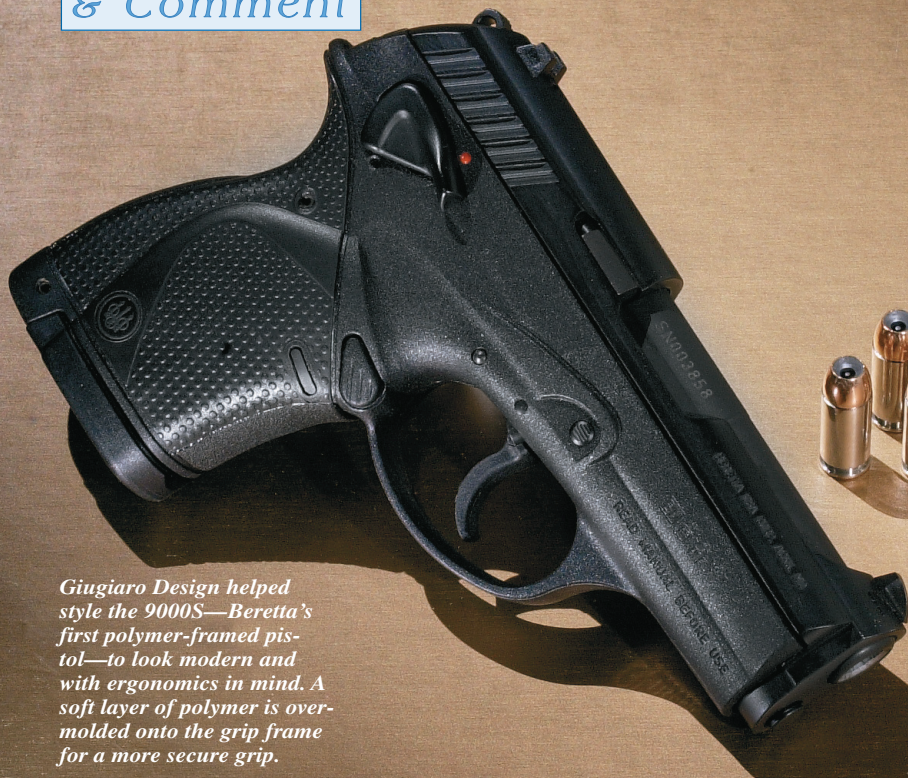
### SUGGESTED RETAIL

PRICE: \$799

clays on alternating afternoons. Some semi-automatics can be balky in cold weather, but the 3" Field did not balk with Winchester Supreme High Velocity Steel loads despite the frigid late-January temperatures. Although a relatively heavy semi-automatic would likely not be one's first choice when hunting upland birds, the Super-X2's uncommonly thin wrist gives the gun a precision and controllability that aided success in bringing down quail and busting clay birds.

While there are many shotguns lively enough for fast targets and others sturdy and reliable enough for waterfowl, the Super X2 3" Field stands out as one that is ready to handle both jobs. Those in search of a versatile gun with a traditional appeal of a walnut stock would be well advised to take a look at the new Super X2. 

*The Super X2 3" Field's trigger guard assembly holds the fire-control parts, and the polished steel cartridge carrier is part of that assembly.*



*Giugiaro Design helped style the 9000S—Beretta's first polymer-framed pistol—to look modern and with ergonomics in mind. A soft layer of polymer is over-molded onto the grip frame for a more secure grip.*

## Beretta Model 9000S

For the longest time, Beretta appeared content with the continuing success of its established lines of semi-automatic pistols. The many variants of the Model 92/96 series of tilting-block pistols and tip-up barrel guns were and continue to be popular models. But, frankly, they're getting long in the tooth. The 92/96 models date to 1976 and the tip-ups are found in catalogs from the 1950s.

In the late 1990s, we saw Beretta introduce fresh designs beginning with the Model 8000 Cougar; a semi-automatic pistol with a rotating-barrel locking system. That system is strong and allows chamberings that include 9 mm Parabellum (9x19 mm), .40 S&W, .45 ACP and the hot-stepping .357 SIG.

The most recent semi-automatic pistol design from Beretta is the stylish Model 9000S. It uses neither the tilting block of the Model 92, nor the rotating barrel of the Cougar for its 9 mm or .40 S&W chamberings. Instead, the 9000S has a tilting barrel with a block that engages the slide. Unlike a Glock design, which has a block around the chamber end of the barrel that tilts up to engage the

top of the slide, the 9000S has dual lugs at the bottom sides of its block that engage corresponding notches in the bottom of the slide. That locking arrangement permits the 9000S to retain Beretta's traditional open-top slide design.

Also new for Beretta is its leap into the realm of polymer frames. The 9000S pistol has a frame of fiberglass-reinforced "techno-polymer" (a term Beretta also uses to describe the trigger guard material of the Urika shotgun) with steel alloy rail modules. Unlike other Beretta pistols that have internal slide rails and external frame rails, the 9000S is just the opposite. It uses a system styled after the SIG SP47/8 that has the internal frame rails overlapping external slide rails.

Combining the open-top slide with the rail arrangement and the locking design results in a rather wide slide for a semi-automatic carry gun—nearly 1½" at its widest point. Add in the additional width from the ambidextrous safety levers, and the 9000S is 1⅞" wide. To put that into perspective, we measured a five-shot, .357 Mag. revolver that was 1⅞" across the diameter of its cylinder.

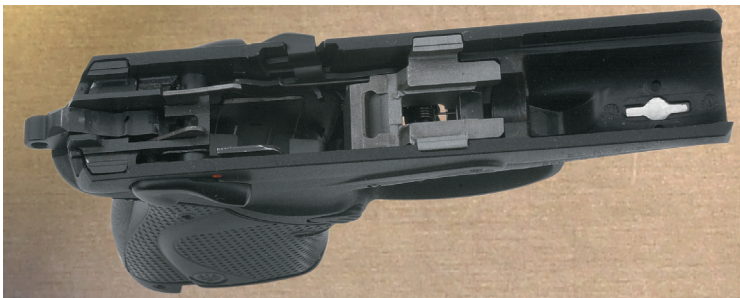
The 9000S is a conventional double/single-action pistol that offers three modes of carry. First is with the hammer de-cocked on a loaded round and the manual, frame-mounted safety off for a long, heavy, double-action first shot. Each consecutive shot has a light, single-action pull. The next mode also has the hammer de-cocked, but with the ambidextrous thumb safety engaged. With that mode, shooters must

*There are three ways to safely carry the Beretta Model 9000S pistol. First is de-cocked on a loaded round with the manual safety off (1.), second is de-cocked but with the manual safety on (2.), last is "cocked-and-locked" like a conventional single-action pistol (3.).*



## SHOOTING RESULTS

.40 S&W Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Recoil (ft.-lbs.)	Smallest (inches)	Largest (inches)	Average (inches)
Federal PD40HS4 135-gr. H-S	1048 Avg. 17 Sd	329	4.7	2.52	3.56	3.08
Hornady 9136 180-gr. XTP	875 Avg. 10 Sd	306	5.6	2.82	4.04	3.48
Winchester X40SW 155-gr. ST	1088 Avg. 26 Sd	408	6.4	2.02	4.41	3.10
Average Extreme Spread:						3.22
Measured average velocity for 10 rounds from a 3 1/2" barrel. Range temperature: 66° F. Humidity: 56%. Accuracy for five consecutive, five-shot groups at 25 yds. from a Marcyln Handgun Rest. Abbreviations: H-S (Hydra-Shok), Sd (standard deviation), ST (Silvertip), XTP (Extreme Terminal Performance)						



Beretta is using more "techno-polymer" components in its arms. The Model 9000S frame marks Beretta's first use of the material as a major component. Unlike other Beretta pistols that have internal slide rails and external frame rails, the Model 9000S is just the opposite.

### BERETTA 9000S

#### MANUFACTURER:

Fabbrica d'Armi Pietro Beretta S.p.A., Via Pietro Beretta, 18-25063 Gardone Val Trompia (Brescia) Italy

#### IMPORTER:

Beretta USA (Dept. AR), 17601 Beretta Drive, Accokeek, MD 20607; (301) 283-2191; www.berettausa.com

**CALIBER:** 9x19 mm, .40 S&W (tested),

**ACTION TYPE:** short-recoil-operated, semi-automatic pistol

**CONSTRUCTION:** polymer frame, steel alloy slide

**FINISH:** Brunton

**OVERALL LENGTH:** 6 3/4"

**BARREL:** blued, chrome-lined, 3 1/2"

**RIFLING:** conventional, six-groove, 1:16" RH twist

**WIDTH:** 1 3/8"

**HEIGHT:** 4 3/8"

**WEIGHT EMPTY:** 27 ozs.

**MAGAZINE:** double-column, 10-round capacity

**SIGHTS:** three white dot, rear drift-adjustable for windage

**TRIGGER:** double-action: 10-lbs. pull double-action, 6-lbs. pull single-action

**ACCESSORIES:** plastic carry case, one extra magazine, two cleaning brushes, cable lock

**SUGGESTED RETAIL PRICE:** \$551

first manually disengage the thumb safety, then the 9000S will fire as described above. The last mode is more typical of a single-action pistol—hammer cocked and the safety on—requiring shooters to flick the thumb safety lever down to the off position to fire all shots with a light, single-action pull of the trigger. The thumb safety also functions as the de-cocker by pushing it up past safe until the hammer lowers safely to half cock.

Beretta also offers an optional "D" model that is double-action-only for a heavy, double-action pull for all shots. That model has a spurless hammer and no external safety levers.

Sights are equipped with three white dots. The rear sight unit is plastic, dovetailed into the slide and has a square notch. The front sight is aluminum with an angled-back, flat-front face to reduce the chances of snagging.

Overmolded onto the polymer grip frame is a layer of soft polymer that has raised gripping nodules and a slight humpback similar to an arched mainspring housing on a M1911 pistol. The award-winning design firm Giugiaro Design styled the 9000S to have a very modern appearance and ergonomic shape. That said, some here questioned Giugiaro's interpretation

of ergonomics—though we do credit the firm with coming up with some excellent aesthetic touches on the 9000S. With the test gun, shooters with long, narrow fingers could get a good, comfortable grip on the gun, but those with smaller hands or thick fingers remarked they had "more grip than ... hand." All remarked that the grip was too short for a comfortable hold—an issue already addressed by Beretta via two different accessories. First is a magazine floorplate with a finger rest that extends automatically when the pistol is gripped.

Everyone here liked that accessory. The other grip extension is a spacer collar that fits around high-capacity and 10-round Model 92/96 magazines. It fills the gap between the magazine well and the floor plate, allowing those magazines to be used in the 9000S. With the collar, a raised finger groove is formed at its junction with the magazine well that some here felt forced their little finger too far down the grip. Two 10-round magazines come standard with each 9000S, and law enforcement officers can obtain 12-round units for 9x19 mm-chambered guns.

We fired the Beretta 9000S for accuracy with the results shown in the accompanying table. As standard Ransom Rest adapters were not available at the time of testing, we opted to use a Marcyln Handgun Rest, which we find works well with small, compact pistols. Function firing was with a variety of ammunition including jacketed hollow-point and flat-

point bullet loads. There were no malfunctions of any kind. The differences in grip comfort noted above were exaggerated in the presence of recoil. Shooters with long, skinny fingers easily controlled the 9000S while those with thicker digits had their fingers crowded against the bottom of the trigger guard—painfully when the gun recoiled—and those shorter-fingered shooters had some difficulty firing fast follow-up shots.

When fired using either grip extending accessory though, all shooters here—including those with short, thick fingers—found the Beretta 9000S more controllable and pleasant to shoot. Beretta might want to consider offering as a standard accessory the auto-extending finger rest floorplate on one of the two magazines that come standard with the gun.

Beretta's new Model 9000S, then, marks a couple of significant advancements for the world's oldest company. First is the use of polymer for the frame, the other is the new locking system. As with other companies, we expect to see Beretta incorporate more polymer components into its arms to take advantage of its corrosion-resistant quality and to save both cost and weight.

As for the new lock-up design, like the Model 92 and Cougar designs that came before, the Model 9000S pistol could prove to be a platform for an entire new line of Beretta handguns.

ARPA



A new tilting-barrel lock-up system has the barrel locking directly to the slide. Unlike a Glock, which has a block around the chamber to lock into the top of the slide, the Beretta 9000S has lugs on the sides of its block to lock into the bottom of the slide.

# Barrett Model 99 "Big Shot" Rifle



## BARRETT 99

**MANUFACTURER:** Barrett Firearms Manufacturing, Inc. (Dept. AR), P.O. Box 1077, Murfreesboro, TN 37133; (615) 896-2938; www.barrettrifles.com

**CALIBER:** .50 BMG

**ACTION TYPE:** single-shot, bolt-action rifle

**RECEIVER:** heat-treated aluminum extrusion

**FINISH:** steel components are Parkerized and aluminum parts are hard anodized either black or silver

**OVERALL LENGTH:** 50.4"

**BARREL:** 29", 33" (tested)

**RIFLING:** eight-groove,

1:15" RH twist

**WEIGHT:** 25 lbs.

**TRIGGER:** single-stage, 3½-lbs. pull

**SIGHTS:** no metallic sights; integral M1913 Picatinny scope mounting rail and adjustable scope rings

**STOCK:** integral aluminum: length of pull 16½"; drop at heel, 1/4"; drop at comb, 0"

**ACCESSORIES:** cleaning kit, manual and adjustable scope rings

**SUGGESTED RETAIL PRICE:** \$3,100

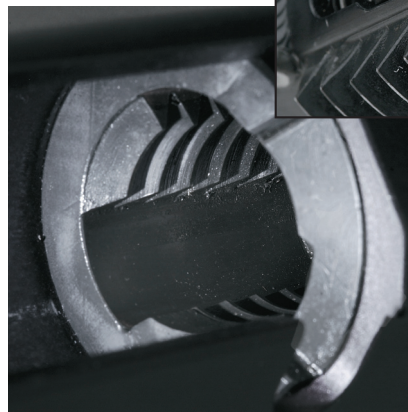
In the past two decades, there has been a growth in interest in the .50 BMG round. The question is, why has that interest developed? A major reason would probably be the high ballistic coefficient (BC) of .50 BMG bullets. Simply put, the higher the ballistic coefficient of a given bullet, the less it will drop or be deflected by wind. The massive diameter of the .50 BMG gives it a ballistic coefficient of 1.0 or more, and makes it well suited for shooting at distances of 1,000 yds. or farther.

As the interest in the .50 BMG has grown, makers of such rifles have low-

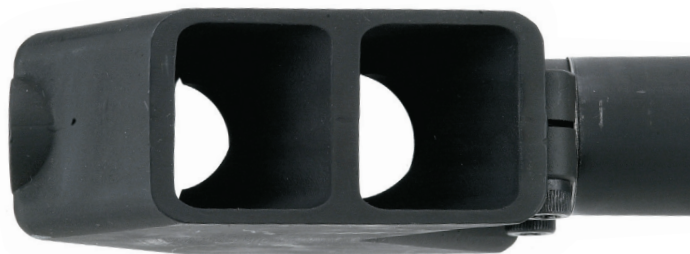
ered costs substantially. And it is that entry-level shooter market Barrett hopes to tap with its Model 99 "Big Shot" rifle. As opposed to Barrett's other rifles, the Model 99 follows a more "minimalist" philosophy based on pure performance, intended to offer the "most accurate .50 caliber in production."

The Barrett Model 99 is a simple and rugged single-shot bolt-action. The receiver, trigger group housing and bolt guide are held together by cotter pins, making for easy disassembly. Its hexagonal cross-section receiver is produced from a precision aluminum extrusion that is heat treated after forming.

The bolt locks directly into recesses machined into a barrel extension. Multiple locking lugs are formed from a modified buttress thread. That form is quite effective for locking lugs since it not only controls the high pressure generated during firing, but also works as a screw during locking and unlocking the bolt. That means the last forward motion of the



*The bolt locks directly into a barrel extension rather than the receiver (l.). That allows Barrett to use an aluminum receiver. The locking lugs are a modified buttress thread. The muzzle brake (r.) is effective at countering much of the perceived recoil from the .50 BMG.*





As part of the test, we took the Model 99 to the Quantico, Va., Marine Corps Base where it was fired in the Marines' Universal Return to Battery Fixture for accuracy at 300 yds. The rifle was also function-fired from the bench.



bolt prior to final locking and the first rearward motion of the bolt on unlocking are made with the mechanical advantage of the bolt handle. That results in better primary extraction to break the fired case loose from the chamber.

The bolt is designed with a recessed face and features a sturdy claw extractor and a plunger ejector. The bolt handle is tear-drop shaped and welded to the bolt body. Also, it is swept away from the receiver body to prevent it from striking the shooter's hand during firing.

backward to the right and left of the shooter. Although quite effective, care must be taken to verify your surroundings when firing, as bystanders could be affected by the vented blast. In addition to the recoil-reducing muzzle brake, the Barrett Model 99 features a very effective recoil pad. It is 1" thick, made of Sorbothane and possesses a great deal of recoil-softening "give."

The safety lever is positioned on the left side of the trigger assembly group and is reminiscent of the M16/AR-15 type-



The Model 99 is simple and straightforward. Parts and design complexity are kept to a minimum, with the focus instead being on pure accuracy.

The Model 99's 33" unfluted match-grade barrel is 4150 steel and has eight-groove 1:15"-RH twist cut rifling. It is press-fit into the receiver and is free-floated for maximum accuracy. Its diameter is 1.275" with a slight taper and features heavy wall construction for maximum stiffness. At the end of the barrel is a dual-chamber, arrowhead-type muzzle brake designed to lessen perceived recoil. It features baffles that are angled back toward the shooter at 45 degrees. It must be stressed that the muzzle brake is designed to vent gases

rotating safety lever. The Model 99 also has an M60-type bipod fitted. That gives the shooter a convenient means to rest the rifle while firing prone. To allow for the use of optical sights (obviously a necessity on this type of firearm), an M1913 Picatinny rail is machined as an integral component of the receiver. It is essentially a modified Weaver-type rail with evenly spaced lugs. Also, the Model 99 features adjustable



The trigger housing group has a trigger bar that transfers the action of the trigger back to the sear behind the bolt.

scope rings that allow the scope to be set at an angle rather than parallel to the barrel. With the scope adjusted higher in the rear, the operator is sure to have the maximum utility of elevation adjustment at all useable ranges. The rings are adjustable up to 1½ degrees and are made of steel, measuring 1.25" front to back.

The test rifle came from Barrett fitted with the optional Model 32 10x42 mm scope. It features a 32 mm diameter tube, level indicator, Ballistic Drop Compensator and a red-illuminated mil-dot reticle with 11 brightness settings and adjustments of 100 1/4-minute clicks up and 30 down. Barrett recommended that we use .50 BMG match ammunition from Arizona Ammunition, Inc., which features 750-gr. Hornady A-Max bullets and neck-turned cases.

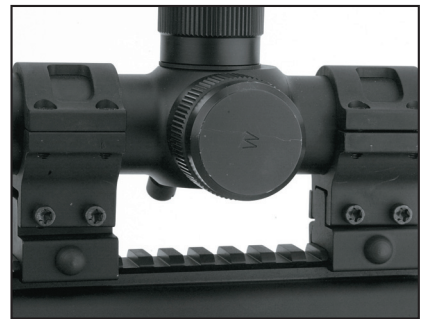
A .50BMG rifle can't be fired safely everywhere, so for testing we made arrangements with S/Sgt. Heishman and Gy/Sgt.-9 Riddle to fire the gun at the Test and Evaluation Facility at the Quantico, Va., Marine Corps Base. The Model 99 was placed in their Universal Return to Battery fixture and fired for accuracy at 300 yds. The fixture was developed by the Marines for their own use and is not available for purchase.

With the ultra-rigid mount, the Barrett turned out some impressive results.

Out of the five, five-shot groups, the gun averaged 3.33" at 300 yds.—or roughly one minute of angle (m.o.a.). The best group was 2.59" which equals less than 1 m.o.a. at 100 yds. Obviously, the rifle has great potential for accuracy. Both Heishman and Riddle stated they were impressed with the accuracy of the rifle and the cartridge. Other shooters at the facility noted that the rifle was surprisingly controllable and easy to fire accurately and comfortably.

It should be pointed out that care must be taken when firing such a powerful cartridge. Always be sure of your backstop and what is beyond, and that you are firing at a range that can handle the .50 BMG.

The single-shot Barrett Model 99 rifle produced outstanding performance, especially considering that it is an entry-level .50 BMG rifle. Offering the shooter a match-grade rifle well below match-grade level cost, the Model 99 is an excellent way to get into the exciting sport of .50 BMG shooting.



The Barrett Model 32 scope was mounted on the firm's standard scope rings, which mate to an integral M1913 Picatinny rail.

## SHOOTING RESULTS

.50 BMG Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Recoil (ft.-lbs.)	Smallest (inches)	Largest (inches)	Average (inches)
Arizona Ammunition 750-gr. Hornady A-Max	2588 Av. 12 Sd	11,153	92.6	2.59	4.33	3.33

Measured average velocity for 10 rounds from a 33" barrel. Range temperature: 75° F. Humidity: 21%. Accuracy for five consecutive, five-shot groups at 300 yds. from a Universal Return to Battery fixture. Abbreviations: Sd (standard deviation).





# Majestic Arms MA2000 Takedown Rifle

*Majestic Arms has taken up the challenge of customizing and accessorizing the AR-7 survival rifle into what it calls the MA2000.*

From 1959 to 1973, Armalite in Costa Mesa, Calif., manufactured a unique, semi-automatic survival rifle in .22 Long Rifle caliber called the AR-7. Now, the Brooklyn, N.Y., firearms maker Henry Repeating Arms Co. produces the proven favorite as its U.S. Survival Rifle. A clever design such as the AR-7 practically begs to be customized and accessorized. Majestic Arms has taken up the challenge with its new MA2000.

Majestic begins by replacing the original barrel with a new 17½"-long, 1/2" diameter button-ripped, steel barrel having an 11 degree target crown. The rifling is nine-groove with a 1:16" right-hand twist. Next, high visibility, red fiber-optic front and rear iron sights are mounted. A Weaver-style scope base rail and set of see-through 1" diameter scope rings are also part of the package.

The action is hand-tuned and the ejection port relieved and lowered to improve ejection reliability. Next, the bolt is remachined and a new, larger, knurled cocking handle installed that allows the bolt to be easily removed.

The original stock is replaced with an aluminum wire unit having an oil-finished walnut pistol grip, buttplate and fore-end. In keeping with the original survival rifle concept, a detachable, black nylon bag with Velcro closures fits over the wire frame of the buttstock. Two magazines, a seven-piece cleaning kit and a bottle of Break-Free are standard with the 4-lb. MA2000.

Also part of the MA2000 package is a padded, black nylon carry case. When taken down, the rifle fits neatly inside the compact case with room left for a scope and several boxes of

ammunition. Optional at extra cost is a Tasco 1.75-5X 20 mm variable scope.

After firing 250 rounds of high-velocity ammunition of mixed brands, functioning of the MA2000 proved very reliable. We also found the rifle had a distinct preference for lead round-nose ammunition. Attempts to fire three brands of hollow point ammunition resulted in poor functioning and poor accuracy.

The changes that Majestic made to the action enhanced functional reliability and access for cleaning. The accessories were considered especially well thought out and executed. A particularly well-

liked feature were the high-visibility, fiber-optic sights.

While the Majestic MA2000 is not a target rifle, accuracy with high-velocity ammunition proved acceptable for a rifle of this type. Certainly accuracy was more than enough to hit small game at ranges out to 50 yds.

In summary, the MA2000 comes off

rather well. The accessories are well thought out and of excellent quality. Accuracy remains acceptable for a rifle of this type, but Majestic Arms may want to make the scope bases and rings optional and reduce the suggested retail price accordingly.

Available from: Majestic Arms, Ltd. (Dept. AR), 101A Ellis St., Staten Island, NY 10307; (718) 356-6765; [www.majesticarms.com](http://www.majesticarms.com). Suggested retail price: \$459. 



*A detachable, black nylon bag fits over the wire frame buttstock to hold accessories (top). The ejection port is relieved and lowered to improve reliability and the trigger tuned as part of Majestic Arm's customization process.*

## SHOOTING RESULTS

.22 Long Rifle Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Recoil (ft.-lbs.)	Smallest (inches)	Largest (inches)	Average (inches)
CCI Mini-Mag No. 0030 40-gr. LRN	1135 Avg 12 Sd	114	0.1	1.51	2.45	1.83
Federal Lightning No. 510 40-gr. LRN	1173 Avg. 18 Sd	122	0.1	2.00	3.56	2.65
PMC Zapper No. 22C 40-gr. LRN	1151 Avg. 17 Sd	118	0.1	1.12	1.93	1.18
Average Extreme Spread:						1.89

Measured average velocity for 10 rounds from a 17½" barrel. Range temperature: 59 F°. Humidity: 34%. Accuracy for five consecutive, 10-shot groups at 50 yds. from a sandbag. Abbreviations: LRN (lead round-nose), Sd (standard deviation).