

talians do things with flair. And when the folks who decorated the ceiling of the Sistine Chapel — who still build Ferraris and craft exquisite shotguns — turned their attention to upgrading the M1 Garand in 1959, a superior battle rifle proved inevitable. Had Gen. George S. Patton slapped his hands on a Beretta BM59, he would have anointed it the best battle implement ever devised. Once the Garand's weaknesses reported during combat were purged, the BM59 became the ultimate refinement of John C. Garand's design.

In harsh combat conditions, the Garand proved accurate, reliable and effective. The United States was the first major nation to equip its soldiers with a gasoperated, self-loading rifle, and American GIs blasted out World War II victories with more than 4 million M1s. In the hands of American and other United

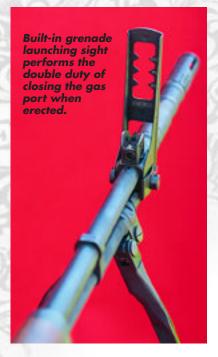
Nations combat units, the M1 soldiered with distinction in the Korean conflict. In post-war Europe, M1-armed NATO nations defined sharp limits to the Iron Curtain's borders.

However successful the M1 was, it did have combat limitations. Approaching 10 pounds, the M1 was too heavy. With only eight cartridges, the M1 could fail the armed soldier who often needed more fire-power but didn't have time to reload. It was too noisy; an empty rifle ejected the enbloc clip with a sound distinctly audible to nearby hostilities. The partially expended clip proved hard to refill, which made it inconvenient. Yet even with these limitations, large quantities of M1 rifles helped rebuild the military forces of European allies in the late 1940s and early 1950s.

Practical Conception

Following World War II, Italy joined NATO and acquired American machines, parts and data in order to overhaul and produce M1 rifles. By the mid-1950s, two Italian companies, Breda and Beretta, were pro-

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ducing complete .30-'06-chambered M1 rifles. Crafted under peacetime conditions using production knowledge transferred from American arsenals, these rifles reflected the best of the basic M1 design. Denmark bought about 20,000 of these rifles. Beretta delivered more than 100,000 M1s to the Italian armed forces. Acutely conscious of the fine points of fit and finish, Beretta's workers demonstrated an artistic passion for sharp cutters, surface-ground finishes, and attention to detail.

Once NATO decided to standardize the 7.62x51 round, an obvious need for rifles to match the new cartridge stimulated competition. European governments budgeted large sums of money for 7.62 NATO rifle purchases, and arms-makers scrambled for market position. The United States ended 12 years of rifle development when it began deploying the M14 rifle in 1957. New 7.62 rifles such as

FN's FAL and the CETME-based G3 rifles were demonstrated and tested by NATO nations.

In 1957, Beretta's Research and Development Division looked hard at the 7.62x51 cartridge. Analysis suggested that with some engineering changes to the basic Garand rifle, all NATO requirements could be satisfied at less cost than a newly designed battle rifle. Recalling Beretta's M1 rifle manufacturing expertise and modern production capability, the design team decided to chamber the M1 rifle in the 7.62 NATO cartridge, correct the rifle's limitations, and upgrade its performance to modern battle-rifle standards.

There were few bugs to impede the design, and in a matter of months the BM59 (Beretta Modification 1959) was production ready.

Adaptability

Beginning with the proven M1's gasoperated action, BM59s came with a 7.62 NATO-caliber barrel with righthand, four-groove rifling. Manufactured from SAE 4150 steel, its barrels were shorter, and the gas cylinders and operating rods differed from the M1. Beretta added selective semiauto and fully-auto firing capabilities; the selector switch is found on the left front of the receiver just behind the handguard. With the selector set to A (or automatic), a sear trip-lever makes contact with the operating rod. The rifle will fire automatically as long as the trigger is depressed and the rifle contains ammunition. To accommodate the box magazine needed for automatic fire, the bolt, the trigger group, and the stock were modified.

The BM59 design included a 20-round sheetmetal box magazine (weighing 11 ounces), a cartridge clip guide for loading the box magazine, and an attachable bipod. A reinforced rubber butt-plate replaced the steel Garand butt-plate. The BM59 omitted the Garand's front handguard, but included grenade-launching sights and a winter trigger to protect the soldier's finger from recoil should he have to fire rifle grenades. Beretta even produced a 9-ounce attachable bipod for prone firing. Stocked in European walnut, the BM59's fit and finish reflected high standards for military rifles.

Beretta developed an innovative barrel-mounted tri-compensator to solve two problems associated with full-automatic fire: heavy recoil during firing and the wide spread of the bullets that results from the upward rise of the barrel while firing. Operational testing showed the tri-compensator gave smaller bullet patterns during automatic firing. In either fully-auto or semiauto firing, the tri-compensator effectively reduced muzzle flash. Tri-compensators came in detachable (for parachutists) and fixed versions. Most, but not all, tri-compensators were adaptable to rifle grenades: but a different gas





cylinder necessitated a non-U.S. standard bayonet. A gas spindle valve, operated by erecting a grenade-launcher sight mount, redirected the gases from the gas cylinder to the muzzle in order to launch grenades. Beretta also produced a finely machined sight for indirect grenade launching.

In full-automatic fire, various BM59 models had a theoretical firing rate of 750- to 810-rounds per minute. However, given the time required to replace empty magazines, the cyclic rate was still about 400-rounds per minute – still a substantial firepower increase over the Garand.

It's A Family Affair

The BM59 rifle family included several variations: wood-stocked standard rifles like the American M14 rifle, a wood-stocked, pistol-gripped rifle for the squad automatic-fire role (like the American M14E2 rifle), and folding-stock versions for parachute and mountain troops. Beretta also produced a sportier version for commercial markets.

At a distance, the BM59 ITAL rifle and the U.S. M14 rifles appear similar. Both used a detachable box magazine, eliminated the M1's front handguard, and added a flash suppressor. The ITAL model included the tri-compensator with attached bipod, weighed 9.7 pounds, and measured just over 43-inches long. Barrel length was 19.3 inches. However, BM59 magazines are not interchangeable with U.S. M14 rifle magazines.

Original Beretta marketing brochures describe a variant of the ITAL rifle. Called the BM59 Mark I and the BM59 Mark II, both marks appear to be the same rifle. A streamlined configuration featured a shorter 17.4-inch barrel but omitted the bipod. Its tri-compensator did not include grenade-launching capabilities. This rifle measured 40.5 inches overall and weighed 9 pounds.

Designed to substitute for a light machine gun, the BM59 Mark IV rifle used a heavy 20.8-inch barrel and weighed about 12 pounds unloaded. A carrying handle attached to the upper handguard made the Mark IV easy to carry. With a fixed pistol-grip stock specially shaped for prone firing and an attachable bipod, the Beretta Mark IV measured 44.5 inches long. Two versions of the bipod were available: a common model with rounded legs and rarer versions with squared legs. Occasionally, references identify this rifle as the Nigerian model.

A folding stock Alpini rifle designed for mountain troops and special units weighed 9.8 pounds and used a 19.3-inch barrel. With stock extended, the Alpini rifle was 43 inches long; folded, it measured just 33.7 inches.

A folding stock Paracadutisti model, designed for paratroops and airborne soldiers, included a detachable grenade launcher and tri-compensator. Without a





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bayonet, an unloaded Paracadutisti model weighed just over 10 pounds and was almost 29 inches long. Unfolding the metal stock and attaching the tri-compensator increased the length to 48 inches.

For customers wanting minimal updates (and expense) for their M1 rifle inventory, Beretta also would convert existing rifles to the 7.62x51 cartridge and add 20-round box-magazine capability. Both fully-auto or self-loading versions could be supplied, but the conversion omitted the tri-compensator, bipod and rubber butt-plate. Called the Beretta BM59 "E," this 9.3-pound rifle looked just like a Garand fitted with a box magazine and flash suppressor.

Beretta offered to modify existing M1 inventories to any of several BM59 configurations. Starting with an as-issued U.S. Garand, 34 parts required no modification, and 18 were discarded. Beretta modified 13 original Garand parts and added 25 new ones of its own manufacture.

Beretta also produced new M1 rifles

chambered for the 7.62x51 cartridge, which required a shorter barrel, shorter rear handguard, shorter stock and shorter operating rod than the .30-'06 model.

A combination of national and political considerations overshadowed the inherent advantages of the BM59 concept, which resulted in most NATO nations adopting other rifles. Beretta's high-quality fit and finish was considered expensive. As a result the BM59 entered service with the Italian Army in 1960 and continued as their primary rifle until 1985, when another Beretta rifle, the AR70/90, replaced it.

World Tour

Beretta licensed BM59 production to Indonesia and Nigeria. In the 1960s, Indonesia produced BM59s at the Bandung weapons factory, and Nigerian BM59s came from the Kaduna Ordinance Factory. Other BM59 customers included Algeria, Argentina, Ethiopia, Libya and Sudan.

The BM59 performed reliably in

combat use in South America and Africa. During the Falklands (or Malvinas) conflict of the early 1980s, contemporary news photos show some Argentine soldiers carrying BM59s. British forces subsequently captured small numbers of BM59 rifles from Argentine troops. Argentina also converted some M1 Garand rifles to use BM59 magazines in the 1950s. Libyan and Ethiopian arsenals included the BM59 Mark IV as a light machine gun. Algerian soldiers toted the standard BM59 rifle.

Interestingly, the BM59 occasionally filled a less official role. When 3 Commando (Canadian Airborne Regiment) deployed to Somalia for peacekeeping duties in 1992-1993, weapons confiscation from Somali irregulars became a major objective. On the night of February 26, 1993, a 3 Commando patrol placed a roadblock on the Mogadishu highway and searched seven vehicles in the first hour alone. Past midnight, things quieted down, with a few vehicles transiting the roadblock each hour. One patrolling Canadian trooper recalled that evening:

"We captured several weapons including a SAR-80 and an Italian 7.62mm BM59 PC by Beretta but made by Springfield Armories in the States. The BM59 is a beautiful weapon, much like an M14 with a bipod and a folding butt. It also has a grenade launcher sight and the flash eliminator pops off to accept a grenade launcher."

Note: subsequent research suggests the confiscated BM59's serial number is 239735. Apparently, this BM59 was not transferred to the Canadian Airborne Forces Museum. The story of how this BM59 came to Somalia, and its current location, remains an intriguing but unknown chapter of the BM59 story.

Lacking large military sales to other nations, Beretta sought commercial markets for the BM59 in the United States. Small numbers of both self-loading and selective-fire BM59s were imported to the United States in the 1960s and 1970s. Most were marked: BM59 308 Win Berben Corp NY, NY. Beretta also developed the BM-62, a sporting model of the BM59. Lacking grenade launcher and sights, the elegant self-loading BM-62 sported a blued metal finish, rubber recoil pad, selected European walnut stock, and two lengths of flash suppressor.

The late Mel Tappan, author of the 1970's tome *Survival Guns*, liked the BM59: "partly because I trust the Garand action on which it is based, but also because it is extremely accurate and it handles almost as well as the little GI carbine of World War II. Its kinship to the M1 also makes parts cheap and easy to come by. Mine weighs just under 8 pounds and, with its gas operation and muzzle break, the recoil is not at all strenuous. It is very stable in aimed, rapid fire. It will accept





among others 20-round magazines, and it may also be fed from stripper clips."

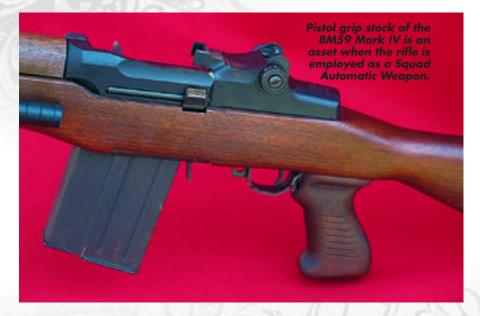
Even with endorsements like Mel Tappan's, sales in the United States proved disappointing. Eventually Beretta stopped importing both BM59s and BM-62s.

Yet the BM59 concept proved popular; the rifle did everything Mel Tappan wrote it would do. When Beretta ceased importation, several companies and individuals began to produce their own versions of the BM59. Many BM59s were constructed on demilitarized or scrapped Garand receivers and barrels. Front and rear receiver pieces were rewelded, and two-groove 1903 Springfield barrels were sleeved into Garand barrel stubs. Others were built on genuine M1 receivers and used a combination of USGI and Beretta parts. Each BM59 conversion required machining on the receiver to handle the box magazine. Some conversions showed acceptable standards of craftsmanship and safety. Others reflected lower standards.

Italian-American

I recently handled a rifle with the receiver marked: Nat'l Ord, Inc. So El Monte, CA, BM59 Cal 308. The serial number was 102X. Next in the rack was a BM59-looking rifle built on a World War II vintage USGI Garand receiver with a USGI barrel and gas cylinder, and a clip charging-guide soldered to the receiver. Both rifles accepted the BM59 box magazine. The point is that almost anything and everything seems possible, and it is unlikely anyone will ever know all possible variations of ersatz BM59s. The best advice for prospective purchasers or owners is that if the receiver markings don't reflect manufacture by Springfield Armory of Geneseo, Ill., bring a BM59marked rifle to a good M1 gunsmith for a technical inspection.

When Beretta stopped importing





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BM59s, Springfield Armory stepped into the picture. Of course, today's Springfield Armory is not the former U.S. arsenal, but a commercial enterprise located in Geneseo, Ill., owned by the Reese family.

Founder Bob Reese recalls:

"In 1974 I took over the Springfield Armory trademark. Around 1984, I found out what a BM59 was, and bought one. It was a used Beretta fully-automatic rifle and the seller wanted \$2,500. It was a very nice rifle. Later I visited Beretta's corporate headquarters in Gardone, Val Trompia, Italy. A long-time Beretta employee mentioned the BM59 machinery was still located in the underground manufacturing facility, and sure enough, it was all there — big broaching machines, heat-treating facilities and lots of receiver forgings in various stages of machining and heat treating. Beretta had even kept enough parts to overhaul BM59s for its customers. It took about a year to close a deal where Beretta sold most of the machines and tooling, plus tons of parts and receiver forgings to Springfield Armory."

With original U.S. cutters and machines purchased from Beretta, Springfield Armory transformed receiver forgings into BM59 actions. Its technicians added Beretta-manufactured parts, bolts, tri-compensators and barrels to finish machined and heat-treated actions. Some rifles were fitted with European walnut butt-stocks. A folding metal pistol- grip stock, similar but not quite identical to the original Paracadutisti and Alpini folders, is available — it can be fitted to all Springfield Armory-produced BM59s.



Prospective purchasers should check applicable laws in their states and locales.

Ultimately, seven distinct semiauto rifles emerged from Springfield Armory's facility. The offering includes the Beretta Garand, the BM59 "E," BM-50, BM59, BM59 Mark IV, BM-62 and BM-69.

The Beretta Garand is nearly identical to the M1 Garand. To accommodate the shorter 7.62x51 cartridge, the barrel, rear handguard, stock and operating rod were shortened, and the rifle length measures 43.125 inches (.05-inch shorter than the M1). This rifle uses the eight-round enbloc clip; the receiver of a photo sample rifle was marked: P. Beretta, Made in Italy, CAL .30 M1.

Many From One

The BM59 "E" retains the Garand's wooden front handguard and steel buttplate, and adds a 20-round box magazine and cartridge clip guide. A different muzzle-brake/flash-hider replaced the Garand's gas cylinder lock. Receiver markings on a photo sample read: P. Beretta, 7.62mm BM59, Gardone V.T., Italia.

Similar to the Beretta BM59 Mark I and Mark II rifles, the wood-stocked BM50 omits the cartridge clip guide and bayonet lug. Prominently marked on the receiver heel was: P. Beretta, 7.62mm BM50, Gardone V.T., Italia. The 17.5-inch barrel retains the grenade launching sight. However, a shorter, reduced diameter tri-compensator makes grenade launching ineffective.

Springfield Armory's BM59 is a virtually indistinguishable twin to the Beretta BM59 ITAL rifle, with a full set of military features.

Differing from the BM59, the Mark IV is fitted with a stock similar to the pistol-gripped U.S. M14E2 stock, a carrying handle and a longer barrel. Beretta originally designed the Mark IV for squad automatic fire; Springfield Armory's Mark IV is a semiauto fire version.

The BM-62 and BM-69 are sporting rifles, omitting the grenade-launching features and sights. The BM-69 includes a folding bipod and tri-compensator, while the BM-62 is a classic rifle without these items.

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Tips for BM59 Rifle Owners

Reliability and performance of BM59 and Garand rifles improve when the following areas are properly lubricated. Apply a good grease to (1) the nose of the hammer, (2) both locking lugs, their recesses and tracks, (3) inside the operating rod where it engages the right locking lug, (4) underneath the barrel reinforce where the operating rod slides, and (5) where the long spring goes inside the operating rod. Do not grease the gas cylinder. Lubriplate 130A and Plastilube are the standard greases, but excellent results can be had with X-1R's space technology gun grease.

Over the years, lots of folks have reworked, welded and assembled rifles that they sold as BM59 rifles. Some builders used welded receivers and sleeved barrels soldered into a Garand barrel stub to complete their rifles. Most of these ersatz rifles used M1 gas cylinders, rather than Beretta BM59 gas cylinders, which are different and much harder to get. Here's a tip: if a flat, wooden Popsicle stick won't go between the barrel and the gas cylinder, the gas cylinder is from a M1. A real BM59 gas cylinder should take about two and a half Popsicle sticks between the barrel and gas cylinder. If the receiver is also marked: Springfield Armory, Geneseo, IL, then the rifle is a real BM59. This test works for all BM59 rifles except for the BM59 "E" rifle, which is a transitional model between the M1 and BM59. The BM59 "E" rifle uses the M1 gas cylinder as does the 7.62 Beretta Garand.





Beretta's BM59

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Today, Springfield Armory BM59 rifles are marketed in the United States by Reese Surplus of Colona, Ill., which provided new BM59 and BM59 Mark IV rifles for a shooting evaluation. Both rifles were semiauto versions. Accompanying each rifle were an oiler, hex wrench to remove the gas plug, four-language instruction manual, and one or two 20-round magazines.

With tri-compensator, the BM59 was nearly the same length as the M1 Garand, even though its 19.2-inch barrel was almost 5 inches shorter. The receiver heel was marked P. Beretta, 7.62mm BM59, Gardone V.T., Italia. The left side of the receiver carried the markings: Springfield Armory, Geneseo, IL. This BM59 was 43.125-inches long, and weighed 9.78 pounds with the attached bipod and grenade-launching sight. The two-stage trigger was crisp and without creep following takeup of slack; it measured 72 ounces. The stock was nicely figured walnut with good grain through the pistol grip to the rubber butt-plate. The upper handguard was stained chocolate brown and did not match the stock.

Sights, safety and operating rod were identical to the Garand — except the sights were graduated in hundreds of meters. The sling swivels differed from the Garand, the front swivel being mounted on the left side of the forearm, and the rear pivoting to the left. The rifle felt trim and shouldered with better balance than a Garand. An accompanying note indicated the rifle's headspace was 1.634 inches and that military specification ammunition or commercial equivalents should be used.

The Mark IV differed somewhat from the BM59. Its barrel was almost 2.5-inches longer, and the receiver markings read: 7.62 BM59, Springfield Armory, followed by a trademark "t" inside a circle. Shaped from finely finished French walnut, the upper handguard and butt-stock matched, and the stock showed attractive grain on both sides. The stock shape was well-suited to firing from the prone position, and a separate, wood en pistol-grip extended behind the trigger. The trigger had more creep than the BM59; its pull exceeded the 72-ounce maximum on local gunsmith Ken Burch's trigger-pull gauge.

The butt-stocks, trigger housing assemblies, tri-compensators and, of course, magazines could be interchanged between rifles. The 20-round magazines fit tightly, requiring some effort to insert or remove. Fit and finish on both rifles was very nice. Bolts snicked into receiver recesses with exquisite precision. The P. Beretta-marked receiver on the BM59 displayed the nicer metal finish, but the elegant walnut on the



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Hands On

Several shooters fired both BM59s rifles on a windy, warm day at the Frontier Sportsman's Association range in Colorado Springs, Colo. Magazines were charged with surplus 7.62x51 ball ammunition from Austria (Hirtenberger), Britain (Radway Green), Venezuela (CAVIM), and Israel (IMI match). Barrels were cleaned after each shot for the first 20 rounds and then fired for accuracy and reliability at 100 yards. We substituted X-1R Gun Grease for the military spec Lubriplate 130A grease normally used for M1 rifles and cleaned the bores with X-1R Gun Cleaner and Lubricant after each 20 rounds. X-1R gun products are good!

Our best three-shot group from the shorter-barrel BM59 measured 1.56 inches, using 1979 vintage Hirtenberger ammunition at 100 yards. Most shooters found the tri-compensator very effective at reducing recoil, resulting in many two-to three-inch groups.

For comparison, shooters also fired a well-used, October 1945 vintage Civilian Marksmanship Program M1 Garand recently returned from Denmark. Choosing between a M1 Garand, BM59 Mark IV and BM59, male testers preferred the BM59 standard rifle with its better balance and livelier feel. With the 7-inch long tri-compensator and rubber butt-plate on the BM59, ball ammunition recoil proved no problem for our lone slender female shooter. Her choice: the 10-pound BM59 Mark IV.

The BM59 proved to be fun for recreational and target shooting, but it is also a reliable and combat-accurate rifle for serious shooters facing tense situations. Installing the folding stock and detachable tri-compensator produced a rugged and compact 7.62 self-loading rifle, measuring less than 33 inches and weighing about 9.3 pounds without a bipod—though test firing indicated the rifle needed the detachable part of the tri-compensator attached for correct functioning.

In the confusing domain of pressed, stamped and synthetic assault rifles, the world's best battle rifle may never be universally acclaimed. Nonetheless, a battle-proven heritage, refined in superbly crafted rifles from Beretta and Springfield Armory, positions the BM59 as the best walnut and steel battle rifle ever produced.

Sources:

Reese Surplus Inc. [309] 441-5003 www.reesesurplus.com

> X1-R Corporation 1-800-747-4917 www.x1r.com