

# Brno 98 Rifle



*For many years, Model 98 sporting rifles made by the Czech firm of Brno have been available to European sportsmen. Now these rifles are imported for American shooters by European American Armory Corp. (EAA).*

**F**ew rifles have achieved the classic status of Mauser's venerable bolt-action Model 98. Arguably, the Model 98 was Peter Paul Mauser's greatest achievement—tens of millions have been made, and they have made history in both war and peace. Commercial production continues even today. Why do sports-

men continue to buy a 100-plus-year-old design? Because it works reliably, it has excellent proportions, and its strength is legendary.

For many years, Model 98 sporting rifles made by the Czech firm of Brno have been available to European sportsmen. Now these rifles are imported for American shooters by European

American Armory Corp. (EAA) of Sharpes, Fla. EAA followed the ancient maxim "if it ain't broke, don't fix it." For that reason, the Brno rifle being imported is pure Mauser 98 including the 1.376" diameter action, the bolt with its external extractor, three-position shroud-located safety, two-stage military trigger and fixed magazine floorplate. And,

yes, the clip charger cut remains in the rear receiver bridge as does the thumb notch in the receiver's left rear. The sole concession to modernity is the molded black synthetic stock with 18 line-per-inch checkering on on both sides of the fore-end and pistol grip. The stock has a Monte Carlo cheekpiece for right-handed shooters. The stock is also equipped with blued steel quick-detachable sling swivel studs and a black rubber buttpad.

For the first year, one model of Brno Model 98 will be imported in calibers .270 Win., 7 mm Rem. Mag., .30-'06 Sprg. and .300 Win. Mag. Additional calibers and models are expected to follow in the future. Both complete rifles and barreled actions are offered



*No frills here, just what has been proven to work for more than a century. What that means is the Brno Model 98 rifle has a very high value quotient for the suggested retail price of \$339.*

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.



## BRNO 98 RIFLE

**MANUFACTURER:** Zbrojovka Brno a.s., Lazaretní 7, Brno, Czech Republic 65617

**IMPORTER:** European American Armory Corp. (Dept. AR), P.O. Box 1299, Sharpes, FL 32959; (321) 639-4842; www.eaacorp.com

**CALIBER:** .270 Win., 7 mm Rem. Mag., .30-'06 Sprg. (tested), .300 Win. Mag.

**ACTION TYPE:** bolt-action, center-fire, repeating rifle

**RECEIVER:** matte blue steel

**BARREL:** 23.6"

**RIFLING:** four-groove, 1:10"

RH twist

**MAGAZINE:** internal,

five-round

**SIGHTS:** none, receiver drilled and tapped for scope mounts

**TRIGGER:** two-stage, non-adjustable, 7 lbs. pull

**STOCK:** black, molded synthetic; length of pull, 14½"; drop at heel, 1¼"; drop at comb, 1"

**OVERALL LENGTH:** 44½"

**WEIGHT:** 6 lbs., 15 ozs.

**SUGGESTED RETAIL PRICE:** \$339 (complete rifle)

by EAA. All Model 98 rifles imported the first year will have 23.6" barrels of sporter contour tapering to 0.590" at the muzzle, a synthetic stock, and a matte blue finish on all metal parts except the brightly polished bolt body. Scope mount bases and rings are optional at extra cost from EAA.

In appearance, the effect of the matte black, all-weather stock and matte blue finish on the metal parts in contrast with the brightly polished bolt is striking. The appearance and workmanship is purposeful; just what one would expect from a well proven tool. No frills here, just what has been proven to work. In this case, a little buys a lot of experience and reliability.

The Brno rifle may be a classic Mauser 98, but it is of new, commercial manufacture and not a rebuilt, refinished military rifle. This becomes evident when the Brno Model 98 is compared to ex-military Model 98 rifles. However, make no mistake about it, the Brno Model 98 rifle is intended as a working tool and the fit, finish and price are appropriate to that purpose.

Shooting the Brno Model 98 remains much like shooting any 98 Mauser rifle. Perceived recoil is noticeable but manageable, the trigger pull has plenty of take-up and lets off at a rather heavy 7 lbs., and the bolt glide is smooth and non-binding. The wing safety functions as Mauser intended and even the bedding screws retain the small lock screws of the classic Model 98. The bolt has controlled feed that requires

all cartridges to be fed through the magazine—single loading rounds directly into the chamber will not allow the extractor to snap over the case rim. Disassembly and reassembly are straight out of a military manual.

We found the Brno/EAA Model 98 accuracy in keeping with hunting rifle performance. This is certainly not a target rifle, but it offers accuracy more than commensurate for its purpose. For our accuracy tests, we mounted a Pentax Lightseeker 3-9X scope with a matte finish that closely matched that of the rifle. Using the EAA bases and rings, we experienced no problem mounting the scope; however, we did find the clearance between the scope's ocular lens housing and the wing safety rather tight, exacerbated by the stiff operation of the safety. No problems were experi-



## SHOOTING RESULTS

.30-'06 Sprg. Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Group Size In Inches		
			Smallest	Largest	Average
Federal 3006A 150-gr. SP Sd	2857 Avg. 18 Sd	2720	1.94	4.54	2.96
Hornady 8115 165-gr. SPBT	2678 Avg. 21 Sd	2628	1.88	3.41	2.57
Remington RS3006A 180-gr. A-F	2680 Avg. 21 Sd	2871	1.34	3.77	2.45
Average Extreme Spread:					2.66

Measured average velocity for 10 rounds from a 23.6" barrel. Range temperature: 81° F. Humidity: 42%. Accuracy for five consecutive, five-shot groups at 100 yds. from a sandbag. Abbreviations: A-F (A-Frame), Sd (standard deviation), SP (soft-point), SPBT (spire-point boattail).

The Brno rifle being imported by EAA is pure Mauser Model 98 including the 1.376" diameter action (top l.), the bolt with its external extractor (bottom l.), three-position wing safety on the cocking piece, two-stage trigger (center l.) and non-hinged floorplate. And, yes, the stripper-clip charger cut remains in the rear receiver bridge as does the thumb notch in the receiver's left rear. In the case of the EAA-imported rifle, a little buys a lot of experience and reliability. Make no mistake about it, the Brno Model 98 rifle is intended as a working tool and the fit, finish and price are appropriate to that purpose.

enced with bolt handle clearance. We did feel that accuracy suffered somewhat because of the rather heavy trigger pull—a lighter letoff weight would likely improve accuracy. On the other hand, we noted that bullet impact point

remained constant even when the barrel was very hot. And the lightweight sporter barrel heated up very fast.

It's hard to critique a classic, and there is little improvement one could envision for the Brno

Model 98 rifle. One could certainly wish for a greater selection of chamberings, but more are on the way. One could wish for a wood stock, but the existing synthetic stock is very serviceable. That leaves a better trigger with a lighter letoff,

a hinged floorplate and a smoother safety topping our list of minor improvements. Not much when you consider the reliability, strength and styling of this classic. Despite its age, the Model 98 remains a rifle for all seasons.



# Traditions ALS 2100 Turkey



## ALS 2100 TURKEY

**MANUFACTURER:** ATA Firearms, İmcesan Sanayi Sitesi B Blok, 201 SK North 8, Yukari Dudullu-Umraniye, İstanbul, Turkey  
**IMPORTER:** Traditions Performance Firearms (Dept. AR), 1375 Boston Post Road, P.O. Box 776, Old Saybrook, CT 06475-0776; (860) 388-4656; www.traditionsfirearms.com

**GAUGE:** 12-ga., 3"  
**ACTION TYPE:** gas-operated semi-automatic shotgun  
**RECEIVER:** Mossy Oak Break-Up finish on aluminum alloy  
**BARREL:** 21" chrome-lined  
**CHOKES:** interchangeable: full, modified and improved cylinder supplied  
**MAGAZINE:** five-shot capacity tubular (two-shot capacity with plug)  
**TRIGGER:** single-stage, non-adjustable, 3½ lbs. pull  
**STOCK:** Mossy Oak Break-Up finish synthetic; length of pull, 14"; drop at heel, 2 ¼"; drop at comb, 1 ¾"  
**OVERALL LENGTH:** 41"  
**WEIGHT:** 6 lbs., 1 oz.  
**ACCESSORIES:** choke tubes, tube wrench  
**SUGGESTED RETAIL PRICE:** \$509

Although turkey hunting has grown into a specialized sport with equally specialized equipment, there are still very few shotguns on the market designed from the ground up specifically for turkey hunting. Most are simply adaptations of existing models with extra full choke tubes and a licensed camo pattern applied using a film-dip process. Many manufacturers end up with a decent product, while others completely miss the mark. One that got it just about perfect is

Traditions Performance Firearms with its ALS 2100 Turkey Model shotgun that we recently received for evaluation.

The ALS 2100 is a Turkish-made design patterned off the Beretta A303 gas-operated shotgun (August 1991, p. 70). That shotgun was introduced as an answer to the Beretta A302's magazine cut-off system that was so overly complicated we stated users should "never engage [it] when firing the gun" (February 1983, p. 55). Traditions simplified

things even more by eliminating the A303's fore-end-located magazine cut-off button altogether.

Features that make the ALS 2100 suitable for turkey hunting begin with its light weight. At 6 lbs., 1 oz., it weighs more than a pound less than the Beretta it emulates, thus making it easier to tote around the woods when moving from one calling location to another. Also making it more portable and fitting for use on the wary birds is the short, 21" barrel. Short barrels make for

## SHOOTING RESULTS

AVERAGE OF 10 PATTERNS AT 40 YDS.



Full Choke

■ = Point of Hold  
Federal Premium Turkey  
12-ga.—3"—2-oz.  
No. 6 Lead

Average Pellet count: 458  
Measured Velocity @ 3-ft.:  
1175 f.p.s.

Total Hits	355 (78%)
21" Inner Circle	238 (52%)
30" Outer Ring	117 (26%)

greater maneuverability and attract less attention when raising the gun or tracking a strutting gobbler's head than do the unwieldy 36" barrels of shotguns such as the old "Long Tom," which have fallen so out of favor with modern turkey hunters.

Traditions offers its barrels chrome-lined, chambered for 2¾" and 3" shells, and threaded for screw-in choke tubes. It's also with the barrel that Traditions falls a little short of the "ideal" gobbler getter. It comes fitted with a single brass front bead on the 5/16" ventilated rib when it should instead come with adjustable



The Traditions ALS 2100 is a Turkish-made shotgun reminiscent of the Beretta A303 gas-operated design, which was introduced as an answer to the Beretta A302's complicated magazine cut-off. Traditions simplified things even more by doing away with the A303's fore-end-located cut-off altogether.

sights. And to make those sights purposeful, the gun should come with a screw-in turkey-specific choke tube that throws a concentrated mass of shot instead of the more versatile complement of full, modified and improved cylinder tubes that come with the gun. Finally, while the majority of wild turkey killed over the years were probably done in with mere 12-ga., 2¾" shells, the current market wants to use 3½", 12-ga. shells which are not an option in this Traditions shotgun.

Camo is full-coverage Mossy Oak Break-Up, and molded-in checkering on the wrist and fore-end of the synthetic stock make for excellent purchase even with gloves on. The solid plastic buttplate slides smoothly into the shoulder pocket without snagging clothes, but is not so slick as to allow the butt to slip off the shoulder.

We patterned our sample ALS 2100 using 3" Federal Premium shells that contained a turkey terminating load of 2 ozs. of

copper-plated No. 6 shot. The results are shown in the accompanying table. Pellet distribution was even and the patterns nice and round, though slightly high and to the left. Our sample had a tight bore, measuring 0.715" compared to a nominal 0.729" for a 12-ga. gun. While the constriction of the "full" choke we used measured 0.032", or improved modified, the actual pellet percentage indicates extra full choke patterns—a big plus on a turkey gun.

Nothing seems to kick harder from the bench than a shotgun turkey load, and the solid buttplate and feathery weight of this gun didn't go to any lengths to help tame the kick. However, even though we were using a heavy 4-dram equivalent load, the gas system and straight stock design seemed to do an admirable job of helping to mitigate felt recoil. The next day, we



Pellet distribution was even and the patterns round. Our sample had a tight bore, and the choke tube, marked "full," had a measured constriction indicating improved modified. It actually shot extra full choke patterns.

could feel in our shoulder that we had fired a box of turkey loads the day before, but were not bruised or sore from the experience.

Function firing included field testing the gun on spring gobblers at the Waccamaw Hunting Lodge in Hemingway, S.C. A Tasco ProPoint red dot sight was added to the gun for more precise aiming of the tight pattern. There were a lot of gobblers, but they weren't alone, and calling them was not easy. The big birds weren't about to leave their receptive hens for the promise of an affair emanating from the bushes near our rubber decoy. That the




Making the ALS 2100 more maneuverable and fitting for use on turkey is the short, 21" barrel. Short barrels attract less attention while being raised or when tracking a strutting gobbler's head.



birds held tight forced us to move our vantage point often and we wished for a sling on the otherwise agile ALS 2100. That said, Traditions advises that future-production guns will have sling swivel studs. We hunted hard over the week and doubled on a pair of jakes late the third morning that were trying to get

*Camo is full-coverage Mossy Oak Break-Up. The solid plastic buttplate slides smoothly into the shoulder pocket without snagging clothes, but is not so slick as to allow the butt to slip off the shoulder. As a turkey-specific shotgun, the Traditions ALS 2100 would benefit from adjustable sights mounted on the 5/16" ventilated rib. As offered, it comes with a single brass front bead.*

lucky without getting beaten up by a big Tom. There were no malfunctions with the gun during any of the patterning, function or field testing, and we were impressed with its value.

If Traditions offered it standard with an extra full choke, sling swivels, sling and adjustable sights, the ALS 2100 would be one of the better attempts we've seen of a manufacturer transforming one of its all-purpose shotguns into a special-purpose one. And at a price point that rivals some pump-actions on the market, this soft-shooting, hard-hitting semi-auto should prove as successful in the turkey hunting market as it was for us in the turkey hunting field. 



*We took the ALS 2100 after spring gobblers. The birds held tight and forced us to move frequently. On the third morning we finally doubled on jakes. There were no malfunctions of any kind during our entire evaluation of the shotgun.*

## Beretta Model 96 Vertec



*Our overall impression of the Vertec was quite good. The pistol's new grip design and shorter trigger reach were well received.*

**D**uring the past quarter-century, Beretta Model 92 pistols have undergone considerable evolution, resulting in a variety of model variations. While the basic pattern, particularly the grip, has remained unchanged, Beretta broke with that tradition in

December 2001 with the introduction of its Vertec pistol. The new gun combines the signature Model 92FS/Model 96 features with a new frame incorporating a modified grip and forward accessory rail. It is currently available in 9 mm Luger or .40 S&W and only with a black-anodized alu-

## BERETTA VERTEC 96

**MANUFACTURER:** Beretta USA Corp. (Dept. AR), 17601 Beretta Drive, Accokeek, MD 20607, 800-528-7453, www.berettausa.com

**CALIBER:** 9 mm Luger (Model 92FS Vertec), .40 S&W (Model 96 Vertec, tested)

**ACTION TYPE:** short-recoil, double-action semi-automatic pistol

**FRAME:** black anodized aluminum

**BARREL:** 4.7"

**RIFLING:** six-groove, 1:16" right-hand twist

**MAGAZINE:** 10-round-capacity detachable steel box

**SIGHTS:** post front with white dot, fixed; drift-adjustable square notch rear with two white dots

**TRIGGER:** two-stage: double-action, 10½ lbs. pull; single-action, 5 lbs. pull

**OVERALL LENGTH:** 8¾"

**WIDTH:** 1"

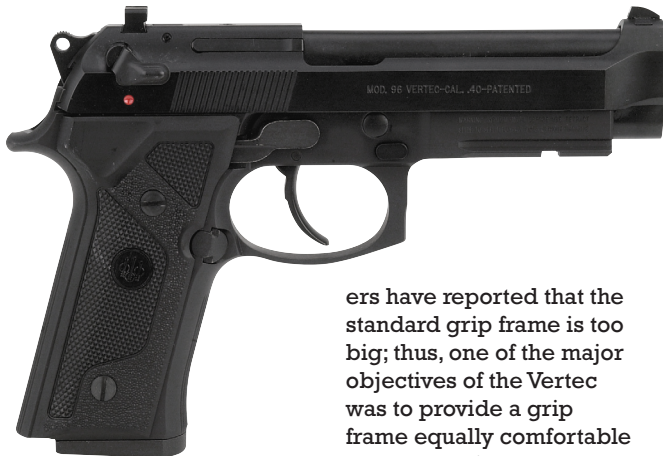
**HEIGHT:** 5"

**WEIGHT:** 32 ozs.

**ACCESSORIES:** extra magazine, gun lock, hard plastic case

**SUGGESTED RETAIL PRICE:** \$712, (blued); \$762, (stainless)

*The Beretta Vertec combines the virtues of the Model 92/Model 96 pistols with new features designed to widen the gun's appeal and fit a broader range of hand sizes.*



gray-anodized frame. The Vertec is designed to complement, not replace, the Model 92FS and Model 96 in Beretta's line-up.

Beretta states that the Vertec was developed partially in response to user feedback regarding the Model 92 and Model 96. For example, some shoot-

ers have reported that the standard grip frame is too big; thus, one of the major objectives of the Vertec was to provide a grip frame equally comfortable to all hand sizes. To accomplish that, the backstrap was flattened, giving the gun a slightly M1911-like appearance, and the width of the grip reduced by using thinner stocks, which have checkering only where checkering is really needed. In addition, the trigger has been subtly redesigned to reduce the

trigger reach. Note that the actual grip angle is the same as the Model 92 and Model 96 guns, allowing the use of existing Beretta magazines. Interestingly, although there was no conscious effort to mimic the feel of the M1911 pistol, the grip frame's width, fore-and-aft dimension and trigger reach are all very close to the comparable dimensions of the Government Model.

The Vertec's 1.9"-long integral accessory rail at the front of the frame was also the result of feedback from law enforcement and the military, both of which have increasingly employed gun-mounted light systems or lasers for some applications. The rail incorporates elements of both Weaver and Picatinny rails, and is designed to allow the mounting of most popular accessories. Also modified is the trigger guard, whose thickened front face serves as a backstop for a mounted light or laser. The modified frame will not allow the Vertec to be used in fitted holsters for the Model 92/Model 96 pistols; however, several gunleather companies are promising new holsters for the Vertec in the near future.

Other features of the new gun include a more

minum frame, blued chrome-moly slide and stainless barrel with Beretta's proprietary black Bruniton finish. Soon to be introduced is a version with a natural-finish stainless slide and barrel and

*The front of the Vertec's frame incorporates a Weaver-style rail for mounting a flashlight or other accessory (r.). A replaceable dovetail front sight on the Vertec is used in place of the integral front post that is standard on Beretta's other full-size duty pistols (below r.). A flatter backstrap and thinner stocks give the Vertec's grip a smaller circumference. The Vertec has a more aggressively beveled magazine well than the standard Model 92/Model 96 guns, and it replaces the lanyard loop of those models with a flush hammer spring cap (below).*



SHOOTING RESULTS

aggressively beveled magazine well; a flush-mounted hammer spring cap replacing the lanyard loop that is supplied on other full-size Berettas; and a 4.7" barrel instead of the 4.9" tube found on the standard Model 92FS and Model 96.



A redesigned trigger makes the gun more comfortable for persons of all hand sizes.

Also new are the Vertec's three-dot fixed sights. The Vertec's slide is subtly re-profiled at the front to allow the mounting of a cross-dovetail front post. At the rear is a rather blocky drift-adjustable sight unit borrowed from the Brigadier. Beretta states that the rear sight, though perhaps ungainly in appearance, allows the user to more easily rack the slide with one hand by hooking the sight on the edge of a solid object.

Other than the design variances mentioned, the Vertec is identical in design, operation, safety features, takedown and maintenance to other models of the Beretta 92/96 series.

We received a Model 96 Vertec in .40 S&W, which we fired for accuracy with the results shown in the accompanying table. With all the ammunition tested, the Vertec exhibited more

.40 S&W Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Group Size in Inches		
			Smallest	Largest	Average
Federal P40HST3 165-gr. HST JHP	1042 Avg. 10 Sd	398	1.31	3.63	2.60
Hornady TAP 91325 155-gr. CQ JHP	1115 Avg. 6 Sd	428	3.03	4.17	3.64
Winchester Ranger RA40T 180-gr. SXT	914 Avg. 7 Sd	334	3.77	4.58	4.10
Average Extreme Spread:			3.45		
Measured average velocity for 10 rounds from a 4.7" barrel. Range temperature: 50° F. Humidity: 41%. Accuracy for five consecutive, five-shot groups at 25 yds. from a sandbag. Abbreviations: CQ (Close Quarters), HST (High Shock Two), JHP (jacketed hollow-point), Sd (standard deviation), TAP (Tactical Application Police), SXT (Supreme Expansion Technology).					

than enough accuracy for service or self-defense. No malfunctions of any kind were noted during more than 120 test-fire rounds.

The Vertec's double-action trigger, which broke at 10¼ pounds, was like that of other full-size Berettas we have tested: long but smooth, allowing good double-action trigger control. The single-action pull had a slight amount of creep, but measured 5 lbs.—just about right for a duty or personal-protection pistol.

Overall, our impression of the Vertec was quite good. Several small-handed shooters tried our test Vertec and reported that the new gun's trigger

placement and grip size made it more comfortable for them than the standard Beretta. Also favored were the distinctive texture of the black plastic stocks and the clear sight picture afforded by the Vertec's fixed sights.

The Beretta Vertec embodies the accuracy, reliability and handling qualities that have made the Beretta Model 92 the choice of numerous military and police agencies worldwide. The Vertec's unique features will undoubtedly widen the appeal of the Model 92/Model 96 line for both armed citizens and law enforcement alike.



# Clymer Cylinder Sizer

To the casual observer, Cowboy Action shooting emphasizes costuming, authenticity and plain having fun. Targets are large and not *that* far from the firing point, so accuracy doesn't seem overly important. But even though this is not a fiercely contested sport, accuracy and performance are important to those who participate. If they weren't, there wouldn't be a cottage industry around "tuning" single-action revolvers.

New for that cottage industry or the do-it-yourself Cowboy Action

shooter is Clymer's Cylinder Sizer tool that lets you precisely ream the cylinder throats to a uniform size on single-action revolvers.

Many original and reproduction single-actions have cylinder throats of smaller diameter than the barrel groove diameter. The problems that creates are twofold. First, accuracy may be poor; second, unnecessary leading at the forcing cone may occur.

Hard lead bullets passing through the small throats may "wobble"

down the bore. If they're soft lead, there may be enough gas pressure to "bump up" the bullet enough to obturate the bore. Even so, the degree of in-bore yaw at that point may mean that the bullet is going down the bore more off axis than if it had passed through the forcing cone more nearly straight.

Using the Clymer Cylinder Sizer is a simple matter of securing the cylinder of the revolver in the base according to the directions, and then hand-reaming each chamber in turn using the supplied reamer and cutting oil.



## SHOOTING RESULTS

### Black Hills 255-gr. Semi-wadcutter

Vel. @ 15' (f.p.s.)      Group Sizes In Inches      Average Extreme Spread

BEFORE		
750 Avg.	2.66	
34 Sd	2.15	
	4.25	
	3.70	
	4.25	3.402

AFTER		
714 Avg.	1.89	
21 Sd	3.71	
	2.81	
	3.65	
	3.65	3.142

Statistic "T": 0.461  
Probability that the gun shoots better: 67%

### Federal 45LCA 225-gr. Lead Semi-wadcutter, Hollow-point

Vel. @ 15' (f.p.s.)      Group Sizes In Inches      Average Extreme Spread

BEFORE		
749 Avg.	3.43	
11 Sd	3.12	
	3.63	
	2.55	
	1.92	2.93

AFTER		
740 Avg.	3.12	
12 Sd	2.24	
	1.80	
	2.94	
	2.57	2.534

Statistic "T": 0.839  
Probability that the gun shoots better: 79%

### Winchester CB45C 250-gr. Lead Flat-point

Vel. @ 15' (f.p.s.)      Group Sizes In Inches      Average Extreme Spread

BEFORE		
576 Avg.	4.15	
15 Sd	2.08	
	4.26	
	3.89	
	2.76	3.428

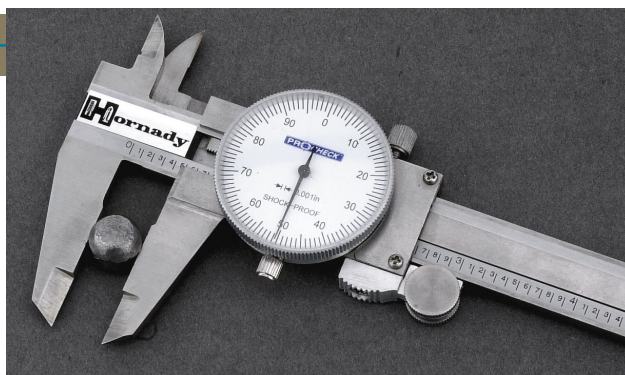
AFTER		
566 Avg.	2.14	
16 Sd	3.01	
	2.40	
	2.92	
	2.80	2.654

Statistic "T": 1.466  
Probability that the gun shoots better: 91%

By opening the cylinder throats to a diameter equal to, or slightly greater than, that of the barrel groove diameter, the Clymer Cylinder Sizer should remedy the inaccuracy and leading attributable to the size discrepancy. To evaluate the effectiveness of the tool, we obtained a Navy Arms replica of a Colt SAA in .45 Colt caliber. The chamber throats were all a uniform 0.452" and the groove diameter was 0.4505". So use of the Cylinder Sizer on the Navy Arms revolver was actually optional. All measurements were obtained by driving a soft lead plug through the orifice in question and then measuring the diameter of the plug with a caliper.

The Cylinder Sizer

comes with a reamer to open up the throats to a uniform 0.4525", so we were understandably skeptical of any improvement being possible given the small amount it would modify the throats that were already close to what is considered ideal. Using the tool is a simple matter of securing the revolver's cylinder in the tool base according to the directions, and then hand-reaming each throat in turn using the supplied reamer and cutting oil. The base is designed to positively locate the cylinder, and the reamer is designed to work with the base to positively center the cutter. The instructions are simple to follow, the tool is simple to use, and it's hard for us to imagine someone using it



Before using the Cylinder Sizer, chamber throats were all a uniform 0.452" and the groove diameter was 0.4505". All measurements were obtained by driving a soft lead plug through the orifice in question and then measuring the diameter of the plug with a caliper.

improperly and ruining a cylinder.

Three factory lead bullet loads were chosen to use in the "before" and "after" Cylinder Sizer evaluation. The raw data is in the accompanying table. Using the Baltecl ballistic program designed by *American Rifleman* Ballistics Editor William C. Davis, Jr., we computed the probability that the gun shot better after modification than before. The greatest probability of improvement was observed with the Winchester Cowboy load. That load showed a 77 percent improvement in group size. According to the Baltecl program, the probability that the gun really shot better after using the Cylinder Sizer is 91 percent with a statistic "T" of 1.466. Velocity appeared to be slightly less after using the

Cylinder Sizer, but the average decrease was only a few feet per second and is not significant. Groups appeared more nearly round with all ammunition types after using the Cylinder Sizer than before.

Clymer's Cylinder Sizer may improve the accuracy of some single-action revolvers. Presently, the tool comes standard with a reamer for reaming the throats of .45 Colt-cal. single-action revolvers to a uniform diameter of 0.4525". Custom sizes are available at additional cost, and a .44-40 Win. version is in development.

Contact: Clymer Manufacturing Co. (Dept. AR), 1645 W. Hamlin Road., Rochester Hills, MI 48309-3312; (877) 732-6377; [www.clymertool.com](http://www.clymertool.com). Suggested Retail Price: \$199.



New for the Cowboy Action revolver tuning cottage industry or the do-it-yourselfer is Clymer's Cylinder Sizer tool that lets you precisely ream the cylinder throats on single-action revolvers to a uniform size.