

DOPE BAG[®]

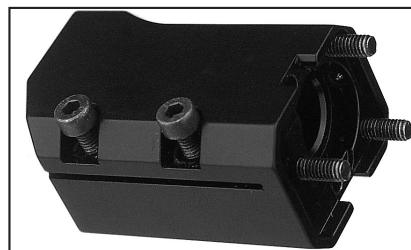
The *American Rifleman* has used the phrase "Dope Bag" at least since 1921, when Col. Townsend Whelen first titled his column with it. Even then, it had been in use for years, referring to a sack used by target shooters to hold ammunition and accessories on the firing line. "Sight dope" also was a traditional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

CAUTION: 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.

HAMMERLI SP20 PISTOL



The Hammerli name has long been synonymous with excellence in international target competition. This tradition continues with the new .22 LR and .32 S&W Long SP20 target pistol that will replace the Model 208S and the Model 280.



The barrel of the new SP20 is secured in a holder that fastens to the front of the receiver using three equal-length bolts. The two socket-head screws on the left edge securely clamp the barrel in position.

SP20 is slated to replace both. The SP20 will be imported into the U.S. by SIG Arms.

Operationally, the SP20 is a blowback-operated, fixed-barrel, semi-automatic pistol designed for international target competition. It is offered in .22 Long Rifle for events requiring a rimfire pistol and in .32 S&W Long (wadcutter only) for events requiring a center-fire. A conversion kit in either caliber is also available.

A major factor in designing the SP20 was to maintain quality while adapting modern production methods to keep costs down. To this extent, the receiver, barrel holder and trigger housing are machined from aluminum alloy then anodized. Magazines are molded of carbon-fiber-reinforced synthetic with a natural finish. The sights, bolt assembly and barrel are of blued carbon steel.

FOR more than 130 years, the Hammerli name has been synonymous with international target shooting. Until recently, successful competitors fired Hammerli pistols; everyone else made-do with lesser brands. But times change, and competitors improve their products. By mid-1995, with competitors fighting hard for market share, the Swiss company found its Model 208S target pistol growing both increasingly expensive to produce and long in the tooth. The carbon fiber-reinforced,

convertible 280 pistol needed major improvements as well. Hammerli has developed a completely new target pistol incorporating numerous leading-edge features to advance the state of the pistolmaker's art. The result is the new SP20 target pistol.

Introduced in Europe in early 1998, the SP20 will be sold alongside the 208S and the 280 for the time being, however, the



The receiver (arrow) of the SP20 target pistol is machined from aircraft-quality aluminum alloy. Five anodized colors are currently offered: red, blue, gold, black and violet.

SHOOTING RESULTS

.22 LR Cartridge	Vel. @ 15' (f.p.s.)	Energy (ft.-lbs.)	Recoil (ft.-lbs.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
Eley Tenex 40-gr. LRN	936 Avg. 15 Sd	71	0.2	1.14	1.80	1.51
CCI Pistol Match 40-gr. LRN	941 Avg. 20 Sd	77	0.2	1.33	2.11	1.80
RWS Pistol Match 895 40-gr. LRN	895 Avg. 12 Sd	79	0.2	1.13	1.79	1.33
Average Extreme Spread:						1.54

Measured average velocity for 10 rounds from a 4 1/4" barrel. Range temperature: 74° F Humidity: 44%. Accuracy for five consecutive, 10-shot groups at 25 yds. from a sandbag. Abbreviations: Sd (standard deviation), LRN (lead round nose)

HAMMERLI SP20

MANUFACTURER: SIG Arms Hammerli AG, Lenzberg, CH5600 Switzerland
IMPORTER: SIG Arms, Inc. (Dept.AR), Corporate Park, Exeter, NH 03833; (603) 773-2302
CALIBER: .22 Long Rifle (tested), .32 S&W Long (wadcutter only)
ACTION TYPE: single-action, blowback-operated, semi-automatic pistol
CONSTRUCTION: aluminum receiver, steel barrel and bolt, carbon fiber-reinforced lower frame
FINISH: natural matte frame; anodized receiver, blued barrel
LENGTH: 11 1/2"
WIDTH: 2"
HEIGHT: 5 5/8"
BARREL: 4 7/8"
RIFLING: 6 grooves, RH twist
WEIGHT EMPTY: 41 ozs.
MAGAZINE: six rounds, detachable, single-column (five in .32 S&W Long)
SIGHTS: rotatable, triangular front post with different diameter faces; variable width notched blade rear adjustable for windage and elevation
TRIGGER: adjustable for pull weight, slack, take-up, let-off and position, pull weight 2 1/2-lbs.
STOCKS: synthetic, adjustable, orthopedic target-type with surface stippling
ACCESSORIES: extra magazine, screwdriver, four hex wrenches, dry fire chamber insert, synthetic bristle brush on rod, bronze bristle brush on rod and fitted, lockable, plastic carry case
SUGGESTED RETAIL PRICE: \$1,482 (.22 LR), \$1,648 (.32 S&W Long),

Reliance is placed on the repeatability of close tolerances held by modern, computer-numeric-controlled (CNC) machinery.

The SP20 does not have a conventional slide. Rather, the round bolt body reciprocates inside the receiver in similar manner to many rimfire rifles. Two integral wings on the front of the bolt assembly serve as ambidextrous operating handles; the bolt face itself being located in a cutout in the center of the bolt. The rear of the bolt body contains the spring-retracted firing pin with a round tip that impacts on the cartridge rim at the 12 o'clock position.

A single, hook-type extractor is pinned into a slot cut into the right rear side of the bolt body in the 3 o'clock position. The right feed lip of the magazine serves as the ejector. There are two small, coil-type recoil springs, one on each side of the bolt. These are held in place by two, steel recoil spring guide rods, which are easily removable. A unique feature is an adjustable spring buffer located in the rear of the receiver. The buffer can be adjusted to fine tune the operation to ammunition velocity and shooter recoil preference.

The six-shot, single-column magazine is in front of the trigger guard. The magazine well itself is an integral part of the molded grip and frame unit, not part of the receiver. This lowers the bore axis and allows for

an orthopedic grip of advanced design that can easily be removed or adjusted. SP20 barrels have a radial shoulder machined in them that mates with a shoulder cut inside the barrel holder. Once inserted in the holder, barrels are centered by a small locating screw in the top of the holder, then firmly clamped in place by two large, hex-head mounting screws. In turn, the barrel holder fastens to the front of the receiver with three equal-length, hex-head mounting screws.

The trigger assembly fastens to the bottom of the receiver with tongues on the housing that fit into corresponding grooves in the receiver. A steel retaining pin locks the trigger assembly into position. The trigger is fully adjustable by the shooter for pull weight, slack, let-off, travel and position. The wide trigger bow has a smooth surface with a non-slip, pebbled finish.

Standard sights consist of an outstanding set of micrometer-adjustable, post and notch target sights. The top of the receiver is also drilled and tapped with five holes for mounting optical sights if desired. Triangular in cross-section, the .155" high front post sight rotates to present one of three flat surfaces of 3.2, 3.6 or 4 mm in thickness to match shooter preference. Posts offering other thickness arrays are optionally available. A sloping, .090" diameter rib on the barrel holder extending from the sight post to the muzzle protects the front sight from impact damage. Click adjustable for both windage and elevation using clearly marked screws, the rear sight mounts in a machined recess on the rear of the receiver using a single slot-headed retaining screw. A unique feature of the rear sight is the ability to quickly and easily



The orthopedic grips of the SP20 are molded of a special synthetic that absorbs moisture to keep the shooter's hand dry. Grip material compound for customizing is offered, as are custom-molded grips.

adjust the width of the notch on the blade. This is accomplished by using a two-part blade mounted in such manner as to allow each half to slide to either side independently. Blade depth can be changed by filing the notches or inserting different, optionally available blade halves.

The orthopedic grips are of a lightweight, synthetic material that absorbs perspiration. The surface of this molded, black material is stippled to offer a secure, non-slip gripping area. The combined grip frame/magazine well is held to the receiver in front by a step on the frame and at the rear by a single hex-head screw. The black color is molded into the material, so it will not crack, chip or peel.



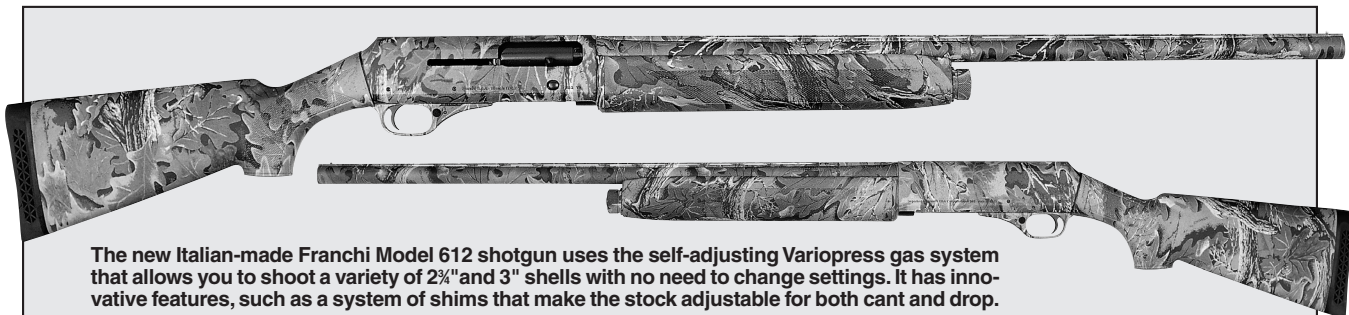
The new Hammerli SP20 target pistol comes well-equipped with standard accessories including: a screwdriver, three hex wrenches, a dry fire chamber insert, an extra magazine, two cleaning brushes and a lockable, fitted plastic carry case.

Recognizing that most competitors personalize the grips of their pistols by adding or removing material, Hammerli selected a grip material that can easily be worked with common tools. Hammerli also offers grip compound as an option or will mold a custom grip to your specifications on request (at additional cost, of course). Most SP20 pistols come with a large right-hand grip unless otherwise specified. SIG Arms customer service will swap sizes of new grips with purchasers of SP20s as needed.

With its very low bore axis, the SP20 rides low in the shooter's hand thus reducing perceived recoil and shooter fatigue. By adjusting the trigger position and grip floor, we found it possible to obtain a comfortable grip position that noticeably improved shooter performance. All shooters were impressed by the metallic sights and crisp target trigger. We found that by using the adjustable buffer, it was easy to fine tune the SP20 to function flawlessly with various ammunition types and brands.

The Hammerli SP20 target pistol offers the features, reliability and performance successful international competitors demand and backs them with traditional Swiss quality, craftsmanship and attention to detail. Hammerli's proven track record of shooter support offers peace of mind and adds value. In our opinion, the SP20 is an excellent value for the money when one considers that considerable sums must be spent to make lesser guns competitive. And even then, in the view of some, they are still not as good as a Hammerli!

FRANCHI MODEL 612 VS SHOTGUN



The new Italian-made Franchi Model 612 shotgun uses the self-adjusting Variopress gas system that allows you to shoot a variety of 2 $\frac{3}{4}$ " and 3" shells with no need to change settings. It has innovative features, such as a system of shims that make the stock adjustable for both cant and drop.

FOR more than 50 years, Franchi has been recognized for its recoil-operated, semi-automatic shotguns. Indeed, the AL 48 series of recoil-operated shotguns remains a staple of Franchi production today. But, as time has passed, hunter preferences have moved from recoil operation to gas operation, so Franchi developed the new Model 612/620 series of gas-operated semi-automatics. We received a 12-ga. Franchi Model 612 for test and evaluation.

The self-adjusting Variopress gas system has a separate, spring-loaded sleeve (arrow) on the gas piston that meters only enough gas to cycle the 612's action.



Model 620 does the same without the Variopress piston). Other modern features include interchangeable, screw-in choke tubes; wood, synthetic or Advantage camouflage stock finish options; and an aluminum alloy receiver. Examining the Model 612, we found two additional, innovative technical features of note: a rotating bolt head with four locking lugs that lock directly to the short barrel extension, and a buttstock adjustable for drop and cant.

The Model 612 has classic, graceful Franchi styling with a low-profile, sloped-back receiver, lengthy but trim fore-end, and pistol-grip buttstock. In operation, the Model 612 bleeds gas from the barrel via two angled ports approximately one-third of the way between the forcing cone and the muzzle. Gas enters the piston housing attached to the barrel then impinges on the Variopress piston assembly that slides on the magazine tube.

The Variopress design has a movable, outer sleeve on the piston body. This sleeve is held in place by a strong coil spring that serves as an automatic gas relief and excess energy absorption system. Gas pressures over and above those required to operate the action compress the sleeve against the spring. This moves the sleeve rearward, venting excess gas to the atmosphere and absorbing excess energy. As the gas piston assembly moves rearward, it acts on dual, tubular steel operating rods attached to a sleeve on the magazine tube to cycle the action. The recoil spring is held captive on the magazine tube between the operating rod sleeve and the receiver.

Franchi uses a bolt having a separate, rotating head with four locking lugs (two on the 20-ga. Model 620) that lock directly to

an abbreviated barrel extension. Bolt head rotation is controlled by a cam traveling in an angled slot cut into the top of the bolt body. As the operating rods move the bolt assembly rearward about 3/8", the cam rotates the bolt head approximately 30 degrees to unlock. The bolt assembly then continues rearward against the compressing recoil spring, extracting and ejecting the



The buttstock is adjustable for drop and cant using shims inserted between the stock's wrist and the rear of the receiver.

fired shell and cocking the hammer in a conventional manner. Buffers in the rear of the receiver and rear of the magazine tube absorb any remaining energy left in the bolt and operating rod assembly at the end of their travel. The single hook extractor is on the right of the bolt head, and the ejector on the receiver's left interior operates through a small relief cut on the bolt head. A spring-retracted firing pin helps prevent slam fires.

The body of the trigger assembly is made of composite with blued steel parts held in place by four steel pins. The aluminum shell carrier is powered by a coil spring acting through a steel lever arm exposed on the

FRANCHI 612

MANUFACTURER: Franchi S.p.A., Via del Serpente 12, 25131 Brescia, Italy

IMPORTER: Benelli USA (Dept. AR), 17603 Indian Head Highway, Accokeek, MD 20607-2501; (301) 283-6981

GAUGE: 12, 3" (tested), 20, 3"

ACTION TYPE: gas-operated, semi-automatic shotgun

RECEIVER: aluminum alloy

FINISH: Advantage camouflage (tested), satin walnut or matte black

OVERALL LENGTH: 49 $\frac{1}{2}$ "

BARREL: 24", 26" or 28" (tested) with ventilated rib

CHOKE SYSTEM: interchangeable, steel shot compatible, screw-in choke tubes

WEIGHT: 7 lbs.

MAGAZINE: tubular, five round capacity

TRIGGER: single stage with crossbolt safety, 5-lbs. pull

STOCK: synthetic two-piece: length of pull, 14 $\frac{1}{4}$ "; drop at heel; 2 to 2 $\frac{1}{2}$ "; drop at comb, 1 $\frac{1}{4}$ "

ACCESSORIES: three choke tubes, choke tube key, shims for buttstock

SUGGESTED RETAIL PRICE: \$579 (black synthetic stock), \$657 (Advantage camo), \$595 (walnut)

The new Model 612 (12-ga.) and Model 620 (20-ga.) are thoroughly modern designs incorporating many of the latest, popular features. For example, the 3"-chambered Model 612 fires all 12-ga., 2 $\frac{3}{4}$ " and 3" shotshells interchangeably without adjustment by means of the patented Variopress gas piston system (the 20-ga.

right side of the housing. A skeleton hammer powered by a coil mainspring assures very short lock time. There is a crossbolt safety in the front root of the trigger guard that acts on the trigger sear, hammer cam and hammer, blocking them while leaving the hammer at rest and under no pressure.

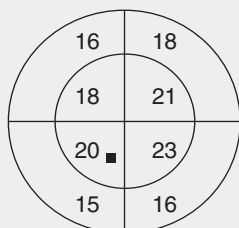
The Model 612 is equipped with steel-shot-compatible, interchangeable, screw-in choke tubes. Three tubes and a choke tube key are supplied with each gun. In European manner, the tubes are marked with small notches to denote constriction. Barrels come equipped with a .268"-wide, ventilated rib with horizontal serrations to prevent glare. The European-type forcing cone has gradual constriction, and the bore is highly polished, but not chrome-plated.

The drop at the comb may be adjusted anywhere from 2" to 2½" to suit shooter preference. Cant can also be adjusted to suit. This is accomplished by a system of shims that can be inserted between the rear of the receiver and the wrist of the stock. An assortment of composite shims comes with the gun, and replacement shims are available. The system is simple, sensible and easy to use.

Standard 612 stocks are selected, satin-finished walnut with cut checkering on the fore-end and pistol grip. A molded, syn-

FRANCHI 612

AVERAGE OF 10 PATTERNS
AT 40 YDS.



Modified Choke

■ = Point of Hold
Federal Premium
High Velocity Load
P128-12-ga. 2¾"-1½ oz.-6 lead
Average Pellet count—253
Measured vel. @ 3': 1411 f.p.s.
Remaining Energy Per Pellet
@ 40 yds.: 2 ft.-lbs.
Range temp.: 72°F
Humidity 68%
Improved Cylinder Choke

Total Hits	147 (58%)
21" Inner Circle	82 (32%)
30" Outer Ring	65 (26%)

thetic stock with negative checkering is available with either a matte natural black finish or an Advantage camouflage finish.

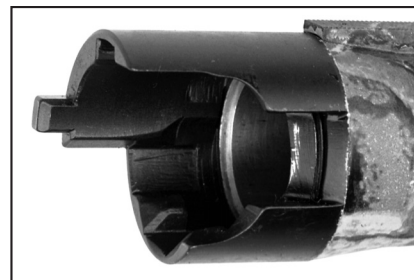
When examining the Model 612, one is immediately impressed by the high order of workmanship, fit and finish. Metal-to-metal fit and stock-to-metal fit is above average. Controls, features and operation seem intuitive and well thought out.

Franchi semi-auto shotguns have always been known for fast, lively handling and superb balance due to their aluminum alloy receivers. The Model 612 does not disappoint in these departments. Everyone who fired the Model 612 commented positively on the balance and fast handling. The excellent sighting

plane, uncluttered, purposeful styling and smooth lines of the 612 also received appreciative comments. Some, however, felt the length of the fore-end to be excessive.

In firing several hundred rounds of 12-ga. ammunition, including both magnum and target loads with lead and steel shot, the Variopress gas piston system functioned as claimed. Light target and game loads functioned the gun flawlessly. Magnums, of

course, functioned the gun more forcefully, and it was here that the Variopress gas system made its presence felt by reducing perceived recoil. Recoil with 3" steel shot magnum loads remained heavy, thus indicating the desirability of a ported barrel for such loads. The Franchi Model 612 weighs barely 7 lbs.—the fast, lively handling, therefore, has a price—more recoil.



The locking lugs on the rotating bolt head lock directly to the abbreviated barrel extension. The 612's receiver is aluminum.

The slip-pad recoil pad design also received high marks. Have you ever tried to shoulder your gun for a fast shot only to snag the rubber buttpad on your coat? Franchi eliminated this common problem by incorporating a hard plastic insert in the heel of the recoil pad. This unobtrusive but slick insert prevents snagging on clothing. A nice touch and one made by experienced hunters for hunters.

We were pleasantly surprised by the suggested retail price of \$579 for the basic Model 612 with a black synthetic stock. The competitive pricing makes the new 12-ga. Franchi Model 612 and its 20-ga. sibling, the 620, excellent values.

NRB

MARLIN 7000T TARGET



Marlin's Model 7000T is an entry-level, semi-automatic .22 Long Rifle-cal. target rifle with competitive features such as a full-length accessory rail; buttplate adjustable for length of pull, drop and cant; an 18" heavy target barrel; and an adjustable trigger stop.

MARLIN FIREARMS Co. has a new rim-fire target rifle based on the proven semi-automatic action used in its line of box magazine-fed autoloading rifles. The Model 7000T is an economically priced

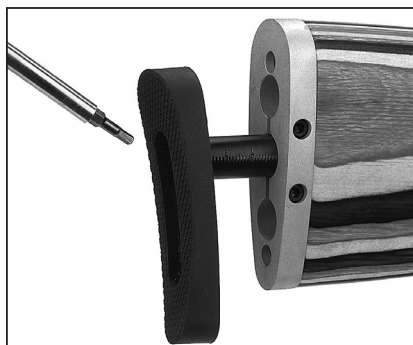
10-shot repeater, with competition features normally found on quality target rifles. Such features include: a full-length aluminum fore-end accessory rail; a serrated, rubber buttplate adjustable for length of pull,

height and cant; an 18" heavy, target barrel; and an adjustable trigger stop.

Our sample's stock is red, white and blue laminated hardwood. Its pistol grip has a striking drop, but is comfortable and com-

DOPE BAG

pletely ambidextrous. Further adding to the stock's versatility is the adjustable buttplate. Screws rigidly attach a 1/2" thick aluminum spacer to the buttstock. This spacer has several holes through it, one of which accepts a telescoping buttstock extension. Allen head screws in the right side of the aluminum spacer clamp down on the extension to secure it at the desired length of pull. Cant



The Marlin 7000T's telescoping buttstock extension provides adjustment to length of pull. The butt pad itself can be rotated left or right to adjust cant, and it may be moved up and down to adjust the drop.

and drop are easily adjusted by loosening an Allen head screw in the 1/2" thick, rubber butt pad and rotating the pad left or right, up or down to the desired position. Retightening the Allen head screw secures the rubber butt pad in the desired position. The solid aluminum accessory rail is inletted flush in the fore-end and can be used for attaching such items as the supplied fore-end stop

MODEL 7000T

MANUFACTURER: Marlin Firearms Co.
(Dept. AR), 100 Kenna Drive, P.O. Box 248, North Haven, CT 06473-0905;
(203) 239-5621

CALIBER: .22 Long Rifle

ACTION TYPE: blowback-operated, semi-automatic rifle

RECEIVER: aluminum

FINISH: satin blue

OVERALL LENGTH: 37"

MAGAZINE: 10-round, detachable, single-column, steel box-type

BARREL: 18", button-rifled, chrome-moly steel, straight heavy contour

RIFLING: Micro-Groove

WEIGHT: 7½ lbs.

SIGHTS: none, receiver grooved for tip-off scope rings

TRIGGER: single-stage with adjustable stop, 3¼-lb. pull

STOCK: red, white and blue laminated hardwood with butt pad adjustable for length of pull, height and cant; length of pull, adjustable: 12" to 15½"; drop at heel, 1½"; drop at comb, 1½"

ACCESSORIES: fore-end stop with QD swivel, 1" scope rings, Allen wrenches

SUGGESTED RETAIL PRICE: \$442

SHOOTING RESULTS

.22 Long Rifle Cartridge	Vel. @15' (f.p.s.)	Energy (ft.-lbs)	Recoil (ft.-lbs)	Smallest (ins.)	Largest (ins.)	Average (ins.)
Eley Match Xtra No. ALB752	1080 Avg. 13 Sd	104	0.1	0.47	0.96	0.75
Federal Gold Medal Ultra Match No. UM1	1041 Avg. 25 Sd	96	0.1	0.44	0.99	0.69
Winchester Super Silhouette No. XS22LR1	1141 Avg. 11 Sd	116	0.1	1.32	1.62	1.37
Average Extreme Spread:						0.94
Measured average velocity for 10 rounds from an 18" barrel. Range temperature: 73° F. Humidity: 31%. Accuracy for five consecutive, 10-shot groups at 50 yds. from a sandbag. Abbreviations: Sd (standard deviation)						

with a quick-detachable sling swivel.

Heavy-contour barrels are commonly used on target rifles, and the Marlin 7000T is no exception. The straight 18" tube is .810" in diameter, rifled with Marlin's famous Micro-Groove system, and has a recessed target-style crown to protect the origin of the rifling and preserve accuracy.

Barrel changing is a popular thing to do with .22 rimfire rifles from companies such as Ruger that use a slip-fit shank and V-block retainer. This is not a practical option with the Marlin 7000T, though, as the barrel is

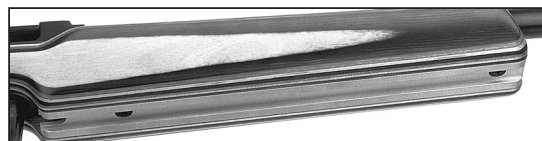
We fired the Marlin Model 7000T for accuracy with the results shown in the accompanying table, and function fired it with a variety of standard-, high- and hyper-velocity ammunition, both solid- and hollow-point designs. The only malfunctions were with Eley Match Xtra, which didn't have enough gas pressure to blow back the bolt for reliable ejection. There were no malfunctions of any kind with Federal or Winchester ammunition, and accuracy was outstanding with Eley and Federal. The adjustable butt stock made it easy to adjust the rifle to shooters of

all sizes. The high, straight comb provides for a solid cheek weld, and ideally positions the shooter's eye directly behind the scope. Trigger pull, while better than average for a sporter rifle, was a little too heavy for a target rifle. Nonetheless, the adjustable stop allowed us to minimize trigger travel to make it more acceptable.

Though the stock has a radical profile, it is comfortable to use from the standing position. Balance was also excellent, being neither butt-, nor muzzle-heavy.

Custom .22 rimfire rifles modified for STC or other competition offering m.o.a. accuracy and adjustable stocks typically cost more than Marlin's Model 7000T. Marlin, then, has achieved a competitive package with near m.o.a. performance for considerably less cost.

NRD



A solid aluminum accessory rail on the Model 7000T fits flush in the fore-end and accepts such items as the supplied fore-end stop with quick-detach sling swivels.

press-fitted into the aluminum receiver and secured with a barrel through pin. Further, the barrel has "restricted availability" and is "installed at factory only" according to the owner's manual. This barrel attachment arrangement is very rigid, however, and eliminates the possibility of inaccuracy induced by uneven tensioning of V-block bolts.

As befits a target rifle intended for a scope, the Marlin 7000T has no iron sights. The receiver is grooved for 1", steel, tip-off rings supplied with each rifle.

Inside the action, a magazine disconnect safety lowers the trigger bar out of alignment with the sear when the magazine is removed so the rifle will not fire. Another magazine-related feature is an automatic, last-shot, bolt hold open. The bolt can be manually locked open by retracting it and lifting up on the bolt control lever at the right front of the trigger guard. This lever will also release the bolt from the open position by pressing it down. A trigger-blocking, cross-bolt safety button is in the rear of the trigger guard. Trigger overtravel is easily adjusted by using the supplied Allen wrench to turn the small set screw in the rear of the trigger guard.



The Model 7000T has an automatic, last-shot, bolt hold open. The bolt is manually locked open by retracting the bolt and lifting up on the bolt control lever (above).

GAMO AUTO 45 AIR PISTOL



The Gamo Auto 45 is the latest in the Spanish firm's double-action .177-cal. air pistols that emulate the lines of popular handguns. It can fire either .177-cal. pellets single-shot or lead BBs from its 12-round-capacity magazine.

MORE and more shooters are catching on to the advantages of practicing with airguns. Pellets and BBs are less expensive to shoot than rifle and pistol cartridges, and a safe airgun range can be set up in many basements and hallways. Airgun practice is most beneficial when the airgun mimics the size and shape of the actual firearm the shooter intends to use for competition, carry or afield. This way, the shooter can practice with the same stance, position and grip. The Gamo Auto 45's strong resemblance to Glock pistols make it an excellent choice for anyone who owns a Glock.

The Spanish-made Auto 45 is made almost entirely of molded, flat black polymer. The 4¼", rifled steel barrel is housed in a zinc alloy assembly that tips up to load. Pressing forward on the latch near the top of the barrel assembly allows the unit to be tipped up, revealing the fixed, 12-shot BB magazine.

Loading begins by turning the trigger-blocking safety lever rearward to the safe position, then tipping up the barrel assembly. Next, push the red lever of the magazine feeder pin forward toward the muzzle until it flips upward into its retaining slot. Up to 12 BBs, preferably lead, are inserted through the opening of the magazine. After loading, release the lever of the magazine feeder pin and close the Auto 45's barrel assembly, making sure it locks firmly into place.

The Auto 45 can be used as a single-shot pellet pistol by inserting a single pellet into the breech instead of loading the magazine with BBs. Power is supplied by a 12½-gram CO₂ cylinder concealed within the grip. Access to the cylinder is available through the left-hand stock panel. The panel is retained by barbed tabs that hook

into the grip frame. Gently prying upward on the slot at its base allows for the removal of the panel.

The trigger mechanism is double-action only. Pulling the trigger draws the trigger bar forward and cams back the concealed hammer. When the hammer reaches its rearmost travel, it is released forward, and a nipple on the hammer face activates a valve to squirt a measured amount of CO₂ into the barrel.

Though plastic, the grip frame feels very solid, and its 19-oz. heft aids a steady hold. Like the firearm it repli-

tures of the Glock pistols were well-reproduced in the Gamo Auto 45, but the Gamo's grip is slightly longer and fatter than that of the original Glock.

The Auto 45's front sight is integral with the barrel assembly, while the rear sight consists of a metal U-shaped notch that is screw-adjustable for windage.

We fired the Gamo Auto 45 for accuracy at 10 meters. The results are shown in the accompanying table. Lead BBs and .177-cal. pellets were used with no malfunctions of any kind, and we easily achieved the manufacturer's claimed 1¼", five-shot group accuracy level. CO₂ cylinders lasted an average of 40 or 50 shots before starting to run out.

The trigger travel was 5/8"; break was 6½ lbs. But the Auto 45 is not a target pistol. It is more of a plinker, and especially a trainer, and in that capacity it deserves due consideration.



The Gamo Auto 45 may be loaded singly with .177-cal. pellets, or it may also be fed with up to 12 lead BBs from its magazine.

SHOOTING RESULTS

.177-cal. Lead Pellets	Vel. @15' (f.p.s.)	Smallest (ins.)	Largest (ins.)	Average (ins.)
Gamo Match 17-gr. Flatnose	372 Avg. 17 Sd	1.01	1.42	1.15
Gamo Hunter 17-gr. Flatnose	364 Avg. 16 Sd	1.31	1.76	1.51
Gamo Round 17 gr. Flatnose	328 Avg. 17 Sd	1.34	2.37	1.94
Average Extreme Spread:				1.53
Measured average velocity for 10 rounds from an 4¼" barrel. Range temperature: 73° F. Humidity: 31%. Accuracy for five consecutive, 5-shot groups at 10 meters from a sandbag. Abbreviations: Sd (standard deviation)				

cates, the 7½" long Auto 45 has molded-in checkering on the finger grooves and back strap. The stock panels are textured and feature small thumb-shelves that help the firer index his grip. In addition, the front of the trigger guard bow is flat-faced. Luckily, we had a Glock 23C on hand for another test and had a chance to compare the two side-by-side. Staffers found that the grip angle and other ergonomic fea-

The Gamo Auto 45 provides a relatively safe practice tool for practical exercises such as drawing from the holster and firing. Naturally those who compete with or carry Glock pistols will find the Gamo Auto 45 especially appealing. It is a well-made air pistol and appears durable. Given due care, it should pay for itself in savings realized from shooting pellets instead of cartridges.

Available from: Gamo USA Corp. (Dept. AR), 3911 SW 47th Ave., Suite 914, Ft. Lauderdale, FL 33314; (954) 581-5822. Suggested retail price: \$100.

