Da Vinci By Design
This new autoloader may be the first-ever modular shotgun.
By Layne Simpson

How many rounds of 12-gauge shotshells do you fire each year? If you are a typical wingshoter, less than a case will probably get you through a busy season. On the other hand, if you are fortunate enough to occasionally enjoy the incredible dove shooting offered south of the border in Argentina, your annual shell count will most definitely increase by leaps and bounds. The doves there never migrate, and since breeding is virtually continuous, they nest five or more times each year. That, along with a mild climate, an abundance of food available from thousands of acres of cultivated crops, and the almost total absence of predators, causes year-round numbers that have to be seen to be believed.

The Cordoba province is an excellent example. Less than one-third the size of California, it contains somewhere in the neighborhood of 30 to 40 million birds, with some of the vast farms there called home by as many as 1,000 doves per acre.

Equally incredible is the fact that for several decades thousands of Americans have traveled to Argentina each year to shoot thousands of doves, and no study I'm aware of has shown any impact whatsoever on their population. Whereas we American hunters consider the dove to be a valuable game bird, some Argentine farmers classify them as pests capable of severe crop damage. As one farm owner put it to me sometime back, "The dove is to us what the prairie dog is to ranchers in the American West."

There is, I must add, one big difference. Whereas prairie dogs are seldom if ever eaten by humans, many of the doves harvested by shotgunners in Argentina are consumed by villagers who are happy to add a bit more protein to their diets.

With this information in mind, it should be easier for those who have never been to Argentina to understand how it is quite common to shoot more rounds of ammo in a few days there than in several years or perhaps even a lifetime here at home. Our shoot in March of this year was a good example. We were there to wring out the Vinci shotgun from Benelli and were in fact, the first people outside the company to see the new gun.
When it comes to torture-testing a shotgun, no other place on earth equals the high-volume shooting of Argentina, so we were in the right place to see what the Vinci was made of. And we decided to make it as tough on the gun as possible.

As is usually the case in Argentina, a staff member of the outfitter was assigned the task of cleaning and lubricating all shotguns at the end of each day’s shoot, but we asked that our guns not be touched in order to see how they would hold up to not only a tremendous amount of shooting in a very short time but to neglect as well. On top of that, it was a bit windy each day, and dust managed to find its way into every crack and crevice of our guns.

So how did the Vinci hold up to all that abuse? Read on.

I shot for around six hours on each of three consecutive days, and at the end of all the excitement, my fired shell count was exactly 6,375 rounds. On the first day out, I fired 2,200 rounds with not a single malfunction of the gun. That’s 88 boxes of shells without a single bobble!

About two hours into the second day, I experienced two failures to eject, at which point I applied a drop of oil to the rotating locking lugs of the bolt and another drop into the locking lug recesses of the barrel. From there on I repeated the lube job every 50 boxes of shells, and it was clear sailing for the rest of that day and on through the next.

I am totally convinced that had I also applied those two drops of oil on the first day, I would have gotten through the entire shoot without a single malfunction. Anyone who does not consider such performance from a shotgun truly remarkable has yet to shoot doves in Argentina, has no experience with autoloading shotguns, or both.

The design of the Vinci allows it to be quickly and easily taken down into three modules.

**Beyond The Basic Shotgun**

When designing the Vinci, Benelli engineers strayed far from basic shotgun design that goes all the way back to the beginning of the 20th century. For starters, the barrel cannot be easily detached from the receiver.

If you think about it, the universal adoption of the screw-in choke made the need for switching from one barrel to another on a repeating shotgun pretty much obsolete, but out of the tradition as much as anything else, the concept continues to live on with most shotgun manufacturers.

One option not possible with a fixed-barrel design is outfitting a bird gun with a rifled slug barrel for hunting big game, but several manufacturers have told me that few shotgun owners do so anyhow. Most either shoot suitable slug loads in their smoothbores, or they buy a dedicated shotgun with a rifled barrel, equip it with a scope, and use it exclusively for hunting deer and
other four-legged game.

It is a proven fact that the fit between the receiver and the barrel of a shotgun has great influence on slug load accuracy, and guns that have proven to be the most accurate either have their barrels rigidly fixed to their receivers or a gunsmith has pinned them in place. The fact that the barrel and receiver of the Vinci are fitted so tightly together that they appear to be one piece leaves little doubt in my mind that it will be capable of delivering excellent accuracy with the right slug loads. In fact, it may prove to be so accurate with some loads—the Remington Buckhammer and Federal's TruBall loading of the old Foster slug come to mind—that a rifled barrel may not actually be needed. And since the receiver of the Vinci is drilled and tapped for scope mounting, it will be easy to find out just how accurate it can be.

Only slightly larger in diameter than the breech end of the barrel, the receiver is cylindrical in shape. Whereas most autoloading shotguns have a recoil spring either around their magazine tube inside the forearm or in the buttstock, the spring of the Vinci is located totally within the receiver and attached directly to the bolt. This in-line, Inertia-Driven system, we were told, cycles faster than more conventional designs and in doing so, it all but eliminates muzzle rise during firing.

As we discovered in Argentina, the statement contained far more truth than brag. As flocks of doves streamed by within range, I found shooting doubles to be easy, and anytime I kept the gun swinging smoothly and did not lose my concentration, dropping three doves with three shots was not only well within the realm of possibility, it happened frequently.

A peek inside the Vinci reveals its simplicity of design.

Occasionally, it got even better than that. On more than one occasion my bird boy would shout "cuatro" with great excitement in his voice as I killed a fourth bird before the first one had hit the ground. That's how quickly you can get on multiple targets with the Vinci.

But there is more to the story than an in-line bolt. The Comfor-Tech synthetic stock plays a key role not only in the reduction of muzzle jump but in reducing perceived recoil as well.

Cutouts in the buttstock virtually make it a two-piece design, with the two pieces connected by rubber cushions called chevrons. Each time the gun is fired, the stock flexes, allowing recoil to be absorbed by the chevrons.
The bolt and its parts, including its attached recoil spring and rotating bolt head with locking lugs.

A big part of what we describe as recoil is actually the blow delivered to the shooter’s cheek by the comb of the stock as a shotgun recoils upward and into the face. Minimal muzzle rise, a cushion of soft rubber imbedded into the comb of the stock, and the ComforTech design practically eliminate that. Add an ergonomically designed butt pad, and you have a shotgun that can be fired comfortably all day long for days on end. This makes the Vinci not only a great hunting gun but one that should have clay target shooters standing in line with money in hand as well.

A shim kit included with the gun allows its owner to adjust drop and cast of the stock to his or her liking. Available at extra cost are recoil pads of different thicknesses that can be used to adjust length of pull, and they are available for both right- and left-handed shooters. Replacement combs of different heights can also be purchased. It all adds up to a near-custom fit at production price.

More good news for deer hunters, turkey hunters, and especially duck hunters -- who have to walk a long way across the marshes with a load of gear--are quick-detachable sling-swivel posts molded into the buttstock and forearm.

Among the advantages I see in the modular stock is the option of easily switching it out for a stock of another style. The so-called tactical stock, with the extended grip preferred by some turkey hunters and by those in law enforcement, comes to mind.

Modular designs have become popular in other industries, and it is also seen in other types of firearms, but I believe the Vinci represents a first in shotguns. As I have already described, one module consists of the barrel and receiver. Another is made up of the forearm, which houses the entire trigger group and the magazine tube. The forearm has molded-in grasping grooves and an integral trigger guard. Add the buttstock to the ensemble, and you have a very unusual shotgun that makes a lot of sense in many ways.
The loading port at the bottom of the gun is beveled for smooth insertion of shells into the magazine. Located just behind the loading port, a metal indicator with red dot indicates by sight and feel whether or not the internal hammer is cocked. The Vinci comes with five screw-in chokes (four shown) and a shim kit for adjusting drop and cast of the stock. One end of the choke wrench is used to clean fouling from the choke threads of the barrel.

Field-stripping the Vinci for cleaning is a snap. Twist the exposed end of the magazine tube counterclockwise while holding down its latch at the bottom of the forearm with a finger, and the forearm module releases from the barrel and receiver. Turning the magazine tube in the opposite direction releases it for removal from the forearm. A twist of the wrist separates the barrel-receiver module from the buttstock. The bolt assembly and its recoil spring are just as easily removed from the receiver.

Reverse the order, and the gun is back together in no time flat. Best of all, it’s easily done by someone without a lot of experience with the gun. I may never get invited on another Benelli hunt for telling this, but in a timed disassemble- reassemble race between one of the Benelli guys and a bird boy who had seen the Vinci for the first time just the day before, the bird boy won—but only by a couple of seconds.

A two-way lever located on the side of the forearm just below the ejection port serves double-duty. Push it forward, and it releases the locked-back bolt. Pulling it to the rear allows shells to be removed from the magazine without cycling them through the chamber. The trigger is as smooth and crisp as you will find on any autoloader (another plus when shooting slugs), and the transverse safety button is just forward of the trigger where it should be. The loading port on the bottom of the gun is beveled for smooth insertion of shells into the magazine. A bit further back, a metal indicator with a red dot tells you whether or not the internal hammer is cocked.

The standard finish is black, but the new Vinci can also be had in Realtree APG (shown) and Mossy Oak Max-4 HD camo finishes.
Another feature I really like about the Vinci: When loading the chamber of some autoloaders, their bolts must be allowed to slam forward with a great deal of speed, and if eased forward on a chambered round—as a hunter might do when trying to be as quiet as possible—the bolt will fail to lock into battery, and the gun will refuse to fire when the trigger is squeezed. No doubt, this single characteristic can be credited with saving the lives of quite a few deer each year.

The Vinci autoloaders I hunted with would fully lock up even when their bolts were eased forward. That feature came in especially handy one morning before daylight when—during a turkey hunt—I forgot to chamber a round before sneaking in and setting up about 60 yards from of a flock of roosting birds.

The hammer-forged barrel is available in 26- or 28-inch lengths and is cryogenically treated, the primary benefit being a smoother bore surface for minimal fouling buildup.

The gun is designed to function with all ammunition ranging from 2¾-inch target loads to the heaviest 3-inch loads. Up top, a steel ventilated rib wears two sights—a red bar at the muzzle and a gold bead in the middle. It comes with five screw-in chokes, ranging from Cylinder to Full, all designed to withstand the ravages of steel shot. Another great idea is a really good choke wrench, one end of which was designed for removing propellant fouling and other gunk from the choke threads of the barrel.

Everything comes in a plastic carrying case, and like the Vinci, inside it looks like nothing else you have seen. Tucked away inside the case is a supply of lubricant, and considering the small amount required by the gun I shot in Argentina, I'd say that little bottle of oil will last you just short of forever.

For now, the Vinci is available only in 12 gauge, in black or either Mossy Oak Max-4 HD or Realtree APG camo. Nominal weight is an ounce or two shy of 7 pounds.

As a traditionalist at heart and a lover of figured walnut and blued steel, I'll have to admit that "homely" was the first word that came to my mind when I first saw the Vinci. Then I shot it, and the more I shot it, the prettier it became. The fact that I shot it darned well did not hurt anything either. By the time our dove shoot was over, the ugly duckling had somehow transformed itself into a work of art that its Italian namesake, Leonardo Da Vinci, would likely be proud to claim if he were still with us.

And how did my shoulder feel after being subjected to the recoil of those 6,375 shells I mentioned at the beginning of this report? Well, I did fudge a bit by wearing a thin, strap-on PAST recoil pad, but I'd used it before, and while it does help, it does not totally prevent bruising if enough rounds are fired, even when using a 20-gauge gun. After three solid days of shooting the new 12-gauge Benelli, the edge of the PAST pad had lightly abraded my shoulder, but there was no bruising whatsoever. Other than a slight tenderness in my right cheek, I suffered no ill effects.

But don't try shooting so many rounds in so short a time unless you own a Vinci—or you have a chiropractor in your immediate family.

I'll close by saying that various models of Benelli shotguns are favored by many outfitters in Argentina who rent shotguns to their clients. They are popular because of their durability and
their ability to withstand the punishment of a tremendous amount of shooting with minimal parts breakage and maintenance. It is quite common to hear an Argentinian outfitter speak with awe about a particular Benelli in his rental battery that has been fired thousands upon thousands of rounds over the years and is still going strong. I expect to see the Vinci carry on that tradition for decades to come.