The airgun world is hot! The shortage of firearm ammunition (especially rimfire) over the past few years has boosted airguns into orbit, and one of the categories leading the growth is the big bores. Big bores are defined as guns with calibers greater than .25. They have existed since at least 1550, but until the 1990s they were seen as curiosities—expensive to own and finicky to operate. That changed abruptly in the last decade of the 20th century when big bore airguns started pouring out of U.S. boutique shops in great numbers; and by the end of the decade, they started shipping from mainstream airgun producers.

This year, AirForce Airguns enters the ring, and they do it with a contender that is probably going to become a champion—the Texan! I have been shooting and testing a Texan for the past several months and have gained an appreciation for its novel design. Let me tell you about it.

A Lightweight Big Bore

The Texan is a .458 cal. single-shot rifle that is cocked using a sidelever located on the right side of the frame. It weighs 8 pounds, 3 ounces, which is light for its caliber and power. Given the physics involved, you can expect a fairly sharp kick when the rifle fires. It’s not heavy, but you know something has happened.

The rifle is long, at 48 inches overall. The 34-inch barrel accounts for a lot of that, and I’ll explain the reason for such a long barrel in a bit.

In AirForce fashion, the reservoir is also the butt of the rifle. Although it can be taken off, it normally remains in place all the time. The pull is adjustable, from 13 3/8 inches to about 15 inches with a sliding buttplate. The buttplate can also be rotated to the right or left for some cast-on and cast-off adjustability.

The frame of the rifle is aluminum, anodized in a non-reflective matte black surface. The long, thin barrel sticks out the front of the frame an additional 9 5/8 inches. I was given the rifle with a 4-power scope mounted, which I was told will go on the production guns. After discovering how incredibly accurate this airgun is, I swapped out the scope for a UTG 6-26X variable that gave more aiming precision at all ranges.

Trigger

The two-stage trigger does not adjust, but it is the lightest, crispest big bore trigger on the market. It breaks positively, at 33 ounces every time. Smallbore triggers should be so good!

The safety is automatic, coming on when the rifle is cocked. It can also be applied at any other time. The safety blade comes back through the front of the trigger guard, where a forward flick of the trigger finger can take it off silently.

This One is Manual

Black-rifle styling belies an all-manual operation. The sidelever swings forward, moving the bolt forward and revealing the loading trough. Once the bullet is loaded into the trough, the shooter manually pushes it forward into the rifling. That step isn’t necessary, but every shooter who’s tested the rifle has found that it helps.

Once the bullet is loaded, the lever swings back to the closed position and the shooter realizes the entire operation was easier than cocking a Red Ryder BB gun! The one thing that big bores have had in common until now is a bolt that is very hard to cock, but the Texan doesn’t work that way. Somehow, a powerful striker spring is being cocked without effort.

The air reservoir is in the butt that remains attached to the rifle. A Foster quick-disconnect fill nipple on the right side allows you quickly to fill the rifle from a compressed air source such as a scuba tank. A gauge on the left side tells you the state of the air remaining in the reservoir. A matte black foam pad fits around the aluminum butt/reservoir to keep your cheek away from the cold metal.

Big bore airguns are all the rage these days, as hunters contemplate an air rifle that can take down an elk. AirForce has one that is accurate, powerful and flexible.
When the action is open, the bullet is laid in the loading trough. Before closing the action again, the bullet is pushed forward manually to contact the rifling.

These features are nice, but they aren’t what make the Texan so interesting. What’s different about this airgun is its valve. For those not familiar with big bores, let me tell you they use compressed air like a funny car sucks down fuel! If a rifle develops any kind of power, it’s only going to get two shots per fill. The ones that get more shots than two have a lot less power—until the Texan, that is.

Shooter Tunes the Valve!
The valve in this rifle is not the simple knock-open design familiar to most airgunners. It does work that way, but this valve is balanced so as not to need a powerful thump to knock it open. Instead of just slamming the valve open the way most big bores do, the Texan’s valve opens more precisely. The amount of time it remains open is partly controlled by the gun’s tuning mechanism and partly by the weight of the bullet that’s being shot.

A heavier bullet moves slower, and therefore remains in the bore longer. As long as the bullet is in the barrel, it prevents the compressed air from escaping, and the air pressure continues to push back against the firing valve. That backpressure prevents the valve from closing.

The valve dwell time, or the time it remains open, is therefore a combination of the tuning mechanism adjustment and the weight of the bullet. The results are fantastic—better than any other big bore has ever achieved.

A Texan shooter can, at will, change the amount of force with which the striker hits the valve by simply adjusting the tuning mechanism. To do this, the sidelever must be forward to expose the adjustment wheel in a window on the left side of the frame. The wheel in that window is turned clockwise to increase the tension on the striker spring for lighter bullets and counterclockwise for heavier bullets.

When the striker spring was properly adjusted, I got six shots with a 215-grain .458 pure lead semi-wadcutter bullet on a single fill of air. The velocities of those six shots that started with a 3000 psi fill were 835 fps, 899 fps, 882 fps, 870 fps, 856 fps and 830 fps. The lowest energy in that string was 329 foot-pounds and the high was 386 foot-pounds!

I’ve never seen a big bore rifle put out six consecutive shots at that power level on one charge of air! In fact, until I saw that chrono ticket, I had been refilling the rifle after every second shot. Suddenly, it dawned on me how differently this gun works!

Special Operation!
I wanted to increase the striker spring tension when firing heavier bullets to hit the valve stem harder because I wanted more air to come out. And I would have decreased it when firing lighter bullets, but that’s exactly the wrong approach for the Texan.

So, you don’t hunt whitetail deer with a 405-grain bullet—unless you think you might get a legal shot at two of them standing side by side. A 215-grain semi-wadcutter will do the same damage to a deer as a bullet twice as heavy, plus it gives you several more good shots before you have to refill the rifle.

Elmer Keith wrote extensively about the penetration of slow-moving lead bullets in game and cattle in his book, Sixguns by Keith. Sure, his writings have passed into history, but that doesn’t make them less true. The big bore airgunner of 2015 needs to think like the guy who hunted with a big bore handgun in 1930.

The way the striker and valve work together, the spring tension has to be lightened as the bullet weight increases, because the bullet stays in the barrel longer, helping to hold the valve open longer. This will take some getting used to for most big bore shooters who are accustomed to conventional valves.

Fortunately, there are marks on the striker spring adjustment mechanism that provide a reference where things are for each bullet you shoot. If I owned a Texan, I would calibrate the rifle for several good (accurate) bullets and record those settings for future use. But I definitely wouldn’t adjust the gun unless there was a good reason.

Less is More
The last thing I will say on the topic of air use with the Texan is that if you fill the reservoir to a pressure above what the valve can use, you’ll get lower velocity. This is called valve lock and is quite a familiar phenomenon to those who shoot smallbore pneumatics.

But until the Texan came along, it didn’t apply quite as much to big bores. Many of them respond with more power when the reservoir pressure is increased. Sure, there’s always an upper limit to this, but that limit is well above the nominal 3000 psi fill that’s recommended by the manufacturer.

With the Texan, however, you’d better stop right at 3000 psi or your velocities will suffer. In fact, with some lighter bullets, the top fill pressure might be a little below 3000 psi. The only way to know for sure is to use a chronograph.

Big Bore Bullet Philosophy
Another thing most shooters don’t appreciate—in fact, many cannot believe—is that bullets from a big bore airgun go right through medium-sized game and out the other side. I’ve experienced this personally several times, plus I’ve heard the same thing from other hunters. Big bore bullets are seldom found inside animals like whitetail deer and sheep.

Even when hunting American bison, which qualifies as big game in my book, a 405-grain .458 round-nose slug will tear through the animal and exit the far side, unless it is stopped by a major bone. Ribs don’t count; it has to be a leg bone or equivalent.
Okay, if the lever was easy to open, then the effort has to come when it is closed. But that’s wrong. The closing effort is also minimal. This time it might take as much as 5 pounds to close the action. Somehow, all the effort of cocking the striker spring has been bypassed! It’s like getting free money or seeing an election promise that’s actually delivered!

What’s not obvious when you do this is that you’re actually compressing a 22-pound spring. Chris Ells, the engineer who designed the valve and striker mechanism, told me that the first prototype of the gun had none of the mechanical advantage of the production model and was a real bear to cock.

He told me he went through numerous iterations of the cocking mechanism before arriving at the production design. It’s both light and easy and also much less complex to manufacture.

Can it be Uncocked?
The ease of this operation gives you a clue that the Texan’s action is different than any you have ever tried. But there’s one more huge question to ask. How do you uncock this beast?

Other big bores are uncocked by grabbing the bolt or cocking handle and pulling the trigger. When the sear releases the striker, you ride it forward with the bolt handle until it comes to rest against the valve stem. If you didn’t restrain the striker, dry-firing one of these monsters is enough to draw attention to yourself from several houses away.

The Texan uncocks much easier. When the gun is cocked, open the lever all the way again and then pull it closed just far enough to allow the automatic safety to be released. The sidelever handle has to move back about 3/4” for this.

Then, just pull the trigger and the sear will release, allowing the striker spring to relax. It’s completely safe, even though you’re uncocking a rifle with 500+ foot-pound potential.

Accuracy
Pretty is as pretty does, and nowhere is that more true than with a big bore airgun. If you’ve never shot one, you might be surprised by the quirks these guns bring to the table. The first one is that they almost all direct shots No. 1 and No. 2 to different places. It takes time to find the right bullet and the best fill pressure for each different gun; but after all that has been done, you still have to learn how to correct for either the first or second shot.

I often find it necessary to elevate the rifle for shot No. 2. The amount of elevation varies with each gun, and again with each bullet type used; but it isn’t uncommon to have to elevate the rifle by 2 inches at 50 yards to get the first two shots to go to the same place. If you don’t do this when shooting many big bores, you’ll get two tight groups separated by a couple inches.

Surprise No. 1 came when I put three shots into the same hole at 25 yards—offhand! I’m not used to doing that with a big bore, but I’m darned if the Texan doesn’t do it every time. Of course, this happened when I was still under the spell of my AirForce instructor, so it remained to be seen what would happen when I got out on my own.

On My Own
The next time I was at the range with the Texan, I was alone and trying to remember all I’d been told about tuning the rifle for different weight bullets. I started with what I thought was just going to be a shakedown session to familiarize myself with the big rifle. Little did I realize that I would also break the course record the first time out! I began shooting my own 405-grain .458 round-nosed bullets that have worked so well in all the other big bores I’ve shot. I can usually put five of them into an inch at 50 yards with a Quackenbush big bore. But the Texan didn’t like them. I put 10 of these lead footballs into just over 3 inches at 50 yards.

Then I tried a pure lead 405-grain .458 hollow-base bullet produced especially for this test by Tin Starr Bullets. This bullet surprised me by putting 10 bullets into 1.993 inches. That group was very good, but the fact that the aim point was the same for all 10 shots was the shocker! I’d been refilling the rifle after every second shot—the same as I would for any other big bore capable of producing over 500 foot-pounds of energy. That’s five refills for 10 shots. But every time I filled the Texan, I noticed that the gun’s reservoir still had about 2500 psi in it. So, the rifle was using about 250 psi for each shot. That’s less
than half of what other rifles of equivalent power use, but the significance of that fact didn’t sink in just yet.

This 405-grain bullet was definitely a hot number in the Texan. But it’s also too much bullet for medium-sized game like whitetail deer. I needed to find other bullets that worked just as well or, perhaps, even better.

Different Bullets

I did test the rifle with other bullets and some of them showed promise—one in particular that I’m about to present. However, you should know that there were a number of other bullets and even a round lead ball tested in the Texan. When we get to the discussion of power, I will present the data for all the successful bullets that were tested.

The Best Bullet

Johnny Hill, the owner of Tin Starr bullets in Weatherford, Texas, took a .45 Colt revolver semi-wadcutter bullet mold and enlarged the cavity to drop bullets that can be sized to .458". This is the bullet I mentioned earlier that gave me six shots in the high 800 fps range. That puts it at the same energy as a factory-loaded .45 Colt round.

And this is the bullet my test rifle loves best! At 50 yards, I was able to put five of them into .762" using a single aim point. That was when I was filling the rifle after every second shot.

Then, I happened to shoot those six rounds through the chronograph and realized I didn’t need to refill the rifle after every other shot. There were six good shots on each fill with this lightweight bullet! To keep things simple, I settled on just five shots per fill.

Now, I could shoot a 10-shot group and only have to fill the rifle two times. What a difference that made! It was like moving from a muzzleloader to a breechloader, because the rate of fire increased so dramatically.

Of course, this was only possible with the lighter 215-grain bullet. When I shot the big 405-grainer or even a 350-grain-round-nose that was also in my range bag, I had to default back to just two good shots per fill.

In practical terms, a third shot is possible with the larger bullets. It won’t go to the same point of aim but can certainly be used for a finishing shot at close range.

50-yard Accuracy

I shot several stunning 10-shot groups at 50 yards with this 215-grain semi-wadcutter before moving out to 100 yards. That’s where the rubber really meets the road for big bores! Big bore airguns are certainly capable of reaching out to 100 yards, but until now, they haven’t been that accurate—at least not the guns I’ve tested. That’s why I always shoot my tests at 50 yards and recommend keeping the maximum engagement distance to around 75 yards or less.

But the Texan has the power to reach out to 100 yards, and it also seems to have the accuracy. So I tried shooting groups at 100 yards. This where I discovered that the Texan does, indeed, shoot to two different spots, depending on whether it’s the first shot or the second after a fill.

At 50 yards, the 10-shot groups are too tight to see the different impact points; but at 100 yards they group several inches apart, with the first shot being higher than the second. It took me three sessions at the range, and the last session was one of adjusting the bullet tuning mechanism over the chronograph before I got my 100-yard act together. But when the planets finally aligned, I was able to put six bullets into a group that measured 1.506 inches between centers. That isn’t just good—it’s astounding!

Unfortunately, this success came right at the end of the time that was available for testing, so I wasn’t able to repeat it. But I had already shot several 100-yard groups where two bullets were in the same hole, so I don’t think this group is a fluke. I think it heralds the dawn of a new era of big bore airguns that have performance sufficient to hold their own with shotguns and centerfire rifles.

Power

The thing about big bore airguns is their power. Even the smaller ones such as the .308s and .357s (that the Koreans have called 9mm) produce over 100 foot-pounds at the muzzle. The larger calibers (above .40 cal.) are where the real action is.

There have been big bore matches in the past that scored hits by listening to the sound of the bullet striking a steel animal silhouette. In matches like that, the smaller calibers have reigned supreme over the larger ones because of superior accuracy. But their tiny bullets had next to no power remaining when they struck the target.

The Texan will turn things around because it brings both power and accuracy to the game. How much power you might ask? I’ve prepared a table that is based on the results of recorded muzzle energies for several bullets. These energies are averages of first-shot observations.

### Texan Performance Chart

<table>
<thead>
<tr>
<th>Bullet Shape</th>
<th>Weight (grains)</th>
<th>1st-Shot Velocity</th>
<th>Energy (ft-lbs)</th>
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<tr>
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<td>Round nose</td>
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<td>476.59</td>
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<td>841</td>
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<td>880</td>
<td>369.79</td>
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<tr>
<td>Round ball</td>
<td>143</td>
<td>966</td>
<td>296.38</td>
</tr>
</tbody>
</table>

Final Word

I was really astounded by the Texan in this test. At least one confirmed firearm shooter has decided to purchase a Texan when they go on sale later this year. He understands that he’ll need to buy the support equipment (a carbon fiber air tank and a compressor) to go with his new rifle, but the beauty of the mechanism and the accuracy he’s seen have made the sale. And I believe that says it all. The AirForce Texan is going to shake things up!

**Thanks**

I want to thank AirForce Airguns (www.airforceairguns.com, 877-247-4867) for the loan of a Texan for several months. They also opened their shop to let me look at the rifle’s development, and they kept me in the loop throughout the process.

Thanks also to Johnny Hill of Tin Starr Bullets (817-594-8511, weatherfordpawn@yahoo.com) for selflessly developing several special .458 lead bullets and for supplying me with hundreds of cast bullets for this test.

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**A BIG TRUTH ABOUT BIG BORE BULLETS**

Here’s a truth that escapes many modern hunters. A .45 cal. bullet generating 250 foot-pounds of energy will kill an animal just as dead in the same amount of time as a .45 cal. bullet that generates 1500 foot-pounds of energy. That’s because most of the big bullet’s energy is not expended in the animal—it slips right through and keeps on going! Unless there’s a large bone in the way, or the animal has a particularly tough hide, you don’t need to hit it with a lot of energy. These heavy lead bullets don’t kill with energy—they kill with blood loss. This is why relatively light round balls kill large game so effectively.

A 405-grain bullet is fine for the largest game; but if I’m hunting whitetails or something similar, I want a much lighter bullet that has the advantage of a flatter trajectory. The 405-grain bullet would be perfect for American elk (wapiti), red deer and bison. We know it will pass completely through even those massive animals when it impacts on one side, such as with a classic heart/lung shot.

Then the process of bleedout begins and the animal drops several minutes later, when blood loss has its effect. This is something archers understand all too well. But many who come into big bore airguns from the firearm side are used to hydrostatic shock.

Hydrostatic shock is the shock wave that passes through the tissues of an animal when hit by an ultra-high-velocity bullet. This shock wave is devastating to the animal’s nervous system and can sometimes cause near-immediate death. Many hunters are so accustomed to this effect that they cringe when they see how long it takes a bullet from a primitive rifle or an arrow to drop an animal. That performance is exactly what you can expect from a big bore airgun bullet.