

Air Rifle Training for High Power

[what to get]
Glen Zediker

How Well is "Shoot Well"?

The accuracy claims by most true match air rifle manufacturers run at about 0.05 inches center to center at 10M for their machine rested product. That sounds good, and it is: it's about a half minute. That may be better than most across the course rifles will do on average, but you don't want a gun that will do worse than that.

The world is missing a good few hundred dollar air rifle, and we are, indeed, diminished. There is about a thousand dollar jump from a good sporting air rifle to a match air rifle. Until someplace somewhere decides to gear up and produce a decent mid-range match gun, there is only one solution for those who want to train with an air rifle: save up!

This article won't examine whether an air rifle will increase a High Power shooter's score (I have another on that) but will, instead, offer a few pertinent points that may help make a decision. To avoid reading this whole article, here's the short take: all the top-line euro-pneumos are good and none are a mistake to purchase.

Action Action

Ultimately, most all air rifles, no surprise, use air to propel the pellet. This air, of course, has to be compressed to provide the push. The means of compressing the air define the major choice in operating systems. Given my (irritating to some) penchant for descriptiveness over techinese, I call them "gas guns" and "cockers." The first uses a pressurized cylinder on the gun, doses from which are dispensed into the chamber for each shot. Cocking air systems use a piston/chamber interaction to compress and seal in the gas needed for each shot. Another type, usually called "spring piston," uses spring power accompanied by a dampening system to counter the thrust and provide "recoilless" operation: this type is easy to spot since its barreled action will slide fore and aft.

Having had both air delivery types, I strongly recommend gas guns over cockers. One reason is that the cocking effort, and the lever stroke itself, make it impracticable to load a lever cocking gun from any position but offhand. If a gas gun is equipped with an accessory rail, the rifle can be fired from prone or sitting, if that's desired; I have no recommendations on its wisdom. I see no reason to purchase a spring gun unless it's a killer deal.

Gas systems are either CO₂ or compressed air (SCUBA, same as divers use). The gas gun push initially came about largely for reasons of reducing shooter fatigue. I don't mind the cocking effort because it makes my shootin' arm stronger, but I could see how the additional strain would wear down a serious competitor. Most manufacturers are currently directing their efforts toward SCUBA.

There are no real differences in accuracy in the two pressure delivery systems, although charge to charge consistency can be better with SCUBA; CO₂ is a little temperature sensitive. For our purposes, though, any performance differences among all three air compression systems are dependent on shooter and projectile quality.

The only drawbacks to compressed gas is that ownership requires a filling tank and a way to fill it. The advantages include a usually lower rifle price compared to the

same company's cocking gun, and maybe lower maintenance costs; as with most things, more moving parts means more potential for wear. The lower rifle price is offset by the additional equipment purchases necessary, but multiple purchases (such as also buying a pistol or purchasing inventory for a shooting program) could save big dollars going with a gas setup.

Speaking of filling tanks, bigger is better, in my opinion. They get heavy, but a 20-pound capacity CO₂ tank can be had for about the same cost as a 5-pound. Complete with riser tube (necessary) and fittings, CO₂ tanks cost around \$100.00; small SCUBA tanks are about that same price but larger units approach \$400.00.

A scale that reads in grams is needed to accurately fill a CO₂ tank. Weigh an empty cylinder, gas it up, and weigh it again; the correct weight will be in the owner's manual. Scales range from basic mechanical "postal" scales to electronic versions (found at big office supply outlets) to little high-tech wonders. I got the high-rev setup from Nygord Precision mostly because I didn't want to drive to the big city and hunt for something suitable. Nygord's scale is a pocket-sized electronic unit with adjustable tare, making for easy reading.

Some insight on filling a CO₂ cartridge is that the cylinder needs to be cold to fill completely. Some people refrigerate the rifle cylinders, but an easier way is to fill one a little bit and then bleed some gas from it, which cools the cylinder, and then top it off. Cylinders may have a safety valve to prevent dangerous overfill, but it is not to be relied on in lieu of a scale.

If a SCUBA tank is purchased from a shooting outlet it should have the fittings and regulator ready for use; otherwise, you may encounter some hurdles in getting one set up for your rifle.

Speaking of hurdles: it is wise to check around before purchasing any pre-compressed system to make sure you can get the supply. I had a devil of a time finding a welding supply willing to fill my CO₂ tank, and I understand that some people have encountered brick walls at dive shops over the same issue with SCUBA. There are strict regulations in effect on tank inspections, for instance, which some potential outlets seem to enforce well beyond the letter of the law. Tell them the ultimate use is for filling air gun cylinders; that may smooth them over. I can't stress this enough. I've heard stories.

Air Array

Years ago I purchased a Gamo 126 that was imported by Daisy. While not on the same level as a genuine "Olympic" grade gun, I paid less than three bills for it and used it happily for years. The rifle shot pretty well and at least had all the accouterments of the genuine article, if not the execution. After an incredible amount of use and one episode of robust abuse involving a flight of stairs and one of my shar-peis, the one we often call "buffalo boy," who attempted a block pass about a third of the way down, my Gamo gave it up. B.B. was fine, Daisy fixed the rifle for fifteen dollars, but I commenced searching for another rifle anyhow.

Disheartening.

My interest in economics extends only to the bottom of my bill basket, so I won't worry about what's going on with the German-speaking nations, but prices can go up and down, but usually go up and up. Even the lower-level competition air rifles are currently over one thousand dollars; a zoot-capri gold medal gun can be half again as much. The prospect of purchasing what for me is a training tool for not a whole lot less than I had invested in each of my across the course rifles seemed sensically stratospheric.

Oh well.

I settled on a Steyr® Match 91, but that's not important, because, in practical terms, there are no differences in the top rifles. I'm not one of those "gun writers" who feel compelled to dissect each rivet and screw on every gun, so don't take that literally and get me wrong. There are, technically, quite a few differences, and each of the top guns has its own array of features, some of which may matter greatly to some people. That's not for me to say. My "no differences" reference is directed to performance.

All the top guns are good. They have to be. This is one of the few shooting sports where competitors use stock guns. Again, some may better satisfy different tastes or opinions, and some have better records in competition, but after a short stint with any good air rifle on an ISU target, anyone will quickly come to the realization that it is not the gun that does the winning. The best shooter wins, and his or her choice determines the new "best" rifle. I hope it doesn't sound like I'm going on to placate manufacturers that don't have a lot of gold medals to their credits, because that's not it. The tough decision is whether you want an air rifle; it's really not possible to get the "wrong" one.

The "entry level" includes the RWS® R75 and Feinwerkbau 300 and starts at about \$1000.00, give or take depending when and where either is purchased. These are both good guns, but great guns don't cost that much more. For better economy, you might want to check into a used gun (Neal Johnson is a good outlet, as is Champion's Choice). Used air rifles don't represent a significant risk due to the reliability of the main mechanisms. Buying a used air rifle is the same as any pre-owned machine: first find what you want and then judge the offering on its condition and cost.

The "great" group starts at about \$1200.00 and goes on for a few hundred more. These are guns a dedicated air rifle competitor would take to the line, and include the Hämmerli 450, Feinwerkbau C60 and 600 series, and various Steyr, Walther, and Anschütz models. Stats usually show Feinwerkbau and Anschütz to be the most commonly entered at major competitions. Somewhat softening the cost of the guns is that most all come with outstanding sights. I strongly recommend going the extra couple of bills and choosing from this group; you'll be happier in the long run, and given the longevity of an air gun, it is a very long run. Enjoy the ride!

Air Accessories & Incidentals

Given that air rifles are bound by ISU regs, the stocks on most are adjustable, but not readily so. Given a selection of factory made stock length spacers and weights, and given that most good guns have adjustable cheekpieces, there is a fair latitude in fitting at the shooter's disposal.

Hammerli makes a very simple, very good air rifle that usually costs a little less than the others and has a superb layout for an average sized person. It's highly recommended. For sake of the deal, though, even more recommended is to stay in touch with a few outlets

Sighting accessories for air rifles are virtually the same as for any using the 18mm front globe and large shank rear. Gehmann and Anschütz adjustable apertures, levels, and lenses all work, making it possible for the High Power match rifle shooter to reproduce his sighting array. The Service Rifle shooter might want to stick with one of the front post sight inserts. Fixing up a post is easy enough given patience and a needle file: just narrow it down to fit the same on the aiming black as the post in your Service Rifle.

You'll need a pellet trap/target holder combination to shoot at, and these range from homemade upwards. I once made my own pellet trap from a coffee can with sweat shirt stuffing. Don't laugh: I did it because my discount store bought trap didn't work worth a hoot. I had it regurgitate several pellets that didn't want to be trapped, including one that returned to the rear sight on the rifle. Scary. I got along fine with my Maxwell House set and never had it so much as drop a pellet to the ground. I punched a hole in

the side of the can and used a wing nut to attach it to the boss on a camera tripod. A tripod is nice because it allows for adjustment to uneven ground outdoors or to different heights, even "upside down" for prone shooting if needs be, and the legs provide a spot to clamp a light for use indoors.



and keep an eye out for "bargains." No one ever gives them away but a watchful monitoring of the sale pages at Champion's Choice or Gunsmithing Inc. might yield a deal on a discontinued model. Again: they're all good.

I recently purchased one of Nygord's pellet traps, which is the best of its kind. This trap is compact, hangs like a picture or attaches on a tripod boss, and will last a lifetime (and cannot back fire a pellet). I got it mostly because it could hang on the wall and make for a more streamlined gallery setup. [I make no representation for the safety of any home built traps; I know what I did and how I worked it out, but that's not saying it is wise.]

Get good pellets. They don't have to be the tray-packed certified-perfect variety, but stick with one of the euro-match brands. I used to shoot discount store "match" pellets and finally tried a tin of the basic RWS® Meisterkugeln™. I found out that I was a whopping lot better air rifle shooter than I thought! I learned a long time ago that "practice" High Power ammunition (which suggests lower quality than what is used in a match) was a wasted effort because it somewhat negates the experience in practice, and learned it again here. Even the ultra-dollar pellets are still ultra-cheap compared to other ammunition that the money spent is not worth a second thought. It does make a difference. My opinion is that Nygord pellets are far and away the best, and I'm not alone there.

**What about sporters?
Avoid them unless you're
wanting to do with them
what they are built to do,
which is knock a significant
hole in an object. They kick
amazingly hard and don't
shoot too well. I've fired
many of the "top" varieties
of these and they belt the
self harder than an AR15
and don't shoot nearly as
accurately as a run of the
mill .22 sporter. Squirrel
issues, I can't advise, but I
can say the value to the
competitive shooter of a
sporter air gun is greater
when it's aimed at raw
paper (trees) rather than
printed paper.**

Take time to learn how to clean and maintain the rifle, and purchase the right gear. The rifle is a large investment so don't shortchange your future satisfaction with it by not getting what's needed to keep it running. Nygord sells a nice kit he's assembled from proven products.

My personal favorite air guns come from Steyr®. They shoot well, of course, but are also structured a little larger. There is a decidedly different feel to these rifles compared to others I've tried. Facto-the-matter is that many women and smaller statured males get involved in big-time air gun matters, and most of these others are built around their main customers. I also like the cant adjustable rear sight arrangement on the Steyr®, and also its hard steel and outstanding finish (much harder and much better, respectively, than what most others use). These rifles get a lot of handling and petrol-based lubricants and air rifles are not good mixes. I have the "orange" touch in my chemistry but I've never had the first speck show up on my Steyr®. If you want to go on what seems to win big events, then you might want to go with one from the Feinwerkbau® 600 series; just choose your system. They all good.

Beware the Bargain

I hear about a Czech-made rifle that's supposed to be decent-to-good but never got a reliable accounting of its availability or quality. Gamo® needs to re-up their 126. That Spanish-made rifle was actually quite outstanding and its top price was only three hundred dollars. It had nowhere near the accouterment level of a top rifle but was entirely (entirely) adequate to give first-rate feedback and feel. As said elsewhere, I got one of those for \$234.00 in 1981 and honestly don't shoot a materially higher score with it than I do my \$1400.00 dollar Steyr®. I bit on a Chiny-made FWB® copy and it went back immediately. Compasseeo sells them and terribly mis-represented this product. I don't knock them for making much ado about their wares, but it was not "identical" to the German-made item. It was covered over every square millimeter, in and out, in what appeared to be ear wax and had stamped sights, extremely poor workmanship, and the same overall "coffee can" construction exhibited by other Norinco products. They were good about taking it back and actually didn't seem too alarmed to hear my reason for the return. I'm not trying to hurt this company, but I owe recollection of this experience to any others who might see the ads too. The Russian-made Bajkaal rifles turn up on occasion. Their team shot these in the Olympics. They're fine performing rifles but you're liable to be disappointed in their appearance. They also have a few quirks that can be hard to work around (like finding sight accessories). Be careful how much you pay, though, because some outlets tend to think they're nicer rifles than they are. Again, the best bargains are closeouts and used, which can take time to find; if you need one today, get an R75 RWS®.