



ALL ABOUT AIRGUNS



NEWSLETTER

ISSUE 03

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Daisy Powerline 15XT

Want to have just a ton of fun at a very modest investment? Give Daisy's new Powerline 15XT a try - you'll be glad you did. The 15XT is a semi-automatic CO2 powered pistol that will send 15 BB's down range as fast as you can pull the trigger. Molded out of sturdy engineering plastic to look like an authentic semi-automatic, the checkered grips nestle easily in the hand, and the curve of the molded plastic trigger feels comfortable to the finger.



The 15XT is easy to handle. It is fairly small, lightweight and ambidextrous. On top of the non-working "slide," you'll find molded-in sights (a blade front and a notch rear), as well as a 3/8" dovetail for mounting a sight device. Beneath the muzzle, just forward of the trigger guard, there is another 3/8" dovetail that can be used for mounting a laser sight. Just to the rear of the trigger guard is a pushbutton safety that displays a red band when the 15XT is ready to fire.

To load the 15XT, first put it on safety. Then, remove the left grip cover by pulling up on a molded tab on its lower right edge. Removing the left grip cover exposes a cavity to hold the 12-gram CO2 cartridge that powers the 15XT. To insert the cartridge, first unscrew the puncture screw at the bottom of the pistol grip, slide in the CO2 cartridge, replace the left grip cover, then rapidly tighten the puncture screw until it is finger tight.

Next, load the magazine by pulling the magazine BB follower fully forward, holding it forward and inserting up to 15 BB's into the loading port. Once the magazine is loaded, slowly release the magazine BB follower. Now you're ready to shoot.

Make sure your target, back-stop and surrounding area are safe, push the safety to fire position, align the sights on the target, and pull the trigger. POP! POP! POP! BB's go whistling toward the target at an average speed of 425 fps. It's fast, and it's fun.

Even better, the 15XT is quite accurate for a BB pistol. In independent tests against another CO2-powered BB pistol that has "blowback action" (that is, the slide moves when the shot is fired), the 15XT was found to be nearly twice as accurate at approximately half the cost.

Breaking-In and Cleaning Air Guns

Many air gun shooters think that because they have shot 200 or so pellets through a new air rifle that it's now broken in. Nothing could be further from the truth. Ten times that number of pellets would be more like it. Normal break-in of a modern spring-piston air gun takes about 2500 pellets.

The break-in period serves to do two important things. First, the trigger mechanism starts to hone itself and smooth out. That initial wear is good for a trigger. The parts start to mate together, small imperfections on the sear and trigger face begin to fade and the entire trigger pull experience can be greatly improved for those who are attuned to it's nuances. Focus on all aspects of the air gun trigger. Where does it let off? Is it longer in the first stage or the second stage? Does it break cleanly or does it creep? As you begin to recognize the individual aspects of the trigger on your new airgun, you will also learn to recognize how it changes during the break-in period.

Second, the cylinder, spring and piston parts really smooth out and begin to mate together. The entire firing sequence begins to smooth out and vibration is greatly reduced. Learn to recognize the vibration that can be felt in your face as it rests on the stock when firing - it is important. Vibration is evident in all new spring piston air guns manufactured. As the power plant parts begin to mate, vibration begins to lessen. This is a good indication that your new airgun is starting to "break-in." Also, the air gun will become noticeably easier to cock. This is because the mainspring is no longer dragging against the wall of the piston air chamber. All of this break-in period must be accompanied by proper cleaning and lubrication. Refer to your owner's manual for this information and be sure to pay attention to any unusual sounds coming from your airgun like squeaks or high pitched squeals. These sounds usually mean that a good cleaning and re-lubrication are in order. However, it is vital to avoid over lubricating today's modern spring piston air guns. Use LITERALLY only one or two drops of lubricant.

I normally use Q20 or WD40 on the outside of the rifle, as well as all the pivot points. Do not use any petroleum based oils inside the rifle or near the synthetic seals. On the stock, you can use any wood oil, or if you don't have anything else, use something like Pledge (that you will normally use for polishing wood furniture).

Here is another tip for you... Pledge is wax based, and a quick spray in a your tin of pellets does wonders for keeping the barrel lubed. Remember, don't over do it.

For cleaning the barrel, you can use a cleaning kit or a pull-through. I take a piece of fishing line about 3 times the length of the barrel. Tie a piece of cloth in the middle of it. It must be able to go through the barrel, but it must fit tight. I normally put a few drops of paraffin on the cloth, to dissolve any old oil as well as lubricate and protect the barrel. Remember; keep it away from rubber and synthetic seals.

Don't cock the rifle; just open it enough to push the line through the barrel. Pull it through a few times and repeat with a dry piece of cloth, to remove excess oils.

High speed photography.

I recently came across these pictures on the internet...

Glass panes



Glass tube filled with paint



Strawberry



Small Tomato



Walnut



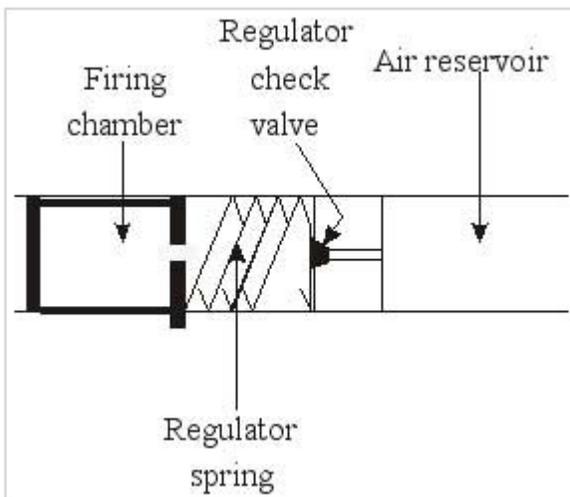
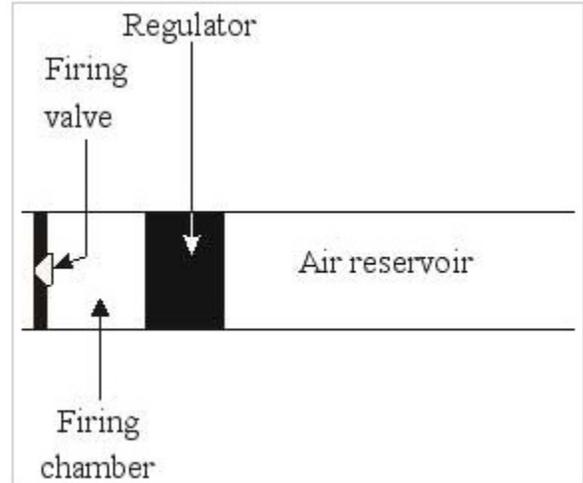
Play-dough



Air Pressure Regulators

What is a pressure regulator?

An air pressure regulator is a mechanical device that controls the air pressure and volume available to the firing valve of a precharged airgun. Because the pressure is always the same, a gun with a regulator shoots with very consistent velocity, plus it may get a few more shots on a fill. As long as there's enough pressure in the reservoir, it operates as described. When the reservoir pressure drops below the regulated pressure, the regulator remains open all the time and the gun becomes unregulated.



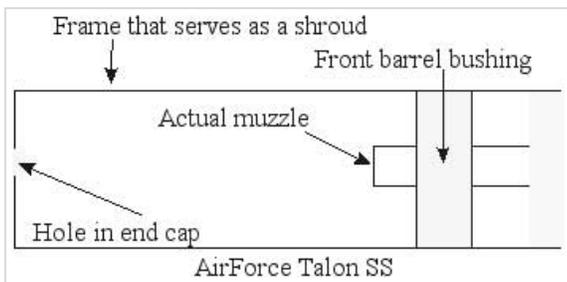
How does an air pressure regulator actually work?

The pressure regulator contains a powerful spring that acts on a valve. However, this spring is not powerful enough to keep the check valve closed against the high pressure of the air reservoir. Air forces its way through the check valve and into the firing chamber. When the pressure builds inside the firing chamber, it pushes on the check valve, helping the spring close the valve against the air reservoir. To control how much pressure is in the firing chamber, the spring is adjusted until the desired pressure closes the check valve.

Barrel Shrouds

The simplest type of shroud is a jacket that encloses the barrel and contains the violent release of compressed air from the muzzle. It lets the pellet escape but forces the air to use up much of its energy before it leaves the shroud, thus reducing the report. In effect, it acts like the simplest form of silencer, and the only difference is that the shroud covers the entire barrel, while the silencer is just a component added to the barrel.

The Talon SS has a chamber between the front barrel bushing and the end cap of the frame, which serves as the space where energetic air can disperse and lose energy before exiting the gun. It's simple and it works. However, only a few guns have a frame large enough to use as a shroud.



Others must install an actual jacket around the barrel. This jacket must be rigid so it doesn't move and hit the barrel. It must also have its end cap hole aligned precisely with the true muzzle, so the pellets don't touch the sides of the hole when they exit. And, it must look right on the gun. That drives makers to use a smaller-diameter tube (smaller than the AirForce frame diameter) and to attach it rigidly at the action.

To keep the shroud to an overall length that doesn't ruin the looks of the gun, the gun designer does everything he can to direct the flow of energetic air backwards after it leaves the muzzle, so it has to run the entire length of the barrel and back again before exiting the end cap. That way, the outer shroud diameter can remain small yet still have a lot of space for the air to expand (length instead of width).



Some wise person discovered that if they allowed ambient air to exit the shroud at the rear, it wouldn't build a pressure wave and reflect the compressed air back to the end cap so readily.

So, the shrouds on really advanced PCPs will have small holes just in front of where they exit the receiver.

There's one final consideration for a good shroud - materials. Use the wrong materials and the shroud becomes a gong, amplifying the sound instead of dissipating it. Use the right materials and deaden them further by installing vibration dampers at the right place, and you'll get a dead-quiet rifle. As you can see, there's a little more to shrouds than you may have thought. Done well, they are as effective as silencers and can also be quite attractive



What's the difference between short & long airgun barrels?

Gerald Cardew and his son, Mike, wrote in their book *The Airgun from Trigger to Target* about an experiment to determine the maximum length a spring-gun barrel should be. When they performed this experiment in the 1960s, the low-powered .22 rifle they tested got its maximum velocity by the sixth inch of barrel. After that, the pellet was coasting. After 25 inches of barrel, the pellet began to slow from friction.

Today's spring guns are more efficient, and the barrel length required for maximum acceleration is closer to 10 to 12 inches. Caliber makes a difference, as well, but it's not that big a difference. **So, spring guns favor shorter barrels over longer ones.**

Now, you probably wonder why rifles like the Diana 350 or Gamo 1250 have such long barrels... Well, both are break barrels, meaning the barrels are also used to cock the rifle. Without the long barrels it will be almost impossible to compress those huge springs.

The Diana 48 is a great example of a high powered spring rifle with a short barrel. The extendable cocking lever means it does not have to rely on a long barrel to cock it.



It is easily to prove that gas guns work better with like longer barrels. An AirForce Talon SS shoots a .22 caliber Crosman Premier pellet at 830 to 850 ft/s when set to its highest power setting. Exchange the standard 12-inch SS barrel for an 18-inch barrel, and the top speed will be 925 to 940 ft/s with the same pellet. Exchange that for the 24-inch optional barrel and the top velocity climbs up to 1,000 ft/s with the same pellet. These results all use the same base gun and air tank, so the only thing that changes is the barrel length.



Notice that the top velocity doesn't increase as much going from the 18-inch barrel to the 24-inch barrel as it does going from the 12-inch to the 18-inch. That's because the additional six inches of barrel after 18 inches don't add as much as they do after only 12 inches.

The proof of greater speed with a longer barrel in a CO2 gun are seen by doing a similar experiment with a rifle like the QB78 where the barrel can easily be swapped. Use 2 barrels that differs about 2 inches in length. The longer one produces about 40 ft/s more than the shorter one.



What does it mean to you?

When shopping for a PCP, a longer-barreled gun will be the most efficient. If two guns of the same make get the same velocity and energy, the one with the longer barrel should get a few more shots per charge. A CO2 gun will be faster in the long-barreled versions.

NOTE: Accuracy is not affected by barrel length.

This myth has been kept alive for decades, probably because the American rifles of the 18th and early 19th century made in Pennsylvania were so much superior to those of Europe.

Their longer barrels did help them burn gunpowder more efficiently, but they had no direct effect on accuracy. One important indirect effect was that the greater separation of front and rear sight made for a finer sight picture. That did help accuracy, but it was only a side product of the longer barrel. Today's Olympic target air rifles use a tube that houses the barrel and stretches the sight distance as far as possible, while their actual barrels remain less than 16 inches.

As an aside, John McCaslin got part of his inspiration for the Talon SS that has an enclosed barrel from these Olympic target rifles.

Olympic target air pistols with barrels of 10 inches or less are just as accurate as the rifles! That should prove that barrel length has no effect on accuracy. Some folks just can't stop believing that if the pellet or bullet is under the barrel's control for a longer time; it just has to be more accurate. **The truth is, length has zero effect on accuracy.**

Best “Bang for Bucks” Airguns



Spring powered rifles

At the moment there is just nothing that get close to the **HW35**. Impressive, timeless, tradition, craftsmanship, these are but a few descriptions of the HW35. The HW35 is one of the most respected airguns of the last 50 years. Built with emphasis on quality first, the HW35 will give generations of precision shooting pleasure. The HW35 has refinements unlike any current production spring piston air rifle. The barrel breach has a lock up system that gives the same accuracy as the best fixed barrel guns. This feature will give accuracy with a scope or open sights and still maintain the ease of cocking of a break barrel gun as well as ample room to load. The action has a very short piston stroke that produces very little recoil with a smooth firing cycle. The action cylinder is assembled with a seamless rear cylinder cap that makes for a beautiful rifle. The power level of the HW35 is ample for shooting up to 50m, the accuracy is on par with the best spring piston FT guns and it comes standard with the match grade Rekord trigger. This classic rifle from Weihrauch continues to set standards by which other weapons are judged.



Only R3399

Precharged rifles

This used to be is an easy one... the CZ200 has been the best priced PCP rifle for years, and with the new full stock version it is even better. It is not a cheap knockoff... quality is excellent, and the rifle is accurate and powerful.

A compact rifle at 907mm, the CZ200FS weighs in at approximately 3kg. A ten shot rotary magazine from Air Arms is available as an option to make this handy little rifle into a true multi-shot, which can be fitted in just a few minutes. Being small and light the CZ is a joy to shoot and handle. Filling the air cylinder is easy and a filling adapter is supplied with the rifle. Until something real good come along at a giveaway price, this will remain the best priced PCP rifle in South Africa.

If you are considering your first pre-charged pneumatic air rifle, or are looking for a handy second rifle, then the CZ 200 is not only worth a look, it could be on the top of the list. It offers amazing accuracy and value from the combined efforts of CZ and Air Arms. A truly modern, international, air rifle.



But it all is about to change, because coming in the next few days...



HATSAN 44 PCP rifle

**Place orders NOW to
avoid disappointment !!!**



Send email to info@airgunshop.co.za or order by phone at 0847646221 between 11 am - 3 pm

The COOL list

Each month we'll pick a springer and a PCP rifle that we feel is the cool gun of the month. This is not about being the most powerful, most expensive or most accurate rifle. A cool rifle is one that you can't wait to shoot or even just take out of the gunbag to see other people's reactions. It must be... well.... It must be cool.

Springers : HW97KL - first of all, chicks dig it!!!



No really, this rifle is simply beautiful, it is very accurate and usually the envy of everyone around. It's like Angelina Jolie in Tombrailer... pretty but deadly. If you want to buy one of these, get it in .20 cal.

PCP : Airvolution Sniper - just look at it!!!



It can push a .20, 14gr. pellet at a 1000 ft/s and is easily one of the most "pimpable" rifles out there. For maximum enjoyment, put on your camo's, load the rifle in single shot mode (like a real sniper rifle), take the silencer off and pop an eardrum.

Yes, there are more powerful rifles, or rifles that have better finish or is more accurate, BUT I DON'T CARE !!!

The Airgun Shop now offer the following services:

- * Standard Tune
- * Gamo Upgrade Tune
- * General repairs

It is important to understand that tuning a gun does not necessarily increase the power or ft/s (and usually doesn't) unless there are issues such as a broken or fatigued spring, a damaged seal, a rough chamber wall or a combination of those conditions and others. The logic in a tune is to improve the efficiency of the gun, to make it smoother, improve accuracy, improve consistency, and reduce spring vibration, twang and recoil to make it a more pleasurable shooting gun. Power should not be the primary concern, although important. If it's tuned and comes out extra strong, that's fine as long as it fires smooth and is consistent.

The following steps are involved in the process, but complete details regarding these services can be found on <http://www.airgunshop.co.za>

- Complete stripdown
- Clean all parts
- clean & lube of pivot locking assembly
- Adjust the pivot locking assembly
- Complete deburring
- Inspect the cylinder
- Check the crown
- Inspect and clean bore
- Finishing the spring ends
- Lubricate all parts with special lubricants
- Clean & lube trigger assembly
- Polishing tophat (if applicable)
- Install seals
- Install spring
- External Lube
- Final testing and chrony

Special discount for schools

If you feel like writing an article or do a review, type it up and mail it to us at info@all-about-airguns.co.za.

