

Air Arms S510 SL

A look at the S510 SL (side lever) carbine, one of the latest rifles from Air Arms.

The test rifle is an example of the third incarnation of Air Arms mainstream pneumatic rifles, starting with the S300 bolt action PCP, refined with the single or multi-shot S400/S410 series and now a major design overhaul in the S500/510 series. Throughout their history these mid-priced PCPs have offered accuracy, reliability and value for money, making them favourites with the hunting community, and lately also with HFT competitors. In the past some S300 and S400 rifles have even been pressed into service for the highly specialised sport of field target shooting – and they've done well there too.

The S500/510 SL series show several modifications and at least one major change over the previous S400 models. The change that can be seen instantly is the replacement of the old bolt action (as in S300/400 models) with a side lever cocking system, hence the SL in the model designation.



All in the action...

Since their launch the S400 and S410 have been popular for both hunting and HFT, and rightly so, but there has always been a little niggle with the operation of the bolt action on the multi-shot S410 version. This was simply because as the bolt is drawn back, the magazine would turn one notch putting the next pellet into position, then pushing the bolt forward would seat the pellet into the barrel's

breech, however if the bolt hadn't been pulled back far enough, the mechanism would fail to re-set for the next shot. To rectify this, the bolt could not just be re-cocked fully and then pushed forward again, as this would put a second pellet into the breech. So to overcome the problem the bolt would have to be pulled back just far enough to allow the magazine to be removed, then with the magazine out of the gun, pull the bolt completely back until the distinctive 'click' of the firing mechanism resetting is heard (as the trigger blade moves forward), then the magazine can be turned back one notch to the empty chamber, reinsert it, then push the bolt fully home. Long winded! Well actually it doesn't take as long to do as it does to describe, and if the S410 is used for any length of time you soon learned to listen and feel for the extra 'click' at the end of the bolt withdrawal to confirm that the action was set before you pushed the bolt back to seat the pellet.

The new lever action, while not removing that extra 'click', nevertheless makes it much more unlikely to occur because the tendency is to automatically draw the lever back to its fullest extent with one smooth pull. This is due to the extra 'leverage' over a short distance... thereby making the cocking procedure far easier, and thus removing the only significant difficulty associated with previous models of this rifle.

Air Arms set great store in customer feedback, and have a rolling R&D programme to keep their products at the forefront of the market. Everything they do is tried and tested before it is finalised. For this reason the lever action replaced the bolt on the FAC version of the S400/S410 well over a year ago - long before finally making the move to the new legal limit S510 model. During this R&D procedure they found that they could significantly reduce the load factor on the lever mechanism by running it on ball-races; this not only gives a smooth unstrained action but also has the advantageous side effect of reducing the 'gap' beneath where the lever attaches to the side of the action (this is where some other 'lever cocking' rifles can have their mechanism exposed to dust, dirt and moisture).



The S510 rifles retain the true two stage trigger mechanism of the previous series. This allows a very fine but positive operation and gives a crisp and predictable let-off straight out of the box. It is also adjustable for both first and second stage pull weight and length of travel between these stages.

Other features include a shrouded 'bull barrel' with a built in primary sound moderator which mutes the muzzle report sufficiently enough to leave it

'as is', in order to keep the length of the S510 compact. However, if an even quieter shot is required, the barrel is threaded to take a secondary screw-in moderator if required. On the aesthetic front, the threaded muzzle ring has unusual diagonal fluting which matches the air cylinder's screw-on dust cap. Even this dust cover is a well engineered piece of kit, covering the neat Air Arms quick fit 'T' connector on the end of the air cylinder. Maximum fill pressure is 200bar but experimenting at slightly lower pressures often gives better consistency. A full charge of air will give approximately 60 shots in .177 carbine or 80 shots in a .22 model. Around 20 extra shots should be expected from rifle length versions.

The stock for this model was in walnut, although beech is available at a reduced price. For the S400/410 series, the difference between walnut and beech models is fairly small. So if you can afford it, the walnut sporter with its laser chequering, contrasting rosewood grip cap and forend tip is the pick of the bunch.



Shooting bench

Over the chronograph, Air Arms own pellets gave some great results, with just 9fps spread over a five shot string – 773, 776, 778, 770 and 769fps - which is approximately 11.5ft/lbs of muzzle energy. Near identical Daystate pellets give a slightly lower reading at around 11.3ft/lbs.

On the test range one hole groups (of 5 shots) are achieved right out to 40yds, and an overall spread of just 20fps across a whole charge (60 shots at 185bar) was recorded with Air Arms pellets.

The Air Arms magazine system is now a tried and tested unit and the new lever action operated smoothly and without fault throughout testing. This new side lever action has absolutely transformed this rifle, and the S510 can be recommended without reservation. However, if you prefer the bolt action of the S410, these models will continue in full production alongside the lever action S510.

Technical Specifications

Model	Air Arms S510SL carbine
Type	Pre charged pneumatic
Action	Side lever cocking
Capacity	Multi-shot, removable 10 round magazine
Calibre	.177 and .22
Overall length	37.5 inches
Barrel length	18 inches (with shroud)
Weight	6.2 lbs approx
Fill Pressure	200bar Max
Trigger	2-stage fully adjustable
Safety	Manual re-settable - cross bolt type
Power	11.5ft/lbs - 11.3ft/lbs
Sights	No open sights. Action grooved for scope mounts
Stock	Walnut sporter with high roll over cheek piece, laser chequering, contrasting rosewood grip cap and forend tip
Contact	Air Arms 01323 845 453