Walther's LP500 Match Air Pistol

Geoff Smith

The latest batch of air pistols from Carl Walther are designated LP500, the LP prefix meaning 'luft pistole' (literally air pistol) and the 500 number following from the previous LP400 series. They're designated as pre-charged pneumatic pistols or PCP, to distinguish them from the earlier piston-style guns.

The LP500 family are precision single-shot models featuring a carbon fibre aluminium composite air reservoir charged to a pressure of up to 200 Bar to provide approximately 100 shots between refills. By way of explanation, the Bar is not an SI unit of pressure, although it seems to have nevertheless been accepted in the context of air cylinders like these. It equates to slightly under one atmosphere (101.3 kPa) and a tiny bit more than 14.5psi so compared, say, to your car tyre at 30psi (roughly 200 kPa) the cylinder at 200 Bar is holding a pressure of 20 MPa or 2900psi above atmospheric. This is why these cylinders ***must*** be emptied before taking them on a flight.

There are four models of the LP500 - Economy, Competition, Expert, Finest Craftsmanship - the one under review here being the Competition model. The gun is supplied in a very tidy velvet-covered foam-lined plastic case and weighs in, with full cylinder, at a relatively light 903g.

Barrel length is 221mm and supplied accessories include a filling/emptying nozzle, safety line for proving the barrel is clear, a universal tool that has 1.5, 2, 2.5, 3, 4 and 5mm fold-out hexagonal keys to suit the screws on the gun, and comprehensive instruction manual. A pull-through line and some pieces of soft cotton cord are provided to clean the bore. A test target is also included and in this example provides a five-shot, single-hole group shot at 10m with 4.49mm pellets, presumably from a machine rest.

First impressions are of a gun carefully designed to fit the shooter, adjustable walnut grips once set up for the shooter's hand providing a very comfortable fit which allows the gun to be aimed very effectively. The whole system is brimming with adjustable features including the trigger, sights and grips as mentioned.

Mike Griggs fired a few shots and found the gun to be light, with a beautiful trigger and simple to operate.

The layout of the gun is straightforward. The air cylinder lies beneath and parallel to the barrel and screws into the aluminium receiver. At the cylinder's muzzle end is an air pressure gauge which shows the remaining pressure, the gauge calibrated in Bar from 0-200+ with the region between 0-70 colour-coded yellow, 70-200 in green and above 200 in red. The grip assembly is attached to the aluminium receiver at the rear and at the breech end of the barrel is the hinged loading gate, the barrel featuring a compensator at the muzzle end and enclosed in a jacket bearing the LP500 logo.

Operation is very simple. The loading gate is lifted thereby drawing back the small bolt and opening the breech which simultaneously delivers the appropriate charge of compressed air into the system when the safety button is pushed from right to left into the 'fire' position. A pellet is placed on the loading tray in line with the breech and as the loading gate is lowered the bolt closes, pushing the pellet into the chamber making the gun ready to fire.

The trigger, when depressed, hinges upwards at the rear and engages a lever that releases the charge of air to drive the pellet out of the barrel. The safety button above the trigger when shifted back to the right changes the operation from live fire to dry fire, very handy for practice. Dry firing consists simply of raising the loading gate fully then lowering it without inserting anything, after which the trigger can be operated to dry fire the gun without releasing any air charge. The guide book suggests the trigger has been factory set to meet ISSF specifications.

Having done most of my air pistol shooting with a side lever gun, the effortless nature of loading and firing this one is most agreeable. At the other extreme, having downloaded an exploded diagram of the gun, I shake my head. The old spring-type guns were relatively easy to figure out but this model has close to 200 separate parts including pins, seals, discs, valves, latches and numerous other designations. In general terms though it's an absolute delight to

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A left side view of the gun.

shoot, having a very crisp 5N (1lb 2oz) trigger pull with no noticeable creep.

Preliminary tests at 25m using a Labradar chronograph and Geco 4.5mm 7gr pellets gave an average velocity over 18 shots of 504.8fps with standard deviation of 27.2fps. The average velocity loss over 25m from these little flat pointed pellets was 99.7fps (I fired 20 shots but the Labradar lost track of two along the way so these were deleted).

Interestingly, the manufacturers stress repeatedly the need for commonsense when handling these pistols, and when you consider that at 25m the pellets are still travelling at an average of 405fps it's easy to see why. Even at this speed a 7gr pellet would carry 2.6 ft lb of energy and could cause damage.

While those initial tests over 25m gave interesting results, the important ones came later from testing the gun with a variety of different pellets at 10m indoors. I took it to Para's impressive new indoor range in South Australia and gave several members the chance to have a few shots and relay their impressions. All were positive, especially regarding the trigger and grip.

Right-hand view.

I then spent a few happy hours setting the sights up and generally familiarising myself with the gun, after which I shot the standard 60-shot match. Despite the nice grips and trigger I found I needed more practice, but in the air-silhouette match where you can shoot two-handed I surprised myself by hitting a chicken with the first pellet.

I returned to the range with the Labradar chronograph and shot the 60-shot match in three sets of 20, each with three separate brands of pellets starting with the budget priced Geco Diabolo (7gr pellets), then JSB Match Diabolo

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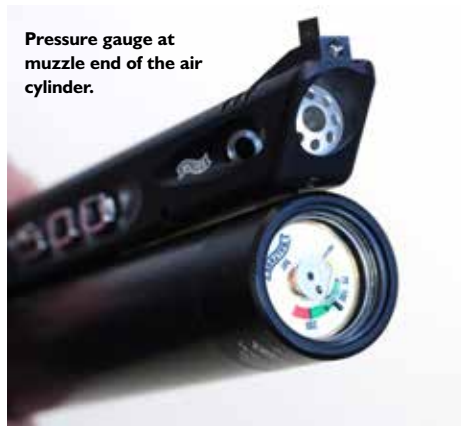
Loading gate up close showing retracted bolt

Left side view of trigger.

Right side view of trigger.

Pulling cleaning strings through the bore.



Pressure gauge at muzzle end of the air cylinder.

The muzzle showing the compensator.

(8.2gr) then Finale Match Heavy (8.18gr). Velocities measured with these pellets and average group sizes are shown in the table. In general terms the gun preferred the heavier pellets and I'd previously done tests with RWS Meisterkugeln 7.0gr pellets which as expected performed well.

Cleaning and maintenance requirements are minimal and I was fortunate when collecting the review gun from Walther's Australian agents Frontier Arms to chat with Mike Papps, one of our senior pistol shooting champions who warned me "never use oils on air pistols!" The supplied Walther pull through consists of a fabric-covered nylon cable with a loop at one end. This is inserted into the breech, non-loop end first, and once the loop is near the breech several strands of the supplied cotton string are inserted then pulled through the barrel to remove any surface gunk. The alternative, which is much easier, is to use the felt cleaning pads, loaded like a pellet then fired through, being careful to not hit anybody as they come out fairly quickly.

The instructions reiterate Mike's "no oil" direction and suggest compressed air can be used to remove any surface dust or dirt. The only exception to the lubricants rule is that acid-free silicone grease should be lightly applied to the thread of the pressure reducer after about every tenth removal of the air cylinder for recharging. Barrels must be cleaned from the breech end and it's important not to put a cleaning rod through the compensator at the muzzle end of the barrel.

At a recommended retail price of around $2895 this is not a cheap gun but it's a delight to shoot and with reasonable care should provide many years of good shooting. ∎

Charging the cylinder from a scuba tank - maximum pressure is 200 Bar.

Top view of the rear sight, adjustable for windage, elevation and width.

Gun with targets and pellets used for testing.

Table of velocities in feet per second and standard deviation for 20 shots (*3 failed to register on chronograph)

Brand	Highest	Lowest	Mean	SD	amount
Geco Diabolo 7gr	659.7	488.8	510.4	39.9	17*
JSB Match 8.26gr	565.8	457.8	471.7	9.2	20
HN Sport Heavy 8.18gr	495.8	463.8	473.0	7.6	20