John Robinson

The Air Rifle match as shot at International and Olympic level under the auspices of the ISSF is a very challenging event.

Walther LG400
Air Accuracy Personified

It is shot standing at a range of 10m at a target with a 10 ring measuring only 0.5mm in diameter. Given that the pellets average 4.5mm in diameter, serious competition shooters seek accuracy from the rifle/pellet combination in the order of 5mm at 10m and anything over that is unlikely to be acceptable.

I started my air rifle shooting career sometime last century and while I have shot plenty of pellets through match air pistols for several decades, the same amount of time and effort and equipment upgrades have not occurred with the long arms. Thus my air rifle activity has been confined to a bit of occasional off hand practice with my old a classic Feinwerkbau 300S spring and piston match air rifle.

While very competitive in its day, the spring and pistol era has long passed, and as is the case with most match air arms these days, power is supplied by high pressure, precompressed air.

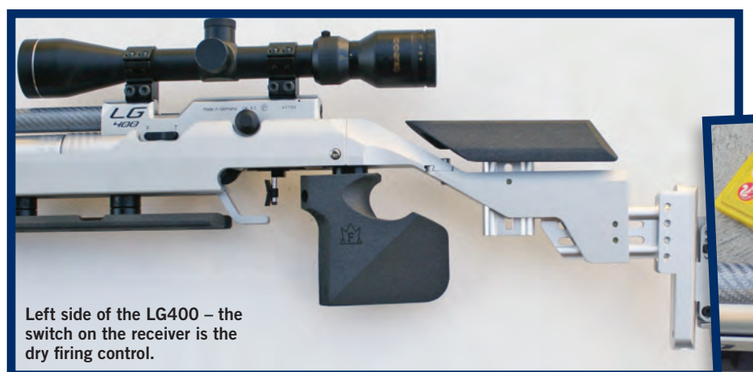
My interest in upgrading my air rifle gear came about through experiments with the Feinwerkbau 300S when testing pellets. It is difficult to get a handle on pellet performance with a match air pistol shooting over open sights, and while testing some pellets for a GUNS review, the variations in accuracy when used in an number of air arms could not be readily identified.

That was as good a reason as any to give in to my weakness for Olympic level shooting machines, Having already acquired a Walther K300 .22 Rimfire match rifle, the next step was to contact Walther distributors, Frontier Arms and check out the Walther match air rifle options.

After explaining my requirements, Chris Papps recommended a Walther LG400 Alutec Basic. While this is a full-scale competition air rifle, Walther produces higher level models in this range - the Alutec Competition, Expert and Anatomic. While these rifles are mechanically similar, their main points of difference to the basic model are in the stock configuration and adjustment accessories and the higher specification aperture sight systems

Apart from the pleasure of owning a top line match air rifle, the practical aspect of this acquisition is to fully evaluate the performance of a wide variety of .177 air pellets using a test rifle that has the capability of shooting one-hole groups.

This is a serious issue for those shooting competitively. Match air rifle shooters are encouraged to perform shooting group tests with their gun clamped in a machine rest to establish which particular match pellet type performs best for their particular air gun. The leading match pellet manufacturers produce pellets with graduated "head sizes", which means the pellets are offered with front diameters from 4.48 mm (0.176 in) up to 4.52 mm (0.178 in). In Europe (and maybe in Australia) a procedure similar to that is used to select .22 Rimfire ammunition that is used with the match air rifles. The gun is mounted in a machine rest test rig and pellets from a specific production run on a specific machine with the same ingredients are test-fired through the gun. Many different batches may be tested, and the pellets which give the smallest consistent group size will be selected, and the shooter will then purchase several tens of thousands of pellets from that batch. Group sizes of 4.5 mm (0.177 in) diameter



Left side of the LG400 – the switch on the receiver is the dry firing control.

The loading ramp is easily accessible – the prong on the bolt seats the pellet into the rifling when the breech is closed.

BELOW: Walther LG400 Basic fitted with Tasco 6X Air Rifle scope.

LEFT: The LG400 in standard trim comes with aperture sights. Stock is all aluminium. The compressed air cylinder operates at pressures up to 300 BAR.

are theoretically possible, but practically shot groups of 5.0 mm (0.197 in) are considered highly competitive.

If you are a lower grade shooter, such effort is hardly necessary but it is still worth finding out the accuracy potential of particular brands of pellets as some initial; testing indicated that some pellets would not even hold the much larger 10 ring of an Air Pistol target from a rest.

The LG400 is obviously designed for international competition and is built to uncompromising performance standards as a result.

The LG400 is powered by a pre-compressed air cylinder operating at up to 300 BAR. This is equivalent to 4200psi. This is not regularly achieved in practice as compressed air sourced from SCUBA tanks is not pressurised to more than 225 BAR (3150psi).

Compressed air has long replaced CO2 as the power source as it is largely temperature independent and thus provides a much more consistent power source, as well as additional velocity if required.

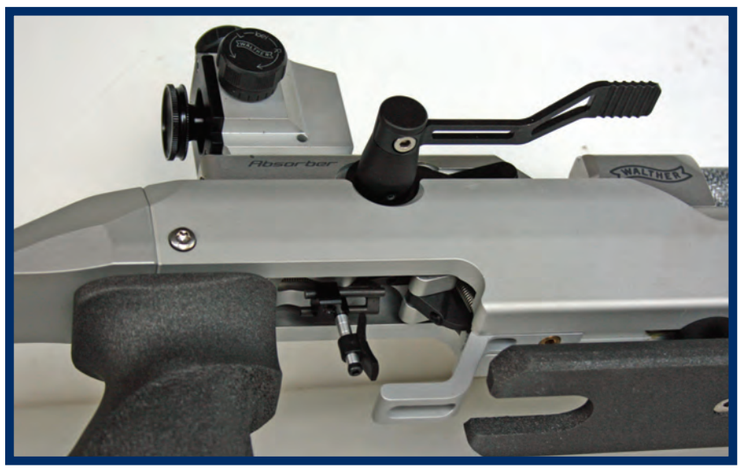
While it is hard to imagine that recoil would be an issue with a rifle weighing 4400g shooting a pellet weighing 7g at around 600fps, Walther thinks that it is and has designed the LG400 with a magnetic recoil equaliser system. No information is available in Walther's literature as to how this works.

Other refinements on the LG400 is an air filtering system (called the Quickclean) on the air supply into the metering chamber.

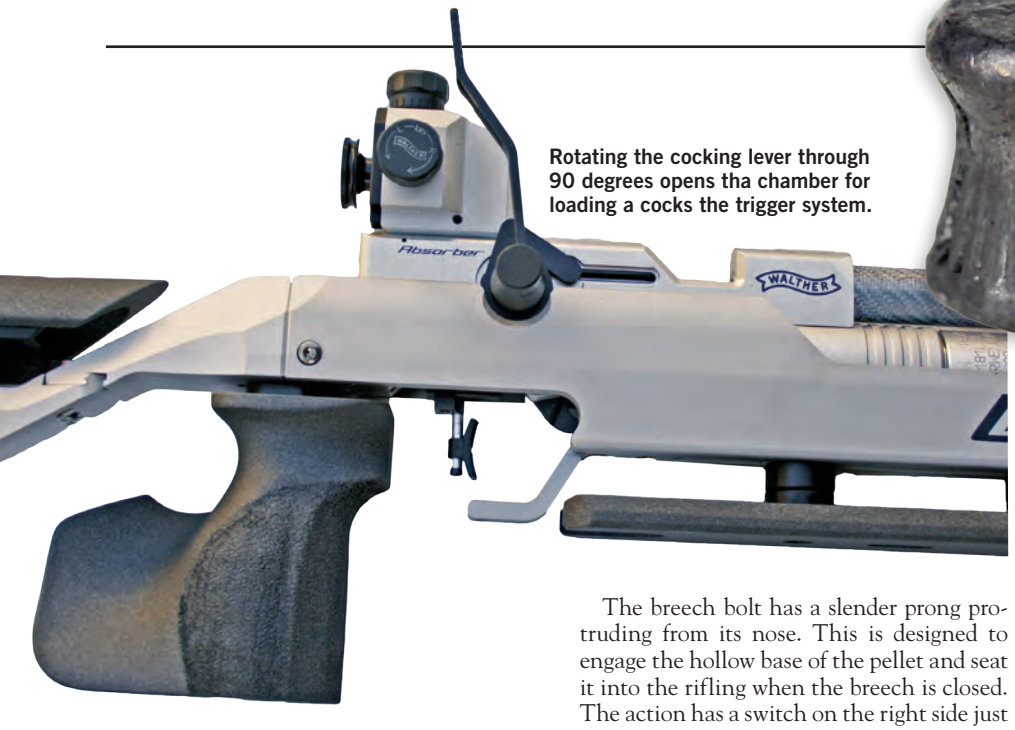
The barrel has a carbon fibre jacket with a stainless liner giving the LG a quite eye-catching appearance. The stock is all aluminium with a polymer pistol grip and is adjustable for length, comb height, butt plate height and inclination.

The pistol grip also has position adjustments and there is an adjustable forend platform that can be set fore and aft and for height to set the stock position for the shooter's preferences when shooting offhand.

Cocking the Walther is via a long lever on the right side of the receiver. By rotating this from the horizontal position to vertical, the trigger mechanism is cocked and the loading ramp is exposed behind the breech. This opening is very accessible and it is easy to drop a pellet on to the loading ramp.



1. Right side of the stock has graduated adjustment marks for accurate stock setting. Pistol grip is also position adjustable.
2. The LG400 trigger is fully adjustable via external adjustments.



Rotating the cocking lever through 90 degrees opens tha chamber for loading a cocks the trigger system.

Match pellets are not all the same as can be seen by these three samples photographed close-up.

SPECS

WALTHER LG400 BASIC

Calibre:
.177 (4.5mm)

Barrel:
Steel lined with carbon fibre jacket

Barrel length:
420mm

Sight radius:
650-850mm

Trigger:
Fully adjustable 50-120g

Stock:
Aluminium with adjustable but, comb and forend.

Length:
1075-1100mm adjustable

Length of pull:
310-390mm

Weight:
4400g

Power supply:
Compressed air to 300 BAR
Shots per charge (200 BAR):
Approx. 450

RRP:
$3000+ Shop around.

Distributor:
Frontier Arms Company.

The breech bolt has a slender prong protruding from its nose. This is designed to engage the hollow base of the pellet and seat it into the rifling when the breech is closed. The action has a switch on the right side just below the chamber that actuates the dry firing mechanism.

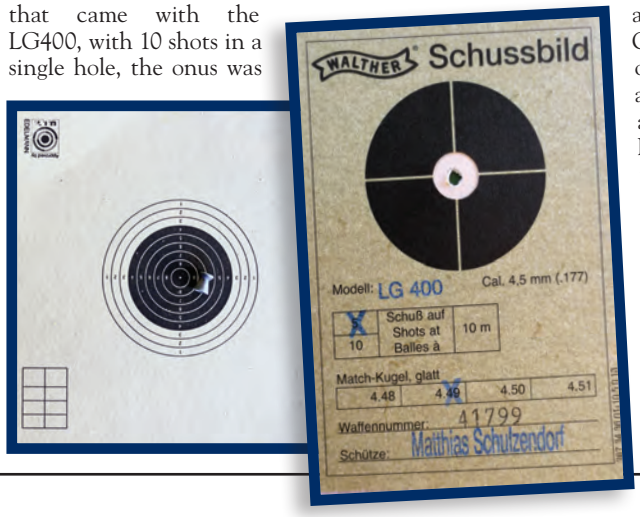
The LG 400 comes in a hard case along with a full kit of tools with the sights supplied with the Basic model being a standard fully adjustable rear dioptre sight and a standard foresight holder. The higher specification LG400 come with an Insight-Out rear sight and a Centa Score foresight holder.

The air cylinder (one supplied) is fairly large and can be screwed in or out via a knurled section around the pressure gauge on the end of the cylinder

I have long had an Ascor high pressure pump for charging my air pistol cylinders, but it was just too much like hard work to fully charge the large Walther cylinder. I was to able track down a certified used SCUBA tank with an appropriate DIN fitting the suit the Walther cylinder adapter and that got the outfit into business.

The LG was shot with its aperture sights to get them sighted in on a 10m air rifle target so that their sight settings were on the mark. The rifle was then set up with a 6X Tasco air riflescope so I had some optical assistance for the testing program.

As can be seen by the test target that came with the LG400, with 10 shots in a single hole, the onus was on the pellets to see what happens next for the preliminary testing of the Walther.



The trigger system on the LG400's is fully adjustable for position, cant, release weight, take-up and everything else that matters.

The testing of the 25 types of .177 pellets in the Walther will be the subject of another story as it is a time consuming project. Preliminary shooting of the LG400 with match pellets could not quite emulate the test group but immediately highlighted the performance difference between pellets, even those classed as match pellets.

The best performers were RWS Meisterklugen Match pellets that are individually packed so that each pellet is secured separately in its box. None of the bulk packages pellets, including RWS, H&N and Geco that were packaged in 500 tins grouped as well as the individually packed pellets. The groups with these pellets were generally very good with the spoilers being occasional fliers. When photographing the range of test pellets for the future tests, the macro photos of the pellets quite easily show up inconsistencies in individual pellets.

The test target supplied with the Walther listed 4.49mm as the pellet diameter used for the test group.

The Walther LG400 is obviously a very specialised target rifle, designed for one of the most demanding matches on the International shooting program. You will get no change out of $3000 to put one of these air rifles in your gun rack, but it a precision shooting machine and will get anyone with the talent onto the Australian Olympic team as it comes out of its box.

Walther firearms are distributed throughout Australia by Frontier Arms Company and can be ordered through any major firearms retailer. Comprehensive information on Walther products available through Frontier Arms and can be found on the FAC web site at **www.frontierarms.com.au**

FAR LEFT: The challenge – the 10 Ring on an ISSF Air Pistol target is the small white dot in the centre – 0.5mm – shot at standing.

LEFT: Test group – one pellet sized hole for 10 shots at 10m.