



Lithgow Arms Crossover Centrefire Sporting Rifles

First in .308 Winchester calibre



Some remarkable groups were over sandbag rests at the range.

Sporting rifle manufacturing has a patchy history in Australia. Lithgow Arms (LA) have now added the robust and highly accurate LA102 Crossover centrefire range to their successful LA101 rimfires.

This almost makes history with both rimfire and centrefire offering world class sporting rifles for local shooters with rifles whose quality and popularity appears to have set the revived industry on firm footing.

Private ownership of Lithgow Arms by Thales Australia Limited has contributed the vital enterprise ingredient to initiate the welcome return of sporting rifle production in Australia.

With over 100 years of military weapons (and intermittent civilian firearm) production behind it, Lithgow Arms was eminently qualified to produce its LA101 rimfire rifles

and now to complete the Crossover range with the release of the LA102 centrefire series. The first LA102 were produced in .308 Winchester calibre, it is now also available in .223 Remington and .243 Winchester. Buyers have the option of a polymer, laminate or walnut stock for their new Crossover rifle.

The LA102 is a multi-purpose rifle as implied by its name, crossing over from typical hunting to varminting or target shooting as needed. GUNS Australia received a polymer stocked Crossover in .308 Win from distributor OSA and we looked forward to see how this 'do it all' rifle handles its various tasks. Its dimensions are typical of a full sized centrefire, about 108cm long with 35cm trigger pull and 3.5kg without scope. Stock has a modern, practical style and shares the distinctive appearance of the LA101 ensuring that the Crossover rifles retain an unmistakable family resemblance.

Lithgow Arms has made the LA102 rep. The receiver has the modern cost effective machined cylinder design and uses a separate plate type stock mounted recoil lug to engage a slot in the receiver.

To keep weight down, the receiver is fluted on both sides of the magazine port and flats are milled opposite the loading/ejection port. Scope mounting is via a full-length aluminium Picatinny rail firmly attached with four base screws, it is shaped and finished to match the receiver outline and can appear to be part of the receiver. Long-range shooters will appreciate the replaceable scope mount base because it gives them the option of fitting an inclined base if desired.

TOP: The Crossover puts function before fancy but its performance will still attract a lot of keen shooters.



A full diameter bolt body (22mm) with three substantial locking lugs results in a very strong lock up. Another advantage of this style of bolt is the very smooth, wobble and bind free operation, due to the very large contact area between the bolt body and receiver bore and of course precision machining.

The repeating action is the popular push feed type with a fully enclosed bolt face, sliding extractor and plunger ejector. In case of a leaking primer or worse, gas entering the bolt cavity is vented down via the bottom lug groove to the magazine. Three locking lugs result in a 60° bolt handle lift, rising about 15° above the horizontal.

The bolt handle is finished black to match the polymer knob, the rest of the bolt is uncoated with a shiny machine finish and the barrel/receiver/Picatinny base assembly is coated with Cerakote H for effective corrosion protection.

A three-way safety lever is fitted to the bolt shroud within easy reach of the thumb.

With the lever fully back, (pointing to the rear) it locks firing pin, disconnects the trigger and allows bolt operation for safe loading and unloading. Swinging it anti clockwise about 45° will lock the firing pin and bolt. Fire is only possible on the most forward position when the flag is pointing to the right and a red warning strip is showing. Lever movements are firm with distinctly felt detent positions.

The LA102 safety has all the features that make an effective and user-friendly safety mechanism. The rear tip of the cocking piece protrudes from the tang when the firing mechanism is cocked.

The LA102 has a three-lever trigger that is adjustable for weight, sear engagement and over travel. It has a generous sear inspection port on both sides and a wide nicely curved blade. This excellent trigger enables

the centrefire Crossover to fully live up to its multipurpose title. The trigger released consistently at 1.05kg with very little creep with the factory settings. This is a good and safe multi-purpose setting and it was left this way. If finer trigger adjustment is required for target shooting, a gunsmith should make it after initial 'wear in'.

A single stack three round detachable box magazine is used on the .308 and .243 Winchester models, (four rounds for .223 Remington rifles). It has a moulded polymer body, bottom and follower, it is sturdy and

“ To assist further with shooting position versatility, the length of pull can be adjusted to 337, 347 or 357mm on the polymer stock... ”

the base is firmly attached with two pins. This all-polymer magazine is light, quiet in operation and maintenance free. Single stack operation adds feed reliability.

Its narrow design takes fewer rounds per length but this is not a disadvantage for most hunting and target situations. The magazine protrudes from the stock but not enough to interfere with carrying the rifle one handed.

Barrel specifications of the LA102 indicate that it has the potential to achieve a high

level of accuracy. It is 563mm long, made of military grade steel and has a medium weight varmint profile gently tapering to 18.5mm at the muzzle. The choked four groove rifling and the semi-match chamber are produced by the cold hammer forging process giving the barrel a number of advantages. Cold forged barrels are considered to outlast cut rifled barrels by a considerable margin, have smoother internal finish requiring little if any running in, ensure full alignment between chamber and bore and enable a choke or constriction of the bore and rifling near the muzzle to ensure an accuracy promoting consistent exit for the bullet. A 'semi-match chamber' means that the allowable tolerance specifications are reduced, resulting in a neater fit between chamber and ammunition further promoting accuracy.

Rifling twist was measured (during cleaning) at one turn in 29cm (11.5”) and handled all common bullet weights. The barrel has a target crowned muzzle and a M14x1 accessories thread with a screw-on cover.

Synthetic stocks are for those who carry and shoot their rifle a lot. (Collectors and traditionalists will favour the walnut and target oriented shooters may opt for the weight, stability and bedding options of the laminated stock.)

The tough polymer and glass-fibre-particle composite of the LA102 is the same material that is used for LA's military rifle stocks and other rifle components.

Stock shape is practical rather than traditional, the lower butt has two non-sloping sections for sandbag rest and a butt hook between which offers a butt grip for sandbag or bipod shooting and a convenient recess for the rear sling stud.

This distinctive butt is finished off with an effective rubber recoil pad. The more conventional fore end tapers gently and has a two QD studs fitted, one for the sling and a second for a bipod if needed. The narrow pistol grip will fit any size hand and offers an easy reach to the trigger. The stock shape is a good compromise between offhand and the various prone or sitting rested positions.

To assist further with shooting position versatility and general ergonomics, the length of pull can be adjusted to 337, 347 or 357mm on the polymer stock, timber stocks have a fixed 347mm. Traction for wet or dry hands does not match the grip of cut checking on timber or rubberised polymer stocks.

The LA102 is not pillar bedded in the conventional sense, i.e. metal pillars are glued or moulded into the stock, and are the main points of contact with the receiver and prevent the stressing or crushing of the stock material. The pillar like aluminium inserts of this LA102 stock stop short of contacting the receiver so they are not pillars. They are metal sleeves for the assembly screws, (over)

moulded into the stock to prevent marking of the stock by the relatively small contact area of the tensioned up screw heads.

This same tension, pulling the receiver down onto the stock at the top, causes no distortion of the polymer because here the contact area is much bigger. However, it is always good practice not to torque assembly screws beyond the specified limit, in this case 5Nm or 44.3in lb. The barrel is free floated leaving the ends of the receiver as the only firm points of contact between the stock and the barrelled action. T

The barrel was 'run in' with three very different types of hunting ammunition and during this process they all produced very good hunting accuracy.

The new Australian made Buffalo River 130gr Hollow Point ammunition at 2980fps regularly grouped three shots under the benchmark inch at 100y. Serbian made PP-U150gr lead tip at 2678fps surprised us with a 20.3mm or 0.8" group. The 165gr polymer tipped Geco from Germany was measured at 2616fps and produced a 11.5mm or 0.454" group. Three out of three types of hunting ammunition producing sub MoA accuracy in a new rifle is a very strong indicator of accuracy potential.

On the next suitable day at the range, we had lighter winds and a partially run in barrel. It was time to try the supplied RWS Performance Test Pack of four different hunting bullets and loads. The accuracy was remarkable, three shot groups from the Crossover at 100y measured 23.3mm, 12.4mm, 15.6mm and 20.5mm. Respective bullet weights and velocities were 165gr/2638fps, 184gr/2452fps, 180gr/2458fps and 136gr/2844fps. Shooting groups with the ammunition that remained from the first day on the range, showed an improvement over the new barrel results.

The PPU group shrunk to 16.9mm, the Buffalo River continued to improve with a 14.9mm and a 12.0mm group and the Geco,

TOP LEFT: Author uses a tree and the tall bipod to achieve good field stability to take advantage of the Crossover's inherent accuracy.

RIGHT: The Crossover grouped all four RWS Test Pack varieties well under MoA. These are the mid performing 180gr UNI and the 136gr EVO groups.



Disassembly is conventional but 'pillars' are not. Do not overtighten on assembly.



which shot tightest on the first day, remained on top with a 5mm one-hole group.

The accuracy of the Crossover has to be rated as excellent, with all seven different loads tried being commercial hunting ammunition, yet all shot easily under one inch and a couple under half inch.

The rifle was used in all common shooting positions from offhand to sandbags front and rear and the Crossover handled each position well. Its weight of 4.3kg complete with the appropriate 3-15x50mm scope made this well-balanced outfit easy to shoot and a pleasure to use.


Trigger pull length was left as delivered, at 357mm and it fitted most shooters well. The author at 167cm tall found it marginal and would remove at least one stock spacer for forest hunting particularly in winter clothing. Bolt operation was particularly smooth and chambering and extraction was positive. Magazine loading was easy and its removal and replacement a simple one hand operation. Single loading was readily achieved through the narrow ejection port but magazine 'topping up' required its removal.

The rifle has exceeded the writer's expectations particularly with respect to value and accuracy. The fundamental requirement of accuracy is outstanding and arguably, the strongest point of this rifle.

Excellent accuracy combined with the versatile stock to make the Crossover also

suitable for varminting and a number of target disciplines such as Full bore, F Class, Metallic Silhouette, Centrefire Field Rifle and more. In addition to its practical versatility and expected long working life, the LA102 is fully Australian made, has military and historic connections and no apparent faults or omissions. This quality rifle at a mid-range price will have broad appeal among the Australian shooting community.

P.S. Prices were sourced from Lock'N'Load Firearms at Wyong; they have polymer stocked rifles for \$1300 but the Walnut stocked LA102 at \$1440 is a 'must see' before settling for a polymer stock.

The test rifle was supplied by Outdoor Sporting Agencies (OSA) who are Lithgow Arms distributors. More information on OSA products can be obtained from its web site at: www.osaaustralia.com.au. 

SPECS

LA102

Manufacturer:

Lithgow Arms, Australia (Thales)

Calibre: .308 Winchester

Action: Bolt action repeater

Magazine: Detachable, 3 Round

Length:

1077mm, (Polymer +/- 10mm)

Weight:

3.5 kg (Polymer) 3.7 kg (Timber)

Barrel: 560 mm Medium Varmint

Stock:

Reinforced Nylon

Length of pull:

337-357mm (Polymer Adjustable)
347mm (Timber)

Trigger:

Single stage, fully adjustable

Price: \$1300 - \$1500