

DIANA 280

In-Depth Review

Of all types of airgun, the good old break-barrel springer still seems to rule the roost in terms of sales volume, and the launch of a quality medium weight break-barrel is bound to create a stir. **Jim Tyler** looks at the latest from Mayer & Grammelspacher – the Diana model 280

I'll be quite open about this, I've got a soft spot for the products of Mayer & Grammelspacher, having owned many Diana airguns over the years and, as this is the first Diana to be reviewed in *Airgun Sport*, I thought I'd break with tradition and start this in-depth review with a potted history of the company.

Mayer & Grammelspacher has a pedigree stretching back no less than 120 years to 1890, when Jacob Mayer and Josef Grammelspacher founded the company in Rastatt, Germany, to manufacture mass produced goods in iron and steel. Two years later, the company produced its first air pistol. In 1901, Jacob Mayer patented the now familiar spring loaded ball bearing breech block closure mechanism and, in 1905, the Diana name first appeared, along with the famous huntress logo.

Airgun production on both sides of the channel was suspended for the durations of World War 1 and II and, following the cessation of hostilities following WWII, the manufacture of guns of any kind in Germany was prohibited, the company was effectively dismantled and its designs, equipment, and even its trade name Diana were confiscated by the Allies, with the air rifles being manufactured and sold under the Diana trade name by Millard Bros. (Milbro).

When production resumed in 1950, the company designed airguns from the ground up and, like other German manufacturers, their new range was a cut above the warmed-over pre-War designs produced in the UK, no more so than in the trigger mechanisms. Where the Brits offered basic single-stage trigger units, the German airguns had creditable two-stage units more befitting target airguns than sporters, but very welcome nonetheless. Mayer & Grammelspacher was and still is an innovator, so it's no surprise to learn that the first recoilless airgun was the Diana (in the UK, the 'Original') model 60.

Throughout the 1960s and 1970s, Diana produced the excellent though under-powered break-barrel model 35 and under lever model 50, then the short-lived model 35S, which was superseded in the late 1970s by the superlative model 45, which was arguably the first 'magnum' airgun. The 45 has the distinction of being the most accurate air rifle from the bench in a series of tests I conducted in the mid-1980s, and in all three calibres (.177, .22 and .20), but was overshadowed as a 'magnum' airgun by the larger Weihrauch HW80, and suffered in terms of sales because of it.

During the late 1980s, the company launched a new generation of magnum airguns in the side lever



DIANA
Mod. 280



models 48 and 52 which are still in production today, and has continued to produce fine break barrels, the latest of which is the Diana model 280.

Mindful of the accuracy I used to obtain from my .177 Diana 45s in the 1980s, I requested that the review rifle was in .177 calibre.

FIRST IMPRESSIONS

The model 280 is a slim and elegant air rifle that has the looks and handling of a classic sporting rifle. With an overall length of 182mm (42.5"), it's a full-sized adult air rifle, perhaps heavier at 3.3Kg (7lbs 4oz) than its svelte lines suggest, but a long way short of being a heavyweight. From the solid feel of the rifle to the fit and finish, the 280 offers quality well above what you might reasonably expect for an air rifle at its modest £230 RRP.

THE METALWORK

The external steel is all blued to the usual high Diana standard, with the trigger blade and guard appearing to be anodised aluminium, and the use of plastics confined to just the foresight, safety catch and cylinder end cap.

The 16mm barrel is manufactured in-house, just like the Diana barrels that made the model 45 so accurate in the 1980s. Measuring 445mm (17.5"), the barrel has twelve lands and grooves, with a right-hand twist, and a choked section approximately 25mm long at the muzzle. The choke should make the rifles less pellet fussy and ensure good accuracy with a wider range of pellets.

The 280 comes with a choice of either fibre optic

open sights, or without sights and with a muzzle weight. The foresight has a red bead, the adjustable rearsight two green dots and, if there's enough light to see by, they glow. I wasn't able to get the correct sight picture (pellet point of impact just above the foresight) at ultra-close range because the rearsight would not adjust high enough, though a small amount of packing under the sight would cure that, and the open sights were fine at longer range.

The breech block is 101mm long, sits between a pair of shims within the breech jaws, and pivots on a hollow hardened pin which has an adjustable nut and bolt running through the centre, so there's no chance of the breech jaws ever opening and, in conjunction with the superb barrel closure mechanism, barrel alignment should be perfect.

The breech face is angled, which with many air rifles leads to the protruding skirts of pellets being damaged as the breech is closed, but the lead in to the 280's breech is generous, and all the pellets I tested seated fully and easily.

The breech closure mechanism is based on the spring-loaded ball-bearing and detent patented by the company 109 years ago and, on the review rifle, was very effective at keeping the breech shut, to the extent that it took quite a sharp tap of the hand to open the breech.

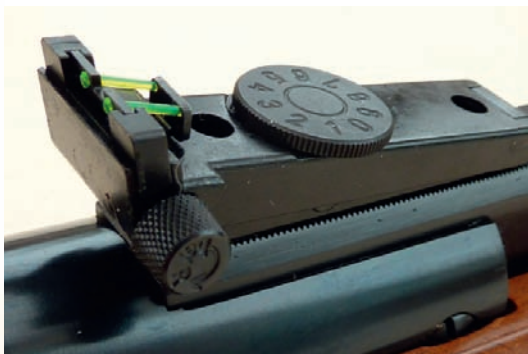
The cylinder is externally 290mm (11.4") long and 32mm in diameter, on top of which is the raised 11mm scope rail, which is 2mm deep and 120mm (4.72") long, so scope mounts have plenty of grip, and there's two recesses for recoil arrestor studs to make doubly sure the scope stays where you put it, though I can't see the 280's recoil causing problems with scope creep. At the rear of the cylinder is the automatic safety, which falls nicely for operation by the thumb, and which can be re-set. One important point to note is that the 280 can be de-cocked, when it's necessary to make the rifle safe without discharging it.

The trigger is the new T06 unit, which is a genuine two-stage mechanism that has rightly been very well received, and is available (along with a piston) as an upgrade for Diana airguns fitted with the T05 trigger. The T06 is a four-lever mechanism, and that allows for a light trigger pull, a clean and predictable break, while maintaining a safe level of sear engagement.

Below: The fibre optic foresight glows in the faintest light.

Right: The automatic safety is well placed, and resettable. The rifle can be de-cocked if necessary.

Below right: The rear sight is adjustable for windage and elevation.





There are three adjustment screws. The two screws in the trigger blade alter the length of the first stage of trigger blade travel, and the point of the start of the second stage of travel, which alters the degree of sear engagement as the second stage is reached. The third screw is situated to the rear of the trigger blade, and adjusts the pull weight from 300g to 380g for the first stage, and from 400g to 500g for the second stage.

THE WOODWORK

The ambidextrous beech stock is dyed an attractive medium brown and it is the stock that gives the 280 its elegant looks. The fore end is slim, rounded, very comfortable to hold and extends to the front of the breech block. The cocking lever slot is very long at 270mm (10.6"), but of necessity due to the geometry of the cocking mechanism and the shallow fore end.

Either side of the fore end are three half-crescent panels of laser cut chequering, with the same theme carried on to the pistol grip, which is similarly adorned – both decorative and functional. The wrist is a quite meaty, as is the pistol grip at 43mm across.

The underside of the butt section is concave, which gives the rifle a very distinct outline, and which also lightens the butt slightly to move the centre of balance forward. Either side of the comb are modest cheek pieces which, to my eye, are rather better than the more defined cheek pieces on many ambidextrous stocks. The stock is finished with a rubber recoil pad with white line spacer.

ERGONOMICS

Using the open sights, the rifle is slightly muzzle heavy – not overly, because it's not a heavy rifle, but enough to steady the aim, and the point of balance is 175mm (6.9") forward of the trigger blade, 520mm (20.5") from the butt pad. The centre pull is 350mm (13.7"), the drop to comb (open sights) 45mm (1.8"), the



drop to heel 65mm (2.5") and the drop to toe 195mm (7.7"). The reach to the trigger blade is not great, and those with smaller hands should have no problem in that regard.

The stock dimensions and weight distribution make the 280 very much an adult rifle, despite the relatively low overall weight, and that extends to the cocking effort, which I measured at just over 30 lbs – that's on the high side, which is partially due to the geometry of the cocking mechanism and the leverage it affords, rather than mainspring pressure, and I believe some of it was due to the tightness of the piston seal, which should reduce as the rifle beds in.

PERFORMANCE

The 280 has a reasonably quick action (lock) time, with muted spring twang. Removing the stock revealed that, unusually, there was no grease whatsoever on the mainspring, and a small amount would go a long way to quietening spring noise. I was surprised to note that there wasn't a piston sleeve – surprised because the first airgun I remember seeing a piston sleeve was the Diana 45, and a synthetic sleeve would further damp mainspring vibrations.

Recoil is fairly light and not at all sharp, suggesting that the piston is on the light side, and that the 280 should be slightly less hold sensitive than one might expect from an air rifle in this weight bracket.

The trigger is excellent, but as supplied was a little too light in the pull for me, and caught me out a couple of times as I failed to find the second stage,

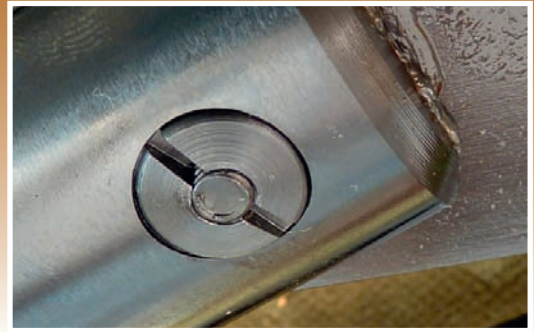
Top: Half-crescent chequering panels on the pistol grip.

Above: Decorative and functional, the fore end chequering affords good grip.



Above: Surprisingly, the mainspring was dry. A little moly grease wouldn't go amiss.

Above right: The breech block pivots on a hollow hardened pin, and the jaws are kept tight by a bolt and nut.



though increasing the pull weight a fraction sorted that and made the release predictable even for hamfisted me! Given the range of trigger pull adjustments, I've no doubt that the most discerning sporting shooter could set the unit exactly to his or her liking.

As most people know, springers tend to be most efficient with lightweight pellets, and I tested the rifle out of the box with a range of light weight pellets, with surprising results. Defiant left the muzzle at 707 fps for 8.5 ft.lbs., Mosquito at 733 for 9.5 ft.lbs., and Falcon Accuracy Plus at 770 fps for 9.6 ft.lbs. Those figures are on the low side, but I then tested with the RWS Hobby.

The RWS Hobby has long been used as the test pellet for those who wish to ensure that their springers cannot exceed the legal limit. The Diana 280 initially averaged (over 10 shots) 851 fps with Hobby, for an energy of 11.1 ft.lbs., just 33 fps shy of 12 ft.lbs. and 9 fps shy of the 11.4 ft.lbs. that's widely accepted as the highest sensible power level. As already stated, the piston seal seemed tight, and I fully expected the power to rise as the rifle bedded in. Some 500 pellets, later, the average velocity had crept up to 858 fps, for an energy of 11.28 (4 fps short of 11.4), and I think it still has a little further to rise.

RWS Super H-Point also gave a higher energy figure than the other lightweights at 839 fps for 10.78 ft.lbs., so it seems the Diana barrel favours RWS pellets from the power perspective. Flat head and hollow point pellets don't hold accuracy at such long ranges as round heads and, the Diana being a .177, I did my serious accuracy testing using round head pellets at a range of 33 yards.

Initial accuracy testing was perplexing. I'd get a nice, tight, group, then the next pellet would land a couple of inches away, and following pellets would

group in the same place, then the POI would shift again. I tried a different scope, then the open sights, with the same result.

I know from experience that some barrels behave in this way when they're brand new, but that the phenomenon quickly disappears as they are run in, and that proved to be the case. Following a very agreeable 200-250 pellet afternoon plinking session using the open sights and shredding drinks cans, I trained the rifle on my knock down target, and knocked it down eight times out of nine which, considering that I could hardly make out the kill zone, was encouraging. I re-fitted a scope and set to serious accuracy testing the following day.

To test a pellet thoroughly requires that the barrel is cleaned, then that a number of shots are taken with each new pellet to 'lead' the barrel. It's time-consuming, and I elected to test a few quality round head pellets properly, rather than skimp on the cleaning and re-leading to test every .177 pellet I had. The bench was 36 yards from the backstop, so I tested at that range.

First up was the RWS Superdome, a favourite of mine that I know can give superb accuracy in the right barrel. I took 30 shots to lead the barrel, and was relieved to note that the pellet point of impact was now constant. Leading taken care of, Superdome groups (measured edge to edge) ranged up to 36mm (1.5") through the 280, and I was looking for sub-25mm (1") groups in the conditions prevalent on the day (a variable following wind). After a barrel clean, I next tried H&N FTT, another excellent pellet, and my best groups were under 25mm, others just over. As it turned out, I'd saved the best until last.

JSB Exact 4.52mm gave 765 fps (10.9 ft.lbs.) and groups consistently under 20mm, and RWS Super Field gave 758 fps (10.7 ft.lbs.) with similar accuracy. I know that not all barrels are the same, but I'd advise anyone who buys a Diana 280 to ignore the sub-11 ft.lb. energies (which will rise as the action beds in), and to put these two pellets at the top of their list of pellets to test.

CONCLUSION

The Diana 280 is a solid, well-engineered, nicely balanced sporting air rifle with a superb trigger and capable of excellent accuracy, and it comes at a price that makes it something of a bargain. If you're in the market for a break-barrel sporter, it's definitely one to consider...and seriously. ■

Below: The trigger pull as supplied was a tad too light for me – easily adjustable by turning this screw clockwise.

Right: The gently curving trigger blade.



Right: The T06 is a genuine two-stage trigger unit. The first stage reduces sear overlap (arrowed)...

Far right: ...to this point, when the second stage kicks in.

