

KAHLES K624i with SKMR3 reticle

By Chris Blatherwick



Procuring the perfect optic for a long-range tactical rifle is one of the most daunting tasks undertaken by any firearm owner. The market is currently flooded with what I call 'catchphrase' optics that promise to deliver knock-out performance without breaking the bank. In reality, only a handful of optic brands are really up to the task at hand.

We received the legendary Kahles K624i from The Powder Keg for a Gun Africa review. The K624i is testament to what a true high-quality, long-range tactical optic should look like and, more importantly, perform. Join us as we put a real long-range masterpiece through its paces on Project Howa.

REFLECTING ON THE PAST AND LOOKING TO THE FUTURE

Kahles Ltd. was established in 1898 when two top Viennese optic powerhouses, Simon Plössl Company and the Opto-Mechanical Workshop, joined forces to establish the Kahles Company. It flourished under the leadership of Karl Robert Kahles, a true visionary in the optic field.

1900 KAHLES introduced the legendary TELORAR riflescope in five different magnifications. Precise and reliable, these early KAHLES riflescopes soon became highly respected by hunters everywhere. At the same time, KAHLES offered binoculars and telescopes for astronomic viewing.

In 1908 Following the founders sudden death, the second generation - Ernst and Karl Kahles - took charge and expanded the product range. Some of the MIGNON scopes produced during this time are still used by

hunters. The company pioneered the first variable power scope in 1949, followed by the first O-ring sealed waterproof optic in 1960. However, this was by no means the last of the company's innovations. In 1972, Kahles introduced the first multi-coated rifle optic capable of more than 90% light transmission.

Johann Peternal took over from Frederick Kahles in the late 1980s as CEO of Kahles Ltd., continuing from where the latter had left off. He pushed for more innovative optic designs, and introduced the 100-year anniversary Helia C-series. Robert Artwohl was tasked with the monumental task of establishing the new Kahles production facility in Guntramsdorf, thus shifting the company from its base in Vienna.



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that ticks all of the boxes.

The new state-of-the-art, world-class facility not only increased this global leader's production capacity, but also allowed for further advancements. In 2005, Kahles introduced the innovative multi-zero TM ballistics elevation adjustment, which hailed a new era in precision shooting. However, Kahles did not stop there, and developed the 'Automatic Light' – the first intelligent on-off mechanism for illuminated rifle scope reticles.

Kahles has been the driving force behind countless optical innovations. It has not only pushed the boundaries of function and form, but design and practicality as well, and is, without a shadow of a doubt, the global leader in optical design and production.

UNDERSTANDING THE BEAST

When one procures an optic for your favorite long-range tactical rifle, it is usually a titanic battle between wants and needs. The lines are not always as clearly defined as we would want, but sometimes you come across an optic that ticks all of the boxes, where function, form, and performance work in perfect harmony.

Enter the Kahles K624i. Definitely not a mid-range optic, it is part of the Kahles high-end range. The K624i is constructed from a solid block of T6 aircraft grade aluminium. The optic has a black graphite finish that is extremely durable and aesthetically pleasing, with little or no glare from any direction.

The Kahles K624i boasts an impressive magnification range of 6-24, which caters for all possible target-engagement distances from medium- to long-range. The optic has a 34 mm main tube and a 56 mm objective lens. As with all Kahles optics, the K624i is dry nitrogen-purged/filled, and features heavy-duty O-ring seals, thus ensuring that it is not only waterproof, but fog-proof as well. Kahles was the first optic manufacturer to introduce this process in 1960, which has subsequently become the industry standard.

The high-definition lenses are fully multi-coated with the company's proprietary AMV lens coatings, and boasts an astounding visible light transmission rate of 95,2% (in daylight), with an equally impressive 89.4% light transmission rate in low-light conditions. The internal prism design makes provision for additional colour correctness in the secondary spectrum, aligning the green wavelength to the same focal point as the blue and red spectrum, thus enhancing the image quality dramatically. The sight picture can only be described as incredible, as the vibrancy of the colours are truly unrivalled, with edge-to-edge clarity.

The K624i has moved with the times. The optic employs a first focal plane SKMR3 reticle. First focal plane optics are designed more specifically for tactical shooters and hunters, where the distance to the target changes, and is often unknown. First focal plane optics place the reticle in front of the erector. The reticles does not grow or shrink in size as the magnification increases, even if it appears to do so. In fact, the reticle is being magnified to match the magnification of the target, as tactical shooters and hunters tend to use MIL scales to calculate bullet drop and wind calls.



The K624i has moved with the times

The Kahles K624i is available in four reticle configurations. Our test unit boasted the popular SKMR3 reticle. This follows the 'Christmas tree' style reticle design, with a free-floating aiming point with .05 Mil increments, with .2 Mil sub tensions on both the horizontal and vertical cross hairs, giving the shooter the choice of either 'spinning the turrets', or utilising the horizontal and vertical sub-tension markings to make the necessary adjustments for variable distances in PRS-style matches.

The fact that the K624i is designed for the tactical long-range community is evident when you look at the oversized windage and elevation turrets, as these turrets can be operated easily by a gloved shooter, with 0.1 Mil per click adjustment increment. Both turrets offer exceptional audible and tactile feedback when adjusted, which is testament to the build quality of the K624i.

Kahles has yet again introduced innovation into the optic industry with the location of its parallax adjustment ring. Traditionally the parallax turret is on the left side of the main tube, which necessitates some shooters to utilise both left and right hands to adjust the optic to engage targets at variable distances.

Instead Kahles has located its parallax adjustment ring design directly under the elevation turret. The shooter only has to use a single hand when

adjusting the parallax ring and elevation turret for different distances. It is suitable for left- and right-handed shooters alike, and thus is far superior to any design currently on the market.

The illumination rheostat is still on the traditional left side of the main tube. It has no predetermined intensity settings, thus allowing for infinite adjustments to suit the needs of any shooter. The illumination is daylight visible, and truly exceptional in low-light conditions. Kahles has pushed the boundaries of optical innovation with the third generation of the K624i. It is also readily apparent why the brand has been the market leader for the past 119 years.

TEST 1 – BEATING AROUND THE BUSH

Recently there have been a lot of industry rumblings about the quality of certain Eastern optic brands, and their respective horizontal and vertical tracking abilities. Thus we thought it necessary to put the K624i through more stringent testing.

Optical impacts are the leading cause of optic failures both locally and internationally. Excessive or sometimes even moderate optical impacts can result in reticle shifts/cant. Major optical manufacturers such as Kahles have designed and construct elaborate pendulum-based systems to allow for repeatable impact tests on their optic ranges. Some manufacturers prefer the human touch by 'smashing' all of their optics on a plastic stand, and then testing for any sign of reticle shift/cant.



We opted for the more personalised approach by 'impacting' the bell of the K624i on a Camp Master plastic table. We then fit the K624i to Project Howa (our M-1500). We zeroed the optic at the 100 m mark and established the correct elevation adjustments for the 200 m and 300 m marks. We then removed the K624i from our Howa and moved to a more secluded spot at the shooting range, and subjected our Camp Master table to an impromptu African drumming session, with the K624i as our main tool. Our drumming session changed gears as we mimicked driving in six-inch nails on a piece of timber.

After reaching that "oh my word, what are you doing" stage, the K624i was inspected, revealing no visible signs of damage or wear. We refit the K624i to Project Howa, and re-established our 100 m zero by sending multiple projectiles down-range, the end result being a perfect three-leaf clover (the optic and rifle combination is definitely capable of better accuracy than I could administer, as I was still recovering from the drumming session, and suffering from some arm pump). The optic was walked out to the 300 m mark. To our amazed delight, it performed flawlessly.



TEST 2 – AROUND THE WORLD IN FIVE SHOTS

We once again pulled out our 2 440 mm x 1 220 mm x 4 mm plywood board for a box test. We marked the first aiming point in the lower left quadrant, ensuring our board was secured before we began testing. I dialled the elevation back down to our original 100 m zero mark, and loaded a Peregrine VLR-4 (167 gr monolithic head) into Project Howa.



I fired the first round at the delineated aiming point, impacting directly on the black sticker. I dialled up 20 mils of elevation with the K624i, keeping the rifle perfectly still. The second shot impacted the plywood board with authority. Moving the crosshairs of the SKMR3 'Christmas tree' reticle down to the first hole on the board allowed me to confirm visually by means of the vertical axis that both shots were perfectly in line.

I moved the reticle back to the second hole, and cycled the third VLR-4 round into the chamber. Keeping the rifle perfectly still, I dialled in 5 Mils of windage to the right, and fired the third shot. Dialling/zooming out with the K624i allowed me to utilise both the horizontal and vertical axis to confirm that the third round impacted exactly where intended.



The K624i is designed for the tactical long-range community.

I placed the crosshairs back on the third hole, and cycled the fourth round into the chamber. I dialled down 20 Mils of elevation, keeping the rifle dead still, and fired the fourth round at our target board. I cycled the fifth round into the chamber of our M-1500, dialling 5 Mils windage adjustment to the left, bringing the reticle back to the original starting point.

I fired the last round at the target board, cutting the hole of the first round. The tracking of the K624i was astounding, showing no signs of horizontal and lateral deviation. Kahles' 119 years of optical development has resulted in a 'bulletproof' optic that can withstand rigorous competition conditions.

WHAT IT BOILS DOWN TO

When I originally opened the understated black box containing the K624i, I had to smile as a Roger Milla quote repeated in my mind: "On the field, everyone is equal." Without thinking, I muttered: "Sorry Roger, you are wrong. You definitely have never seen the Kahles K624i, have you?"



When I removed the K624i from its box, I was a bit concerned that it may be a tad on the heavy side, as the dimensions are rather large. To my amazement, it was very light, tipping the scale at a mere 949.70 g. Placing the K624i on Project Howa transformed our M-1500 instantly into a menacing target machine. However, the K624i has the performance to back up its looks.

During our range evaluation, we pushed the K624i past the 600 m mark with ease, with the optic rewarding the shooter with a crisp, clear image of the target. The high-definition glass allowed us to track a flock of guinea fowl that walked onto the range at the 700 m mark, allowing us to observe them up close, while they scrounged for something to eat.

Kahles has long been the 'platinum' standard in rifle optics. South African consumers are bombarded by spin doctors touting 'best value for money'

optics. These are functional, and do have a place within the market, but they cannot compete with the Kahles K624i in the tactical long-range/ PRS segment.

As per my usual questions to end off with: "Would I hand over my hard-earned money to procure a K624i?" Absolutely. If I was a long-range tactical/PRS competitor, I would not hesitate to fit this optic to my M-1500. It provides unrivalled optical clarity with innovative design elements that will be hard to find on any other optic on the market. 🌟



DESIGN OVERVIEW AND SPECIFICATIONS

Make	Kahles
Model	K624i
Magnification	6-24
Reticle	SKMR3
Illuminated reticle	Yes (red reticle)
Battery	CR2032
Body	Single-piece anodised aluminium
Lens coatings	Fully multi-coated
Objective lens diameter	56 mm
Focal plane	First
Eye relief	90 mm
Length	450 mm
Weight	949.70 g
Tube size	34 mm
Turret style	Tactical
Adjustment graduation	.1 Mil
Maximum windage adjustment	11.5 Mil
Maximum elevation	26.2 Mil
Lateral parallax correction	50 m to infinity
Applications	Long-range sport shooting and hunting

 The Kahles K624i, and other products, are available from The Powder Keg of Roodepoort, Gauteng.
www.powderkeg.co.za