

VORTEX

★ C O M B A T R E A D Y ★



RAZOR HD 5-20X50

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RAZOR HD 5-20x50



WE THOUGHT ABOUT USING TESTIMONIALS,
BUT MOST OF OUR CLIENTELE IS
CLASSIFIED.

The all-new Razor HD 5-20x50mm riflescope was designed from the ground up to meet the demanding needs of military and law enforcement precision shooters. Packed with more than a dozen unique performance and optical features, the Razor HD delivers superior ranging and accuracy at extreme distances — and absolutely reliable performance in the most demanding shooting conditions.

Built on a 35mm one-piece tube machined from aircraft-grade aluminum, the Razor HD offers an incredible 125 MOA / 36 mrad windage and elevation adjustment range; enough to accommodate for bullet drop at the most extreme distances. Optically indexed lenses are precision-ground from XD optical glass and fully multi-coated with Vortex's advanced XR coating to deliver the highest level of edge-to-edge brightness, resolution and clarity obtainable. A unique, multi-element apochromatic (APO) objective lens virtually eliminates chromatic aberration across the entire field of view so targets can be more clearly defined at longer distances — camouflage patterns are more easily spotted and identified.

Ranging and accuracy at extreme distances are enhanced with the new laser-etched-on-glass EBR-2 mrad, first focal plane reticle. The first focal plane reticle enlarges and shrinks with the target when zoomed so the scale remains in proportion at all magnifications. In addition, the subtensions on the reticle match the subtension markings on the turrets so range calculations and shooting adjustments can be made faster and more accurately. The turret screws are ultra-precision machined from

a silicon-brass alloy and fitted with hardened steel turret pads that interface with a hardened steel ring on the erector tube. This patent-pending Friction Reduction System eliminates deformation of the erector screws, wear and galling. Finally, Vortex's proprietary RZR (Rapid Zero Return) Zero Stop mechanism stops the elevation turret from dialing below sight-in range by using a rotational-blocking steel design (patent pending) that is mechanically more reliable and accurate than other systems used to block the vertical movement of the turret.

With generous 3.9 inch eye relief throughout the entire 5-20x range of magnification, absolutely waterproof/dustproof/shockproof construction and a hard-anodized matte Stealth Shadow Black finish, the Razor HD 5-20x50mm riflescope truly represents the state-of-the-art in combat-ready rifle optics.



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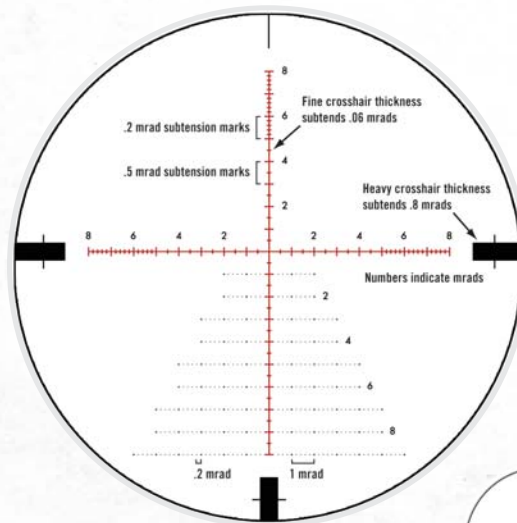
PRECISION IS NOT AN OPTIONAL REQUIREMENT.

Vortex's EBR-2 mrad maximizes long distance shooting capabilities by facilitating fast, accurate ranging and rapid holdover, windage and moving lead corrections. Based on milliradian (mrad) subtensions, which are more quickly and easily used in ranging formulas, the clean, intuitive design of the EBR-2 mrad reticle is exceptionally easy to learn and use.

● ILLUMINATED CENTER CROSS HAIRS:

To aid in low light visibility, the center portion of the EBR-2 mrad reticle can be illuminated using the offset control knob located on the left side of the Razor HD's eyepiece. The illumination offers 11 levels of intensity and has an off position between each intensity level, allowing a shooter to instantly return to a preferred brightness level. **Illumination is powered by a long life, low cost and easily obtained CR2032 lithium battery.**

VORTEX EBR-2 MRAD RETICLE



● EBR-2 SUBTENSION SPECS

Above: EBR-2 Reticle at 20x magnification.
Right: EBR-2 Reticle at 5x magnification.



● **RETICLE LOCATED IN THE FIRST FOCAL PLANE:** The Razor HD's EBR-2 mrad reticle enlarges and shrinks proportionately with the zoom magnification so the scale of the reticle remains in proportion to the zoomed image – this allows accurate holdover and ranging at all magnifications and prevents any shift in the point of impact during zoom.

● GLASS-ETCHED RETICLE

The Razor HD's ultra-precise reticle is laser-etched in glass and sandwiched between two layers of glass (not made from wire) for maximum durability and reliable performance in extreme-use conditions.

● SYNCHRONIZED MRAD SUBTENSIONS

Unlike many competitors, the Razor HD's elevation and windage turrets use the same mrad subtensions as the EBR-2 mrad reticle. This eliminates confusion and facilitates fast and accurate communication between shooters and spotters, especially in high-stress situations.

RAZOR HD 5-20x50

TACTICAL SITUATIONS CALL FOR THE VERY BEST AT EVERY LEVEL. IN FACT, THEY SEEM

THE VORTEX HD SYSTEM: The sophisticated Vortex HD System delivers razor-sharp images with the latest optical engineering, high-definition glass technology, multi-layered lens coatings and the addition of an ultra-hard proprietary coating on glass surfaces: XT optical design, XD objective lens elements, XR lens coatings, ArmorTek top coat.

OPTICALLY INDEXED LENSES: All Razor HD lenses are optically indexed and matched using state-of-the-art computer-controlled equipment to assure optimum alignment. The result is an optical image that is uniformly brighter and sharper without degradation or fringing around the edges. This quality allows the entire reticle to be used in extra-long-range shooting situations.

SHOCKPROOF CONSTRUCTION: Every lens is locked in place, fore and aft, with machined locking rings that resist impact from every angle. All lenses remain in perfect alignment after the roughest field use – including extreme recoil, dropping and miscellaneous impacts.

WATERPROOF/FOGPROOF/DUSTPROOF INTEGRITY: The Razor HD's one-piece tube is O-ring sealed and purged with inert argon gas for absolute waterproof/dustproof performance in every conceivable hostile environment – including the harshest (cold and wet) shooting conditions, extreme altitudes and humidity.



1. 3.9 IN. EYE RELIEF: The Razor HD provides generous and consistent eye relief at all magnifications for faster target acquisition when shooting in a wide variety of positions and situations. The considerable eye relief eliminates eyestrain during extended viewing while protecting from recoil on large caliber rifles.

2A. OFFSET ILLUMINATION CONTROL FUNCTION: The control knob features an "OFF" position between each intensity level so the illuminated reticle can be turned on or off with a single click. There's no need to progress through every intensity level or return to zero with multiple clicks in order to access a preferred illumination setting.

2B. OFFSET ILLUMINATION POSITION: The position of the control knob at a 45° angle on the left side of the scope's eyepiece allows for easy adjustment without blocking the view of turret, parallax and magnification settings.



3. MAGVIEW SYSTEM: A patent-pending fiber optic magnification indicator, combined with raised rear-facing magnification references on the zoom dial, provides fast visual confirmation of magnification from the shooting position in low light conditions.



4. LARGE DIAMETER 35MM, ONE-PIECE TUBE: Machined from a solid block of 6061-T6 aircraft-grade aluminum, the 35mm one-piece tube provides more internal room to accommodate a greater range of windage and elevation adjustment – allowing the shooter to accurately dial in longer-range shots. It's also stronger and more rigid for superior alignment of optics resulting in improved accuracy, optimum visual performance and extreme durability.

5. ARGON GAS: Inert argon gas won't diffuse as quickly as other elements, won't chemically react with water, maintains its protective properties over a wider temperature range and prevents internal corrosion.

6. RADIUS BAR: The Razor HD's patent-pending fiber optic turret rotation indicator provides an easy-to-see illuminated and tactile point of reference for counting turret rotations in all light conditions.



7A. MATCHED TURRETS AND RETICLES: The subtensions on MOA and mrad version reticles match the subtension markings on the turrets to make range calculation and shooting adjustments faster and more accurate.

7B. 125 MOA / 36 MRAD WINDAGE AND ELEVATION: The Razor HD offers an incredible 125 MOA / 36 mrad adjustment range for both windage and elevation – more than 25% greater than most competitors. The greater adjustment range easily accommodates for bullet drop at extreme ranges.

8. PARALLAX ADJUSTMENT: Located on the left side of the turret housing, the parallax setting can be observed and adjusted from the shooting position.

TO CALL FOR VORTEX BY NAME.



9. RZR ZERO STOP TURRET DIAL (PPI):

Vortex's patent-pending RZR (Rapid Zero Return) Zero Stop mechanism prevents the turret from dialing below sight-in range for fast, precise return to zero after temporary elevation correction. Once set, (during sight-in) the turret can be quickly spun and stopped at the zero setting without counting clicks. The patent-pending rotational blocking steel mechanism is more reliable and accurate than other systems that block the downward movement of the turret. Completely sealed at all times, even when setting the zero-stop position, all internal parts and components stay clean and dry — absolutely free of sand, dust, moisture and other foreign material. After removing the turret cap, all that's required to reset the mechanism for fast re-adjustment at the range or in the field is to loosen three screws and adjust with the standard issue Allen wrench included with the scope.



10. HARD ANODIZED FINISH: The Type-3 hard-coat anodized finish features a low-glare matte surface in Vortex's proprietary Stealth Shadow Black color. This color absorbs less light than jet black so it is more difficult to see in low-light conditions. The hard-coat anodization resists scratching and abrasion while maintaining a dull, durable, glare-free finish.

11A. MULTI-ELEMENT APOCHROMATIC (APO) OBJECTIVE LENS SYSTEM:

The XT design uses a multi-element APO lens system to correct color throughout the entire visual color spectrum. This virtually eliminates chromatic aberration across the entire field of view for the sharpest, true-to-life visual image obtainable. Apochromatic lenses deliver color fidelity and sharpness superior to less costly achromatic lenses found in most competing scopes. Targets are more clearly defined at long distances and camouflage patterns can be more easily spotted and identified with a true color image.

11B. PRECISION-GROUND XD GLASS:

Only premium, precision-ground, hand-selected XD (Extra-Low Dispersion) glass is used throughout the Razor HD's entire optical system. XD glass delivers maximum resolution and a crisp, clear image from edge to edge so the entire reticle can be utilized throughout the entire field of view. XD glass delivers a sharper, true-to-life color image, especially in low light when small targets are most difficult to resolve.

12. XR LENS COATING ON ALL LENS SURFACES:

The Razor HD's fully multi-coated optics feature Vortex's advanced XR lens coatings on every surface for maximum light transmission and the brightest possible image — a critical performance factor when acquiring and identifying targets in extreme low-light situations.

13. ARMORTEK LENS COATING:

Exterior lens surfaces are protected with Vortex's proprietary ArmorTek coating to resist scratches and repel stains, grease, dirt, corrosive salts and dust. ArmorTek reduces the need to frequently clean lenses after exposure to harsh elements while delivering a consistently clearer image.

>>> SPECS <<<

MAGNIFICATION: 5-20x

OBJECTIVE DIAMETER: 50mm

EXIT PUPIL DIAMETER:
10mm | 2.5mm

FIELD OF VIEW:
5x: 22.0 feet/100 yards (4.2")
20x: 5.76 feet/100 yards (1.1")

EYE RELIEF:
3.9 in (100mm)

INTERNAL ADJUSTMENT RANGE:
36 mrad elevation | 36 mrad windage

CLICK VALUE: .1 mrad

TUBE DIAMETER: 35mm (1.37 in)

OCULAR DIAMETER: 36mm

MOUNTING LENGTH: 175.2mm (6.9 in)

WEIGHT: 35.2 oz.

OVERALL LENGTH: 401.32mm (15.8 in)

RETICLE: Vortex EBR-2 mrad Reticle



DESIGNED & ENGINEERED FROM THE INSIDE OUT FOR PRECISE, REPEATABLE ACCURACY.

Packed inside the Razor HD's dust/sand/moisture/corrosion-proof turret housing is the most advanced, precision-machined and feature-rich turret mechanism ever built. Engineered from the inside out with ultra-precision machining, premium alloys and patent-pending features, the Razor HD delivers consistently repeatable accuracy in the most hostile environments.



1. PREMIUM ALLOY TURRET SCREWS:

Precision-machined from a silicon-brass alloy, and treated with an advanced dry-film lubricant, the Razor HD's turret screws provide ultra-smooth, wear-resistant operation and adjustments for consistent, error-free performance over the life of the product.

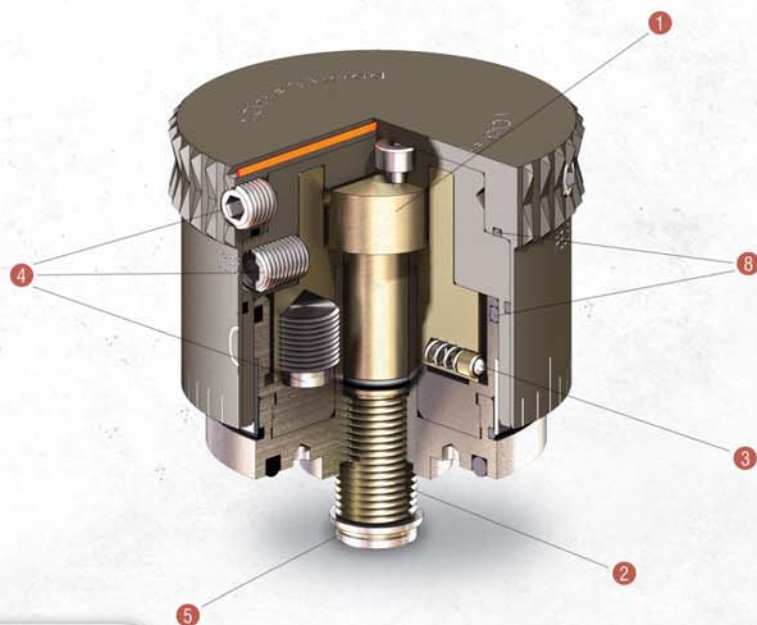
2. ULTRA-PRECISION-MACHINED TURRET SCREW THREADS:

The turret screw threads are ultra-precision machined to sub 2-micron tolerances (less than 78-millionths of an inch) to achieve perfect tracking and consistent accuracy throughout the entire range of windage/elevation travel and adjustment.

3. HARDENED-STEEL TURRET SCREW

CLICKER & SPLINES: The turret screw clicker is a hardened steel ball bearing that clicks against hardened steel splines inside the turret housing. This steel-against-steel contact virtually eliminates wear and delivers a firm, positive click with every windage or elevation adjustment.

ZERO-STOP, FIBER OPTIC TURRET



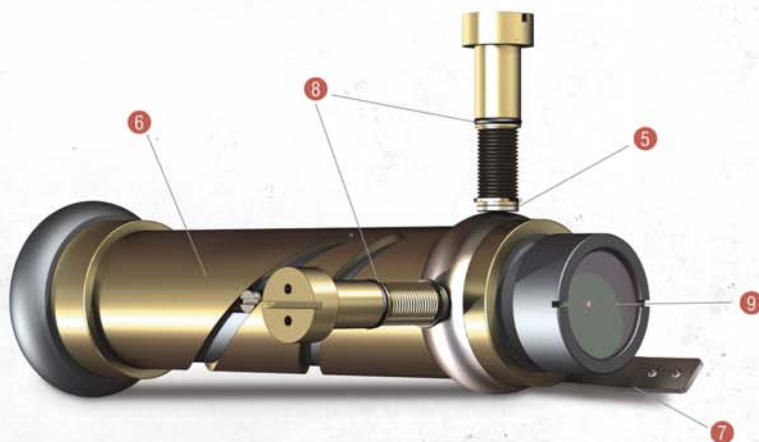
4. RZR™ ZERO STOP MECHANISM: Vortex's patent-pending RZR (Rapid Zero Return) Zero Stop mechanism prevents the turret from dialing below sight-in range for a fast, precise return to zero after temporary elevation correction. Once set during sight-in, the turret can be quickly spun and stopped at the zero setting without counting clicks. The patent-pending rotational blocking steel mechanism is more reliable and accurate than all other systems that block the downward movement of the turret. Completely sealed at all times, even when setting the zero-stop position, all internal parts and components stay clean, dry and completely free of sand, dust, moisture and other foreign material.

After removing the turret cap, the loosening of three screws and a quick adjustment (with the included standard issue Allen wrench) is all that's required to reset the mechanism for fast re-adjustment at either the range or in the field.





ERECTOR TUBE ASSEMBLY



ERECTOR TUBE ASSEMBLY:

The Razor HD's Erector Tube is precision-machined from premium brass to precise tolerances and fitted with Vortex's patent-pending Friction Reduction System to assure smooth, reliable operation in the harshest conditions.

5. FRICTION REDUCTION SYSTEM :

Heat-treated, highly polished hardened steel pads float on the end of the turret screws to interface with a hardened steel ring on the erector tube for steel-on-steel contact when adjusting windage and elevation. This patent-pending Friction Reduction System prevents galling or deformation of the erector screw contact point by preventing wear on the turret screw and erector tube. The result is superior durability and consistently repeatable accuracy for the life of the product.

6. MACHINED BRASS ERECTOR TUBE:

The erector tube is precision-machined from premium brass alloy for greater strength and durability compared to aluminum and other metals commonly used. Consistently performs smoothly and reliably – without galling – even after many years of hard use.

7A. CHROMIUM VANADIUM ERECTOR

SPRING: The Razor HD's chromium vanadium erector spring has high fatigue resistance and is tumble-polished to a mirror finish for consistently smooth performance during micro-precise elevation and windage adjustments. The chromium vanadium spring will withstand a lifetime of compression with zero memory.

7B. SINGLE SPRING CONSTRUCTION:

The Razor HD's single erector spring system fully constrains (without over-constraining – a common problem with dual-spring systems) the optical system for predictable tracking throughout the entire range of windage and elevation adjustment.

8. WATERPROOF/DUSTPROOF/FOGPROOF CONSTRUCTION:

The entire chassis, from the one-piece machined tube to each turret housing, is O-ring sealed for 100% waterproof/dustproof/fogproof performance – even in the most extreme, hostile shooting environments.

9. RETICLE LOCATED IN FIRST FOCAL

PLANE: Located in the first focal plane, the Razor HD's reticle enlarges and shrinks proportionately with the zoom magnification so the scale of the reticle remains in proportion to the zoomed image. This allows accurate holdover and ranging at all magnifications and prevents any shift in the point of impact during zoom.



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RAZOR HD ACCESSORIES:

Four essential accessories come with every Razor HD riflescope.

4 INCH SUNSHADE: prevents flare when shooting into the sun while reducing any sun flash off the objective lens.

FLIP CAP COVERS: keep lens surfaces free of dust, dirt and moisture while offering protection against scratches.

35MM BUBBLE LEVEL: maintains perfect vertical alignment for extreme distance accuracy.

ANTI-REFLECTIVE DEVICE (ARD): reduces sun flash off objective lens.





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UNLIMITED. UNCONDITIONAL.

We want you to use your optics with complete confidence – and that's why our warranty is so straightforward. When you see the Vortex VIP warranty, you can rest assured that if any Vortex Optics product should ever require service, Vortex will repair or replace the product absolutely free – no matter the cause. That's it. Period.



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