



PRODUCT MANUAL

**VENOM<sup>®</sup>**

3-15x44 & 5-25x56 FFP RIFLESCOPES

## SPECIFICATIONS

CONFIGURATION	3-15x44		5-25x56	
SKU	VEN-31501	VEN-31502	VEN-52501	VEN-52502
RETICLE	EBR-7C MOA	EBR-7C MRAD	EBR-7C MOA	EBR-7C MRAD
FOCAL PLANE	First Focal Plane (FFP)			
ILLUMINATION	No			
EYE RELIEF	3.5"		4.0"	
LINEAR FIELD OF VIEW (@100 YDS.)	42.8' - 9.0'		21.2' - 4.7'	
ZERO STOP SYSTEM	RevStop®			
TURRET STYLE	Elevation - Exposed Windage - Capped		Elevation - Exposed Windage - Exposed	
TUBE SIZE	34mm			
ADJUSTMENT GRADUATION	1/4 MOA	0.1 MRAD	1/4 MOA	0.1 MRAD
TRAVEL PER ROTATION	25 MOA	10 MRAD	25 MOA	10 MRAD
MAX ELEVATION ADJUSTMENT	135 MOA	40 MRAD	85 MOA	31 MRAD
MAX ELEVATION ADJUSTMENT W/ REVSTOP® INSTALLED	47 MOA	19 MRAD	85 MOA	18 MRAD
MAX WINDAGE ADJUSTMENT	76 MOA	22 MRAD	85 MOA	23 MRAD
PARALLAX SETTING	10 yds. - ∞		15 yds. - ∞	
LENGTH	13.4"		15.3"	
WEIGHT	28.5 oz.		35.0 oz.	

## 3-15x44



## 5-25x56



DIMENSIONS		3-15x44	5-25x56
OVERALL LENGTH	L1	13.4"	15.3"
FRONT MOUNTING SURFACE	L2	2.2"	2.6"
REAR MOUNTING SURFACE	L3	2.4"	2.4"
OVERALL MOUNTING SURFACE	L4	6.4"	6.9"
OBJECTIVE LENGTH	L5	3.6"	4.8"
EYEPIECE LENGTH	L6	3.4"	3.4"
OUTSIDE DIAMETER OBJECTIVE	H1	2.0"	2.5"
OUTSIDE DIAMETER EYEPIECE	H2	1.8"	1.8"
TURRET SADDLE DEPTH	H3	0.25"	0.28"

## VENOM® RIFLESCOPES

Get into the long-distance game faster with a first focal plane optic packed full of shooter-friendly features. A 5x mag range and a 34mm tube give ample power and turret travel, and our exclusive RevStop® Zero System makes for a fast, easy, rock-solid return to zero. The included throw lever allows for fast transitions between magnifications, topping off an optic that lets you go deep for less.



Images are for representation only. Product may vary slightly from what is shown.

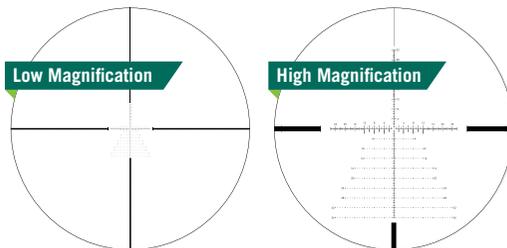
## INITIAL SET UP

### Reticle Focal Plane (Second Focal Plane vs First Focal Plane)

All rifle scope reticles can be termed either first focal plane (FFP) or second focal plane (SFP), with respect to the reticle's internal location within the erector system. An SFP reticle is visually consistent in size and weight across the magnification range; however, the subtension values are only accurate on one magnification, typically the highest. In contrast, an FFP reticle will scale with magnification, and their subtensions used for ranging, holdovers, and wind corrections will remain constant. The reticle size will appear larger at higher magnifications, and smaller at low magnification.

### First Focal Plane Reticle

The Venom® 3-15x44 and 5-25x56 riflescopes feature a first focal plane (FFP) reticle. FFP reticles are located within the riflescope near the windage and elevation turrets. This style of reticle will appear to grow and shrink as you change the magnification.



## Ocular Focus – Fast-Focus Eyepiece

The ocular focus is typically a one-time adjustment used to focus the reticle for maximum sharpness.

This adjustment is slightly different for every shooter. A clearly focused reticle is a critical component for accurate shooting. When setting up a scope, this should be the first adjustment you make and should only need to be changed from user to user, or if your eyesight changes over time.



## Ocular Focus - Fast-Focus Eyepiece Adjustment

The Venom® riflescopes use a Fast-Focus Eyepiece designed to easily adjust the focus on the rifle scope's reticle.

**WARNING:** Looking directly at the sun through a rifle scope, or any optical instrument, can cause severe and permanent damage to your eyesight.

### Adjusting the reticle focus to your eye:

1. Turn the Magnification Adjustment Ring to the highest power and the Parallax Adjustment Knob to infinity. Looking through the optic, turn the Fast-Focus Eyepiece counterclockwise until the reticle is slightly blurry.
2. While looking at a white wall or a clear blue sky, taking short glances through the optic, turn the Fast-Focus Eyepiece clockwise until the reticle is clear and crisp as soon as you look through the optic. This may take several attempts.

**Note:** You do not want your eye to focus to the reticle, rather you want the reticle in focus to your eye instantly when looking through the optic. Looking away and letting your eyes refocus is important in getting the Fast-Focus Eyepiece set correctly.

Once this adjustment is complete, it will not be necessary to refocus every time you use the rifle scope. However, because your eyesight may change over time, you should recheck this adjustment periodically.

## Parallax

Parallax results when the target image is not on the same optical plane as the reticle within the scope. This can cause an apparent movement of the reticle in relation to the target if the shooter's eye is off-axis behind the optic.

## Adjustable Parallax

The Venom® 3-15x44 FFP and 5-25x56 FFP riflescopes come equipped with a Parallax Adjustment Knob located on the left-hand side of the turret housing. When the parallax is properly adjusted, the shooter should experience no parallax error.



Dial the Parallax Adjustment Knob until the target image is as sharp as possible. The yardage numbers on the knob should be used as general reference points only. Check for parallax error by moving your head up, down, left, and right without influencing the gun. The parallax is correct if there is no apparent shift between the reticle and the target image. If you notice any shift, adjust the Parallax Adjustment Knob slightly until all shift is eliminated.

**Note:** If the reticle and the image are not both simultaneously in focus, readjust your Fast-Focus Eyepiece. See Ocular Focus – Fast-Focus Eyepiece section.

### Magnification Adjustment

The Magnification Adjustment Ring is used to change the riflescope's "power." The Venom® 3-15x44 FFP and 5-25x56 FFP riflescopes are variable powered optics with a 5x optical design. (Ex: 3-15x, 5-25x)

To adjust your optic's magnification, rotate the Magnification Adjustment Ring clockwise, or counterclockwise, to increase or decrease the magnification to your desired level.



### TURRETS

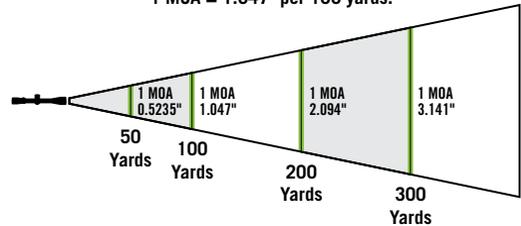
The Venom® riflescopes are offered in either Minute of Angle (MOA) or Milliradian (MRAD). All Venom® riflescopes will have a matching reticle/turret configuration.

**Note:** The top of both the windage and elevation turret will state what unit the scope is laid out in.

### Minute of Angle (MOA) Adjustment

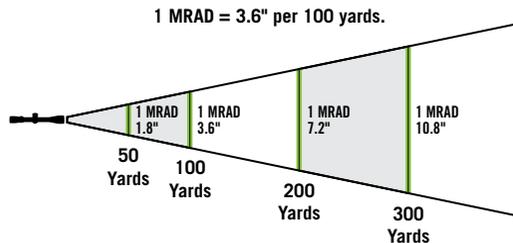
Minute of Angle is an angular unit of measurement commonly found in riflescopes. It is used to measure bullet drop, wind holdovers, and for measuring targets. Both the reticle and turrets will be laid out in specific MOA values. 1 MOA equates to 1.047" at 100 yards, 2.09" at 200 yards, 3.14" at 300 yards, etc. Being an angular unit of measurement, the value of 1 MOA will increase/decrease proportionally as you increase/decrease the distance you are shooting. For this reason, think about all of your adjustments in MOA, rather than a linear unit such as inches. If your turret, reticle, and drop chart are all laid out in MOA, adjusting your scope for bullet drop or windage corrections is extremely easy.

1 MOA = 1.047" per 100 yards.



## Milliradian (MRAD) Adjustment

Milliradian is an angular unit of measurement commonly found in riflescopes. It is used to measure bullet drop, wind holdovers, and for measuring targets. Both the reticle and turrets will be laid out in specific MRAD values. 1 MRAD equates to 3.6" at 100 yards, 7.2" at 200 yards, 10.8" at 300 yards, etc. Being an angular unit of measurement, the values of 1 MRAD will increase/decrease proportionally as you increase/decrease the distance you are shooting. For this reason, think about all of your adjustments in MRAD, rather than a linear unit such as inches. If your turret, reticle, and drop chart are all laid out in MRAD, adjusting your scope for bullet drop or windage corrections is extremely easy.



## Elevation and Windage Turrets

Use turrets to adjust the bullet's point of impact. The Venom® 3-15x44 FFP and 5-25x56 FFP riflescopes use either 1/4 MOA or .1 MRAD turret adjustments on both the Windage and Elevation Turrets. Each click will move the bullet's point of impact roughly .25" at 100 yards for



MOA, and .36" at 100 yards for MRAD. The turret on the top of the riflescope is the Elevation Turret, which is used to adjust the bullet's point of impact up and down. The turret on the right-hand side of the riflescope is the Windage Turret and is used to adjust the bullet's point of impact left and right.

## Capped Turrets

The Venom® 3-15x44 FFP riflescopes come equipped with capped Windage Turrets. This protects the turrets from accidental adjustment while out in the field, in transit, or in storage. You will need to remove the caps prior to making any adjustments on the turrets.

**Note:** The scope is still waterproof with the caps removed.

### To Make Turret Adjustments:

1. Remove the turret caps by spinning them counterclockwise.
2. Following the directional arrows, turn the dials in the direction you wish the bullet's point of impact to change. (If you hit high, dial down. If you hit low, dial up. If you hit right, dial left. If you hit left, dial right.)
3. When finished adjusting, replace the turret caps.

**Note:** The reticle will move in the opposite direction of the turret dials. When you dial up, the reticle will move down, forcing you to aim higher, changing your point of impact upward.

## Exposed Elevation Turrets

The Venom® 5-25x56 FFP riflescopes come equipped with exposed Elevation and Windage Turrets. The Venom® 3-15x44 is also equipped with an exposed Elevation Turret however it has a capped windage turret. This allows the shooter to quickly dial in their elevation and windage adjustments.

### Adjusting Exposed Elevation Turrets:

1. Following the direction arrows, turn the dial in the direction you wish the bullet's point of impact to change. (If you hit high, dial down. If you hit low, dial up. If you hit right, dial left. If you hit left, dial right.)
2. When finished adjusting, push down to lock the turret in place.

## Throw Lever

Make magnification adjustments smooth and easy by attaching the included Throw Lever.



### Installation

1. Find the center of travel on your riflescope's Magnification Adjustment Ring. This should ensure that the Throw Lever does not contact anything on the rifle.
2. Gently spread the ring enough to get it over the eyepiece.
3. Slide the Throw Lever onto the magnification ring at the desired position.
4. Insert the hex screw through the unthreaded hole in the lever and into the ring and tighten only until snug and the ring does not slip when rotated. If you use a torque wrench, tighten to 2.2 in-lbs.
5. Test to ensure the Throw Lever is in the best position for you. To adjust, simply loosen the screw and reposition the lever to a more comfortable position. Then, retighten the screw and test the new position.

## RIFLESCOPE MOUNTING

To get the best performance from your riflescope, proper mounting is essential. Although not difficult, the correct steps must be followed. If you are unsure of your abilities, use the services of a qualified gunsmith.

Please take note of the instructions on the following pages. For the proper scope mounting procedure go to [VortexOptics.com/vortex-nation-videos](http://VortexOptics.com/vortex-nation-videos) for a video tutorial.

### Riflescope Mounting Checklist

- Gun vise or a solid platform for your rifle
- Scope rings
- Torque wrench
- Reticle leveling tool(s) (such as feeler gauges or bubble levels and a plumb bob)

**Recommendation:** Pick up the Vortex® Torque Wrench Mounting Kit, which comes with the complete set of bits needed to install Vortex® scopes and rings.



### Rings and Bases

The Venom® 3-15x44 FFP and 5-25x56 FFP riflescopes feature a 34mm main tube. Be sure to select a base and matching rings appropriate for your riflescope's mount according to manufacturer's instructions.

**Tip:** Selecting the proper ring height to provide appropriate clearance between the riflescope and any part of the rifle is paramount. The proper height will also allow for a comfortable head position and aid in establishing a solid and consistent shooting position. A ring's height will not have an adverse effect on accuracy and overall range or performance.

## Eye Relief and Reticle Adjustment

After installing the bottom ring halves on the mounting base, place the riflescope on the bottom ring halves and loosely install the upper ring halves. Before tightening the scope ring screws, adjust for maximum eye relief to avoid injury.

1. Set the riflescope to its highest magnification.
2. Move the riflescope fore and aft in the rings until you achieve a full, unobstructed sight picture.
3. Without disturbing the fore-aft placement, rotate the riflescope until the reticle is level. Use a leveling tool(s) such as feeler gauges or bubble levels and a plumb bob to aid in this process.
4. After leveling the reticle, tighten and torque the ring screws down per manufacturer's instructions. Use caution and do not over-tighten ring screws.

**Note:** We typically suggest 15-18 in-lbs of torque on the ring screws. If the mount/ring manufacturer suggests more or less, contact the Vortex® Technical Department for best instructions. For base clamp screws on the rings/mounts, reference the ring manufacturer's specifications. We do not recommend liquid thread-locking compound on the ring screws.

If you have questions about a specific setup, please call our Technical Department at:

1-800-4VORTEX (1-800-486-7839) Ext 5

## SIGHTING IN YOUR RIFLESCOPE

### Bore Sighting

Initial bore sighting of the riflescope will save time and money at the range by roughly aligning the scope to the rifle. This can be done several ways, either by using a mechanical or laser bore sighter according to the manufacturer's instructions, or by removing the bolt and sighting through the barrel.



### To Visually Bore Sight a Rifle

1. Place the rifle on a solid rest and remove the bolt.
2. Sight through the bore at a target approximately 100 yards away.

**Note:** It will help to have larger, high contrast target to focus on as it can be difficult to pick up smaller targets through the rifle's bore.

3. Move the rifle and rest until the target is visually centered inside the barrel.
4. With the target centered in the bore, make the necessary windage and elevation adjustments until the reticle is also centered on the target. You may notice the reticle travel in the opposite direction as listed on the turrets. This is completely normal.

## Final Range Sight-In

After the riflescope has been bore sighted, final sight-in should be done at the range using the exact ammunition you expect to use while hunting or shooting competitively. Sight-in and zero the riflescope at the preferred distance. 50 to 200 yards are the most common zero distances.

1. Following all safe shooting practices, fire a three-shot group as precisely as possible to determine an average point of impact to correct from. This will also help you establish the accuracy potential of the weapon system.
2. Adjust the turrets to correct for any offset in your point of impact. Be sure to read page 11 prior to adjusting.
3. Fire another three-shot group to establish another average point of impact. This procedure may be repeated as many times as necessary until your point of impact and your point of aim are in the same place, and you have achieved a perfect zero.

**Note:** Vortex® does not recommend the use of a weighted gun vise, as it can put extreme stress on the gun, stock, scope, and mounts. It is best practice to use a combination of sandbags or a bipod and sandbags. Letting your weapon recoil naturally also provides consistency from shot to shot.

## Reindexing the Elevation and Windage Turrets

After the rifle and scope have been zeroed in, the elevation and windage turrets should be reindexed to their zero indicators. This will allow you to accurately keep track of elevation or windage corrections dialed on the turrets in the field, and quickly return to an original zero-point setting.

### To Reindex Capped Turrets

1. While holding the windage turret firmly between thumb and forefinger to prevent any rotation, use the 2mm hex wrench to loosen and remove the central screw on top of the dial.
2. Gently pull the turret dial straight up and off the turret post, being careful not to rotate the post.
3. Reinstall the turret dial, lining up the “0” mark with the indexing mark on the scope body and replace the central screw on the top of the dial.
4. Replace the turret cap.

### To Reindex Exposed Elevation/Windage Turret and Set Zero System

1. Loosen and remove the Elevation Turret cap using the included turret tool. Gently pull the turret dial straight up and off the turret post, being careful not to rotate the post.
2. Place the RevStop® Zero Stop Ring over the turret post.
3. Push the RevStop® Zero Stop Ring down until seated, then rotate the ring clockwise until it stops.
4. Reinstall the turret dial, lining up the "0" mark with indexing line on the scope body.
5. Replace and tighten the Elevation Turret cap.
6. For the Windage Turret, Follow Steps 1, 4 and 5.

**Note:** Installing the RevStop® Zero Stop Ring will reduce the total elevation adjustment. Although installing the zero stop ring is recommended, it is not required to operate the scope. The Elevation Turret can still be indexed to zero after sighting-in even if the RevStop® Zero Stop Ring is not.



## MAINTENANCE

### Cleaning

Your Vortex® riflescope requires very little routine maintenance other than periodically cleaning the exterior lenses. The scope's exterior may be cleaned by wiping with a soft cloth. When cleaning the lenses, be sure to use products that are specifically designed for use on coated optical lenses.

- Be sure to blow away any dust or grit on the lenses prior to wiping the surfaces.
- Using your breath, or a very small amount of water or pure alcohol, can help remove stubborn dried water spots.

### Lubrication

All riflescope components are permanently lubricated, so no additional lubricant should be applied.

**Note:** Other than removing the turret caps, turret indicators, and battery cap do not attempt to disassemble any components of the riflescope. Disassembling of riflescope may void warranty.

### Storage

If possible, avoid storing your scope in direct sunlight or any very hot location for long periods of time.

## TROUBLESHOOTING

Please consult the following list prior to returning a riflescope for service. Many times, a problem thought to be with the scope is a mounting issue. Be sure the correct rings and bases are being used and that they are properly torqued to the rifle. Be sure there is no free play in the scope, base, or rings.

### Common Issues

#### Point of Impact is Inconsistent or Changes Drastically After Turret Adjustment.

- Verify that the ring screws are not over-torqued. Ring screws should only be torqued to Vortex® recommendations, and no thread-locking compound or lubricants should be applied. Over-torquing ring screws will cause excess pressure on the tube, which may cause problems when making turret and parallax adjustments.
- Remove the scope from the rings and visually check the scope tube for slide marks, and/or indentations from over-torqued, or out-of-spec rings.
- Ensure the rifle's action screws are tightened to the rifle manufacturer's specification.
- Be sure that the base is tightened using thread-locking compound to the top of the rifle's receiver to manufacturer's specs.
- If using the scope on an AR-style rifle, ensure that the cantilever mount/rings are mounted only to the top of the receiver. The cantilever mount/rings need to be mounted to a single, solid surface. Make sure the forward connection of the cantilever mount, or ring, is not mounted to the fore-end of the rifle.
- Be sure the rifle barrel and action are clean and free of excessive oil, or copper and powder fouling.

- Some rifles and particular ammunition do not work well together. Try different ammunition and see if accuracy improves.

#### Insufficient Windage & Elevation Adjustment Range

- Be sure you have the proper base and rings for your rifle. If you need assistance, contact a local gunsmith or the Vortex® Technical Department.
- Once you have verified you have the correct base and mounts, and that you have been properly fitted for your gun, make sure you have followed the correct mounting procedure. See Riflescope Mounting Section on pages 14-15 for this procedure.
- Insufficient windage or elevation adjustment range usually indicates problems with the mounting, base mount holes drilled in the rifle's receiver, or barrel/receiver misalignment.
- Be sure you do not have the RevStop® Zero Stop Ring installed in the Elevation Turret as this will limit your travel in the downward direction and can limit your travel in the upward direction.

#### Cannot Focus on the Reticle and Target

- Check and reset the ocular focus for the shooter's eye. See Riflescope Adjustment Section, Ocular Focus – Fast-Focus Eyepiece Adjustment on page 6.

#### Reticle is moving the wrong direction

- The reticle will always move opposite of the turrets. Markings on the turrets indicate point of impact change. If you dial down on the turret, the reticle will move upward, forcing you to move the gun down, to change your point of impact downward.

## NOTICE

### Virtual Patent Marking Notice by Vortex Optics

This product may be protected by patents in the U.S. and elsewhere for Vortex Optics. <http://vtx.legal> website is provided to satisfy the virtual patent marking provisions of various jurisdictions including the virtual patent marking provisions of the America Invents Act and provide notice under 35 U.S.C. §287(a). Please visit <http://vtx.legal> to view list of products that may be covered by one or more U.S./ Foreign patents or published patent applications.



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**Note:** The VIP Warranty™ does not cover loss, theft, deliberate damage, or cosmetic damage not affecting product performance.

For the most up to date manual visit [VortexOptics.com](http://VortexOptics.com)





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