



RETICLE MANUAL

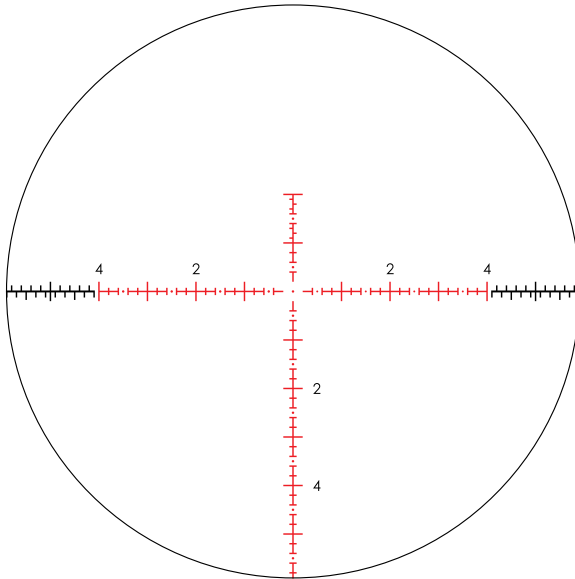
VMR-5

MRAD RETICLE

**FIRST FOCAL PLANE
ILLUMINATED**

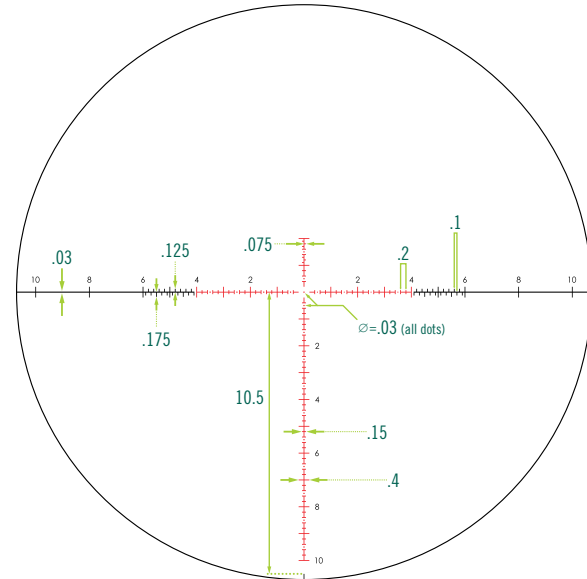
VMR-5 MRAD RETICLE

Designed for PRS and long-range shooters who need a clear view to spot misses and correct quickly. Fine subtensions on the crosshair support precise measurement and adjustments, without the clutter of a windage tree design.



MRAD Subtensions

The VMR-5 MRAD is based on Milliradian (MRAD) subtensions. MRAD is an angular unit of measurement used to account for bullet drop, wind corrections, and range estimation. 1 MRAD will correspond to 3.6" for each 100 yards.

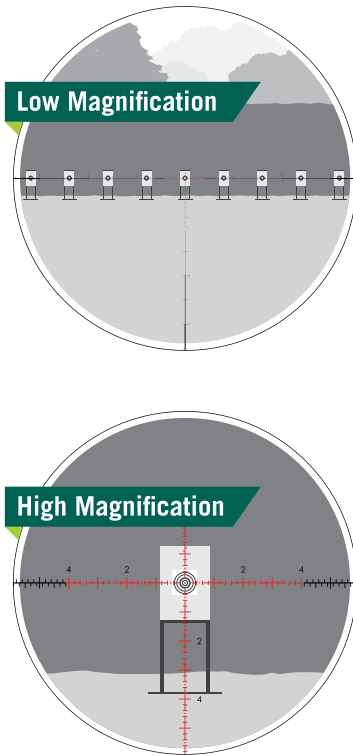


MRAD values are correct on all magnifications.

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

First Focal Plane Reticles

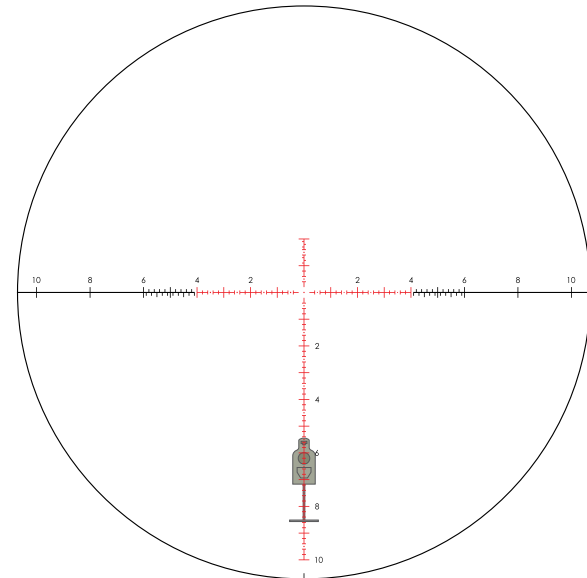
This riflescope features a first focal plane (FFP) reticle. FFP reticles are located within the riflescope near the Windage and Elevation Turrets, in front of the erector tube. This style of reticle will appear to grow and shrink as you change the magnification.



Elevation Holdovers

Correcting for bullet drop is easy with the VMR-5 reticle's 0.2 MRAD hashmarks and 0.5 MRAD dots. Use the bullet's drop in MRAD and hold on the corresponding hashmark.

Example



6.2 MRAD elevation correction at 625 yds. No wind.

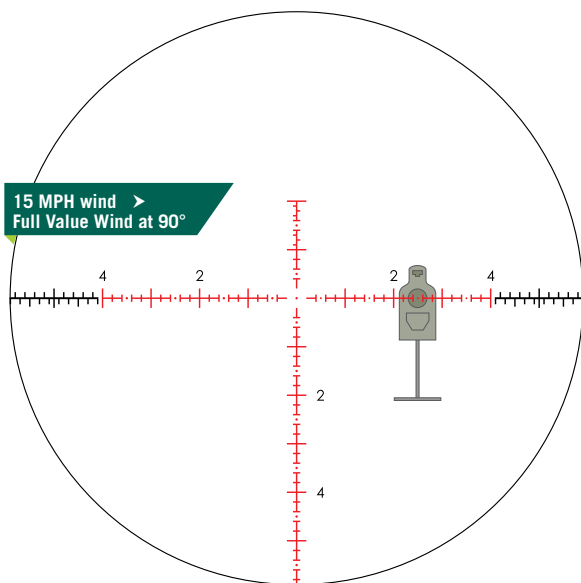
Windage and Moving Targets

Using the VMR-5 reticle for effective windage and moving target leads will require thorough knowledge of your weapon system's ballistics performance under varying conditions and experience in reading wind and target speed. As a bullet drops, it is important for the shooter to learn a particular weapon's windage/moving target corrections in MRAD rather than inches. Always hold the reticle into the wind.

Basic Windage Correction Holdovers

When dialing elevation, use the horizontal stadia line for windage or moving target lead corrections.

Example

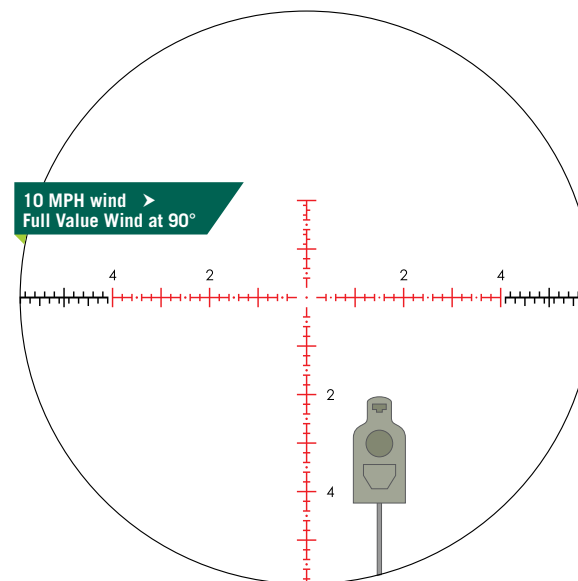


2.5 MRAD windage correction for a 15 mph wind at 700 yards.

Basic Windage and Elevation Correction Holdovers

When using the reticle for elevation correction rather than dialing, the MRAD hashmarks on the horizontal stadia line can still be used to help visually reference windage corrections. Remember to hold the reticle into the wind.

Example



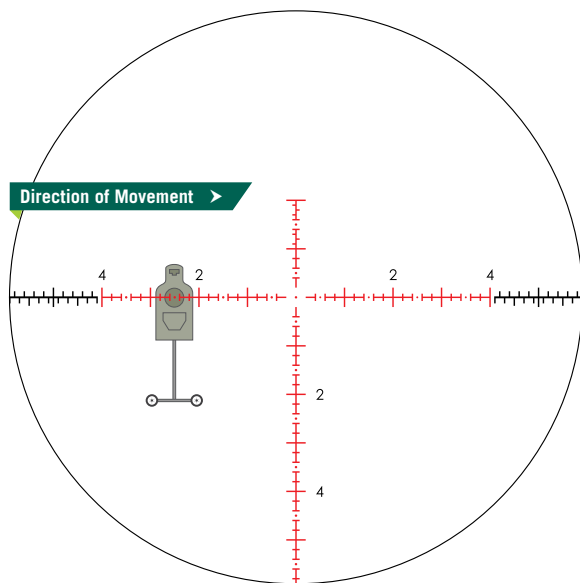
3 MRAD elevation correction at 500 yards.
1.5 MRAD windage correction for a 10 mph wind.

Basic Moving Target Lead Correction

When estimating moving target leads, use the MRAD hashmarks on the horizontal stadia line. Estimating moving target leads will require knowing distance, wind speed, moving target speed, and total bullet flight time (including rifle lock time). Bullet flight times can be roughly calculated based on FPS velocities or a ballistic calculator.

Note: Correctly estimating moving leads is very difficult and requires practice and knowledge beyond the scope of this manual.

Example



2.5 MRAD correction for a target moving at 4.5 mph.

RANGING

MRAD measurements are effective for ranging using a simple formula. To use this formula, the shooter needs to know the size of the target or nearby object in inches, meters, or cm.

$$\frac{\text{Target Size (yds.)}}{\text{Measured MRAD}} \times 1000 = \text{Range (yds.)}$$

$$\frac{\text{Target Size (inches)}}{\text{Measured MRAD}} \times 27.77 = \text{Range (yds.)}$$

$$\frac{\text{Target Size (inches)}}{\text{Measured MRAD}} \times 25.4 = \text{Range (m)}$$

$$\frac{\text{Target Size (m)}}{\text{Measured MRAD}} \times 1000 = \text{Range (m)}$$

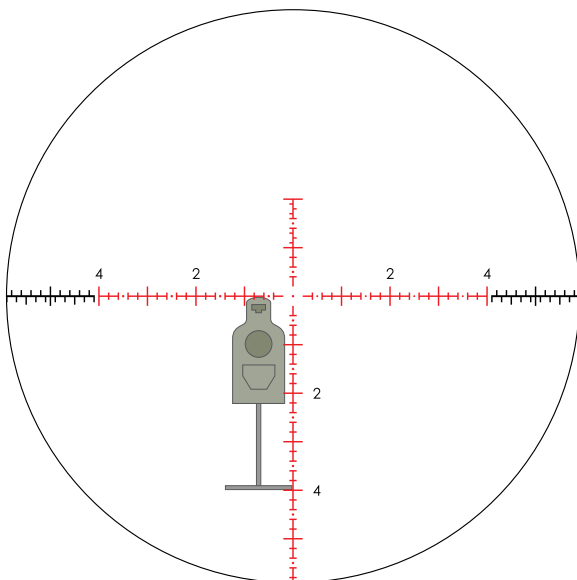
$$\frac{\text{Target Size (cm)}}{\text{Measured MRAD}} \times 10 = \text{Range (m)}$$

For the most accurate solution, use the longest dimension. If the object is taller than it is wide, it is best to use the object's height in the formula.

Using either a vertical or horizontal MRAD scale, place the reticle on a target of known dimensions and read the number of MRAD spanned. You will obtain the best results if measured to the nearest 0.1 MRAD.

Accurate measuring will depend on a very steady hold. The rifle should be firmly braced using a rest or bipod when measuring. Once you have an accurate MRAD reading, use the listed ranging formulas to calculate the distance.

Example



Ranging a 6' target (2 yds.) at 4 MRAD yields 500 yds.

$$\frac{2}{4 \text{ MRAD}} \times 1000 = 500 \text{ yds.}$$



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M-00457-0

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