RETICLE MANUAL

VECTOR OPTICS®

VET-BTR

READ IT BEFORE USE!!!

READ AND UNDERSTAND THE CONTENTS OF YOUR RETICLE MANUAL.

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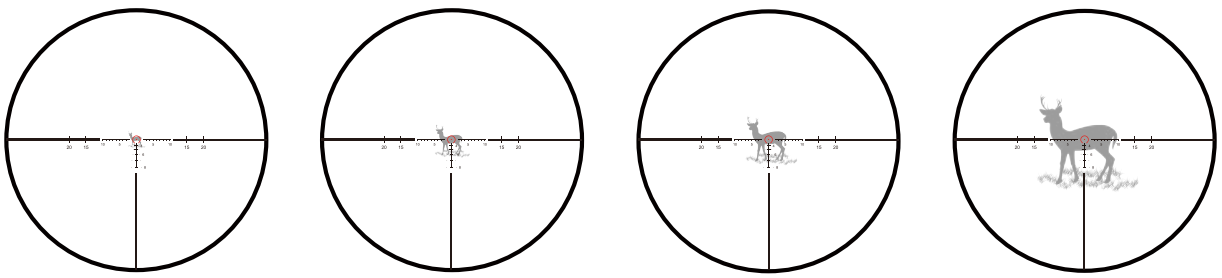
SECOND FOCAL PLANE RETICLES

The second focal plane (SFP) reticles are located near the scope's eyepiece behind the image erecting and magnifying lenses.

This style of reticle does not visually change in size when you change the magnification. The advantage of an SFP reticle is that it always maintains the same ideally-sized appearance.

When shooting with this SFP scope, be aware that the listed reticle subtensions used for estimating range, holdover, and wind drift correction are only accurate at the specified magnification.



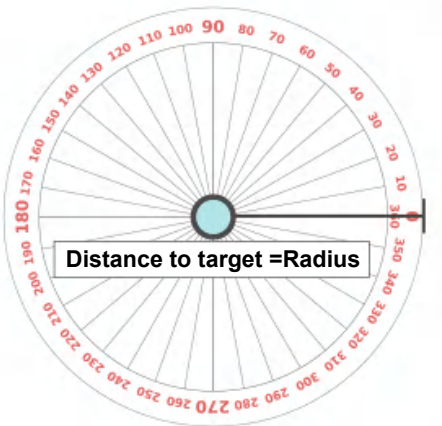
1x 2x 3x 6x

MILS / MRAD EXPLAINED

MILs, or milliradians, are a unit of measurement dividing radians in a circle. A radian is equal to 57.3 degrees, with 6.2832 (π x 2) radians in a circle. There are 1000 milliradians in 1 radian, and therefore 6,283 milliradians (or mils) in a circle.

1 MIL equals 1/1000 of any shooting distance. So 1 MIL is 1 meter at 1000 meters, and 1 yard(36") at 1000 yards. Then **1 MIL is approximately 10cm at 100m**, 20cm at 200m and so on. Likewise, **1MIL is approximately 3.6 inches at 100 yards**, 7.2 inches at 200 yards and so on.

A mil is so large that it's usually broken into tenths in order to make precise adjustments on your scope turret.



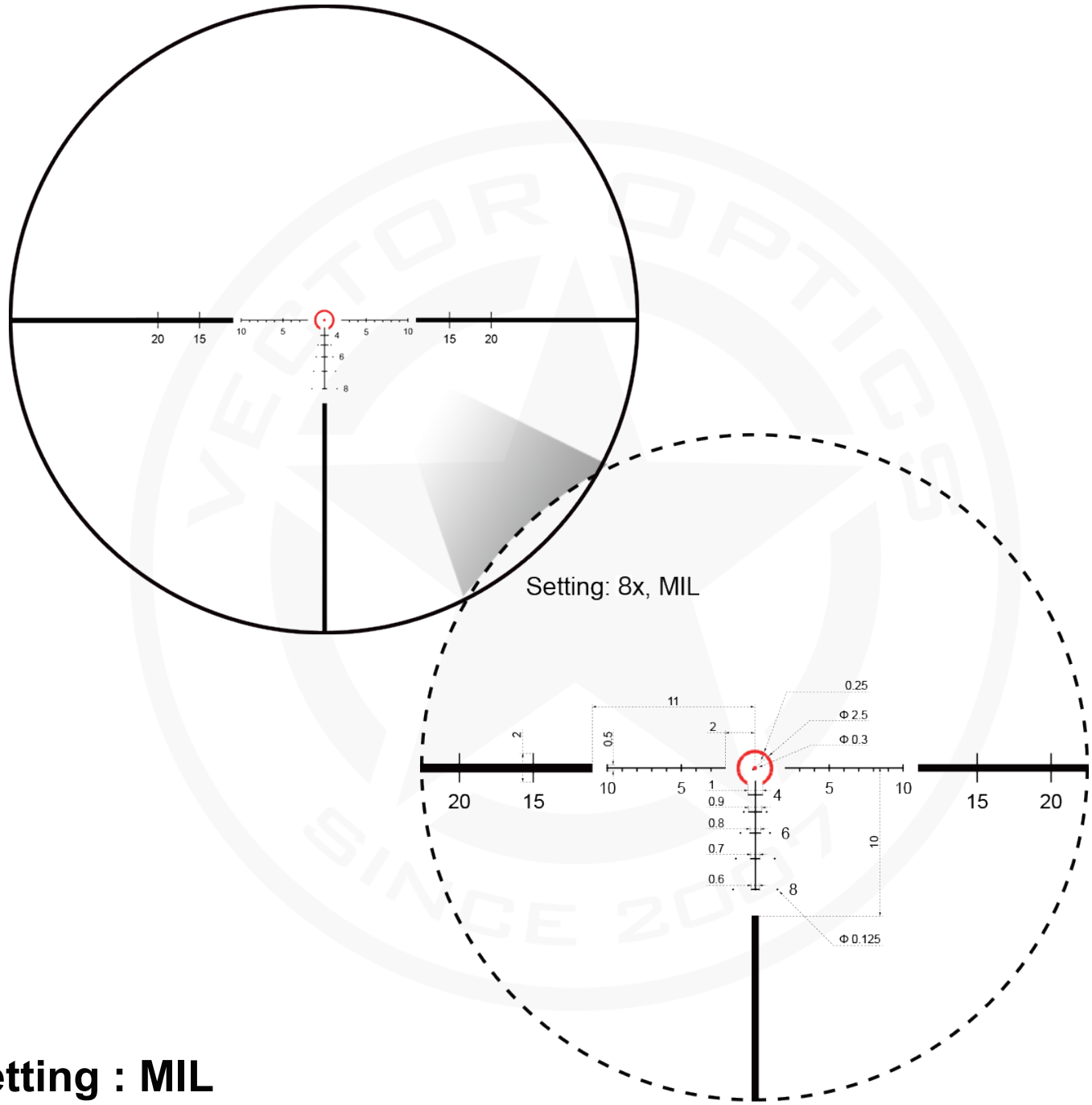
THE Vector Optics® VET-BTR MIL RETICLE

The **VET-BTR** reticle features an illuminated center dot and a horseshoe-shaped ring around it, with a bullet drop compensation (BDC) markings and a horizontal target ranging system, making it ideal for tactics, hunting, or competition use.

The BDC system improves your first hit ratio and decreases time on target. It's specifically designed for shooting range clays, cans, bottles, and other targets. The BDC system makes it easy for adjusting your aim based on distance, so you can make quick and accurate shots without the need for a separate rangefinder or ballistic calculator. The target ranging system uses the hash marks on the horizontal line as reference points, the shooter can quickly and accurately estimate the distance to the target and adjust for wind drift compensation.

The VET-BTR reticle is perfect for quick target acquisition and combines the advantages of a bullet drop compensation system and a target ranging system. With this reticle, you'll be able to fully utilize the ranging features and bullet drop compensation in no time.

★ For VET-BTR reticle, the suspension is valid at 6x.


Setting: 8x, MIL
20
15
10
5
4
5
10
15
20
6
8
11
2
0.5
1
0.9
0.8
0.7
0.6
10
0.25
Φ 2.5
Φ 0.3
Φ 0.125

Setting : MIL

WIND DRIFT COMPENSATION

The VET-BTR reticle also takes wind drift into account. Wind can cause a bullet to drift off course, which can lead to missed shots. The VET-BTR reticle compensates for wind drift by using the dots aligned with the hashmarks. This allows the shooter to quickly estimate the wind speed and direction, and make the necessary adjustments to their aim to compensate for wind drift.

BULLET DROP COMPENSATION

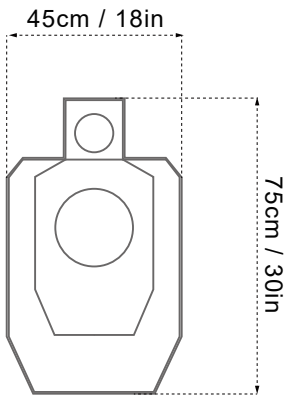
The VET-BTR reticle is designed for bullet drop compensation, shooters can estimate bullet holdover at different distances. The BDC starts at the center dot and finishes at the mark indicated by the number 8, can offer bullet-drop reference for all distances. **The VET-BTR reticle is designed to follow the trajectory of a .223 rifle bullet, with the gap increasing each time to better match fixed distances.**

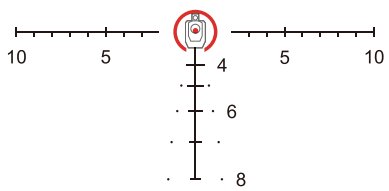
There are various firearms that the VET-BTR reticle can be used with, like high powered rifles, rimfire rifles, black powder rifles, slug shotguns and so on. The hash marks of this reticle can also be used as reference for bullet drift compensation in windy days or to estimate range.

RANGING WITH THE VET-BTR RETICLE

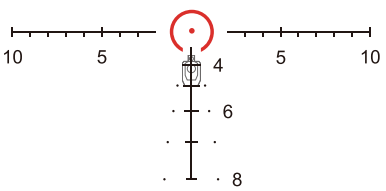
Fast Ranging with Vertical Hash Marks

The opening at the bottom of the horseshoe and the horizontal lines beneath the reticle indicate a distance of 19 inches at the specified range (which is the average width of a man's shoulders). To estimate the range of your target, use the bottom of the horseshoe at 300 meters and the width of the horizontal lines at 400-800 meters.

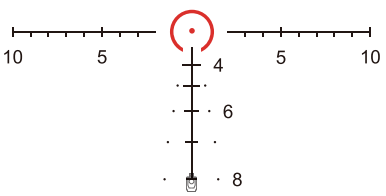




300 meters



400 meters



800 meters

Ranging with Horizontal Hash Marks

The Horizontal line has mil hash marks, can help the shooter estimate the range to a target. The MIL is an angular measurement -- 1/6400th of a circle -- which equals almost precisely one yard at 1000 yards or one meter at 1000 meters. To use the Mil hash marks for ranging, the shooter first needs to know the width of the target in question. Once the width of the target is determined, the shooter can use the Mil hash marks to measure the target in mils. This proportional relationship makes possible a simple formula to compute distances: For distances beyond 300 meters, select the stadia line that best fits the target's shoulders and use it as your Point of Aim. Because the BDC is calibrated for the correct trajectory, your Point of Aim will be your Point of Impact at each distance.
(valid at 6x magnification)

Width of Target (yards) / mils * 1000 = Distance to Target (yards)

If the width of target is in Inches, then the formula should be:

Width of Target (inches) / mils * 27.78 = Distance to Target (yards)

(1 inch ≈ 0.0277778 yards)

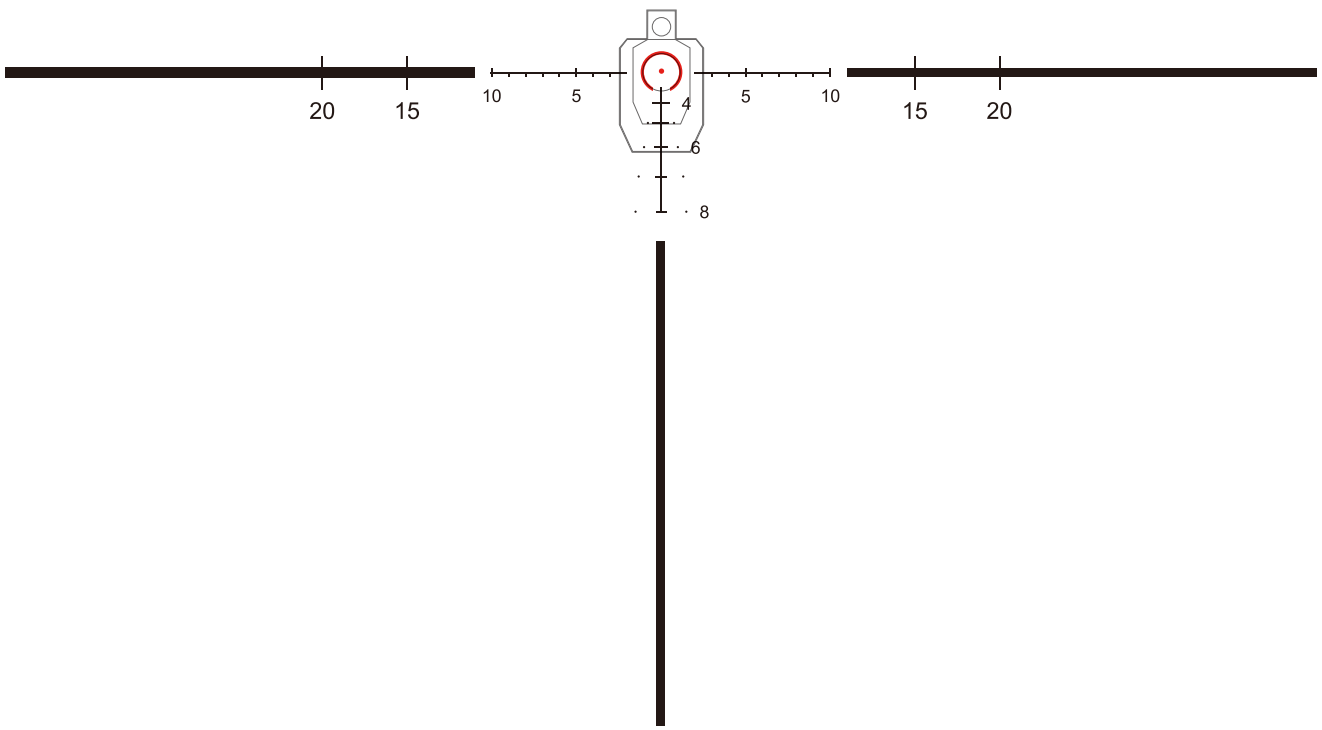
This formula works equally well with meters, but don’t mix meters and yards:

Width of target (meters) / mils * 1000 = Distance to Target (meters)

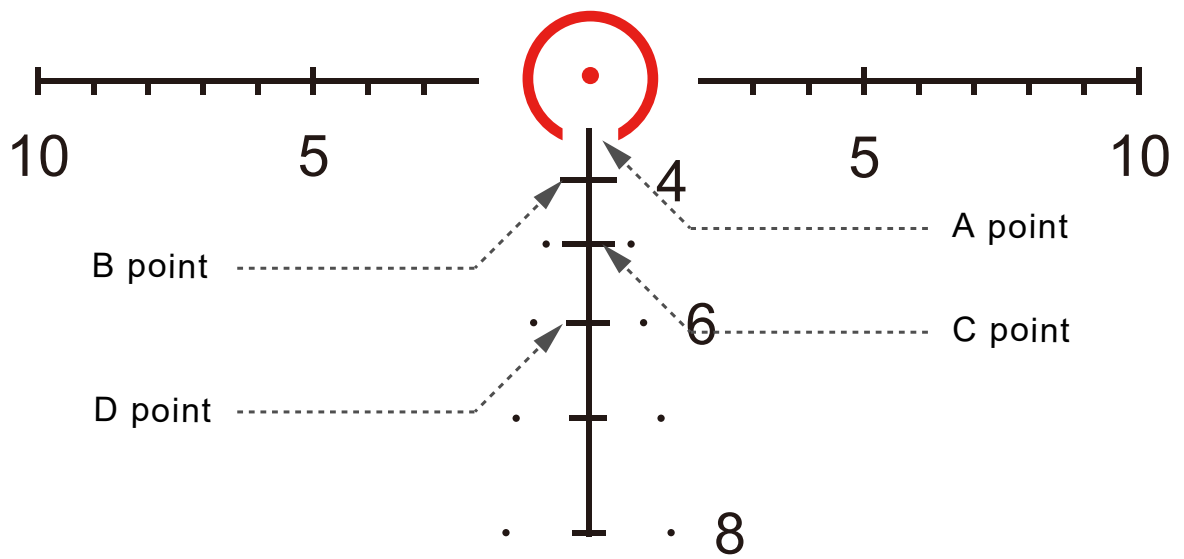
EXAMPLE

leticle at 6x magnification, if the shoulder width of an adult male is 19in, and measures 4.5Mils across the reticle, that is:

19 (inches) / 5mil x 27.78 = 106 yards



USING THE RETICLE FOR BULLET DROP COMPENSATION



If you are using the VET-BTR reticle for bullet-drop compensation, please first zero your rifle at 100m or other distances and set the magnification to 6x, then use the hash marks on the reticle to compensate for bullet drop. Here is an example with .223 caliber:

Caliber: .308, 7.62

High Power Big Game Rifle | Boat tail bullets, 2600 - 2650 FPS muzzle velocity | Use 200 yd. zero on center dot.

Bullet Drop:

A point: 285 yds | 7.2" drop

B point: 385 yds | 22" drop

C point: 485 yds | 47.4" drop

D point: 600 yds | 92" drop

Caliber: .223, 5.56

High Velocity, Small Caliber Varmint Rifle | boat tail bullets, 2700 - 3000 FPS muzzle velocity | Use 200yds zero on center dot.

Bullet Drop:

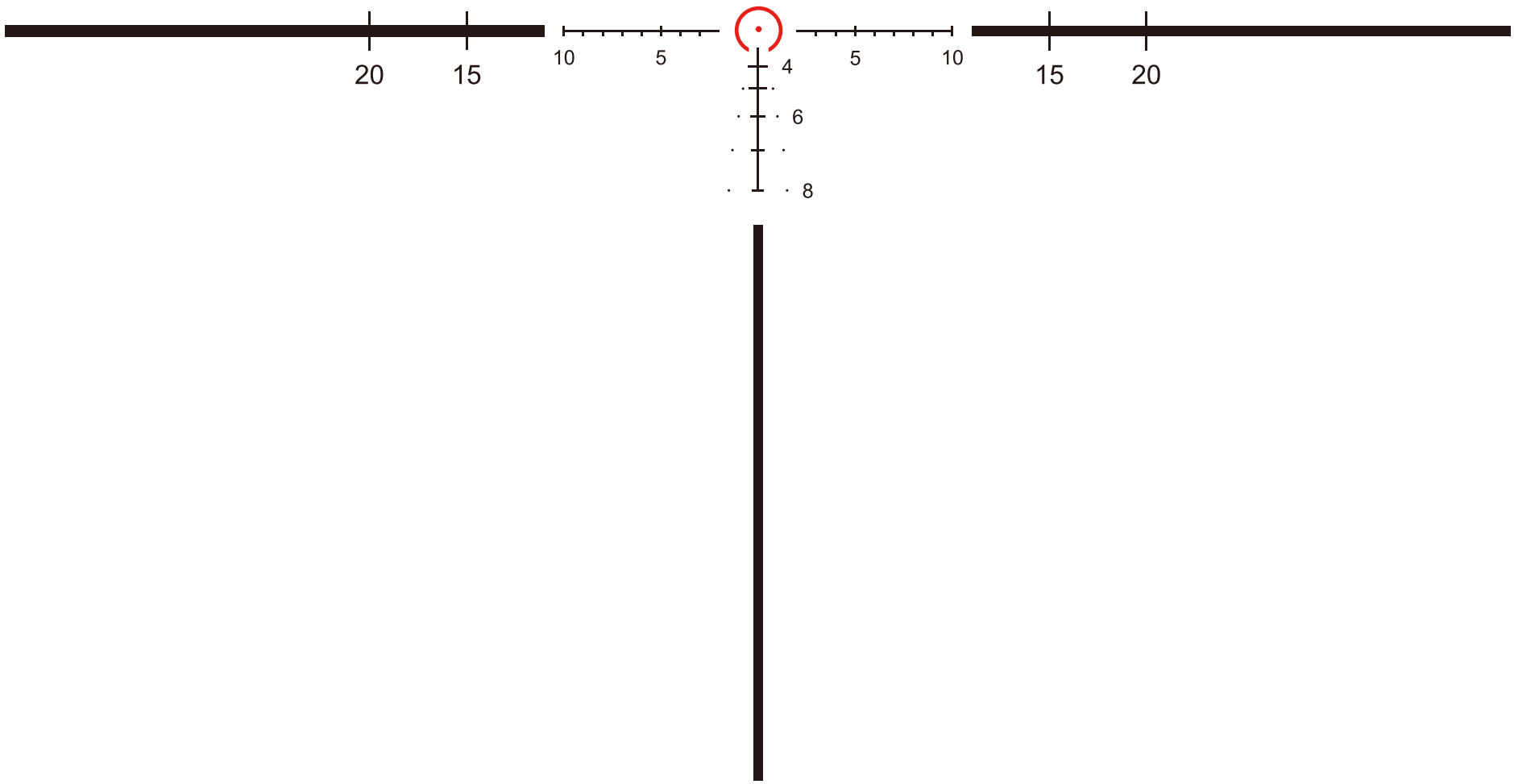
A point: 300yds | 7.5" drop

B point: 400yds | 23.5" drop

C point: 500yds | 50" drop

D point: 600yds | 92" drop

NOTE



NOTE

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