HUSKEMAW
LONG RANGE OPTICS

OWNER'S MANUAL

RIFLE SCOPES/BINOCULARS/CROSSFIELD

HUSKEMAW.COM | 1-866-754-7618 | CODY, WY

I have used Huskemaw Scopes on my long range rifles for over 10 years and wouldn't use anything else. These scopes are crystal clear and very simple to use with the quick dial turrets and built in wind compensation makes a deadly combination. Thank you Best of The West!

Bill Gaynor

It's my first Antelope ever and was taken in southern Wyoming. I used my Best of the West Hunter Elite chambered in 7mm Rem Mag topped with a 5-20x50 Huskemaw Blue Diamond Scope. I ranged him at 457 yards and dialed my turret to 450 yards and dropped him with 1 shot. With this shooting system "one and done" is how the story always ends. Thanks a bunch to you and the rest of the crew at BOTW for everything you guys do and for customer service that is second to none!

Jordan Rollins

When you are setting up for a shot on a trophy animal and precious seconds count, I trust my Huskemaw Optics and RFBC turrets it's as simple as range, dial, hold for windage, and shoot. Don't miss your shot opportunity fumbling through ballistic drop charts or guessing holdover.

Nick Saner

PRO DEALER

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HUSKEMAW LONG RANGE OPTICS

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Please visit our website Huskemaw.com and select the "VIDEO" tab, or our Youtube.com channel The Best of the West, and search for "Huskemaw Optics Scope Mount Instructions" to find instructional videos that coordinate with this manual.

HUSKEMAW LONG RANGE OPTICS

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THE HUSKEMAW ADVANTAGE

Congratulations and thank you for purchasing the most technologically advanced rifle scope and turret system in the industry. We anticipate that you will enjoy many years of precision long range shooting with a Huskemaw mounted on your favorite rifle. The "Huskemaw Advantage" is best described as the most precise, quick and user friendly system pre-validated in a known environment. The Huskemaw scope is built to withstand years of use and provide reliable functionality in all field conditions. The various attributes of your Huskemaw scope are outlined below:

- **HUNT SMART RETICLE:** The design is simple, yet functional used in tandem with the **BDC** turrets. The same principals apply to all HO scopes models however differences do exist and are explained in detail in this manual. The wind holds with corresponding MOA values are unique to Huskemaw and are patent* protected. This key asset is utilized by dialing to a known distance, then holding for wind deflection as indicated on the turret directly above the elevation number. It is as simple as ranging for distance, dial appropriate yardage and hold for wind as applicable. * US PATENTS 8,365,455 & 9,366,502
- **CUSTOMIZED HUSKEMAW BDC TURRET:** This turret is an elevation turret which is calibrated in yards/meters rather than the standard MOA indicator marks. This turret is both simple and precise because it has been validated with actual drop data that has been shot in the field in a known environment. The precision aspect of each turret is proven by utilizing a number of factors to include elevation, temperature, true ballistic coefficient and muzzle velocity. In summary, every turret is laser engraved to match the actual trajectory of an individual rifle and load based on the click value of the scope.
- **WINDAGE ENABLED:** As mentioned above, the Huskemaw **BDC** (bullet drop compensator) turret is the only windage enabled turret in the industry. Huskemaw Optics uses patented wind compensation technology and when applied to the Hunt Smart Reticle becomes a **RFBC** (Rapid Field Ballistic Compensator) system. Without question, this is the most reliable, quick and precise tool for wind compensation in a variety of field conditions. Huskemaw Optics has available a DVD "How To Dope The Wind Beyond Belief" that provides many tips, techniques and tools for gaining knowledge to become proficient at long range in wind.
- **TRUE BC/FIELD DATA COLLECTION PROCESS:** U.S. Patent 9,915,503 B2. This program was the first to use an online process for ordering a turret. The process is explained in detail in section 2 of this manual. As a precursor to more detail, the obtainment of actual drop data by shooting in the field in a known environment provides the necessary

data for your windage enabled **BDC** turret. Suffice to say, Huskemaw will engrave your turret to match the exact ballistic profile of that rifle and load. This creates a turret that is simple, yet precise in a variety of field applications and environments.

Now that we have established several of the factors that give you "The Huskemaw Advantage", let's briefly examine key product features and multiple product offerings currently available. Huskemaw currently has **6** scope models (see specifications) in Section 3. These product offerings address every possible hunting/shooting situation for precision close and long range applications, including a specialized crossbow scope.

HUSKEMAW RIFLE SCOPE FEATURES:

- Extreme durability utilizing 30mm and 34mm one-piece main tubes
- Blue Diamond lens coatings for superior light transmission and color separation
- Precision machined internal components for precise adjustment and repeatability
- Highly functional power ranges for variable field applications
- Proprietary adhesive and bedding of individual lenses
- ⅓ MOA click values for maximizing elevation and wind compensation per revolution. Exception: 1-6x24 utitilizes ½ MOA click values

The process of familiarizing yourself with your Huskemaw scope and collecting field data is supported as follows:

- Huskemaw Rifle Scope Owner's Manual
- Huskemaw Instructional Video available on the Best of the West Youtube.com channel, search for "Huskemaw Optics Scope Mount Instructions"
- Huskemaw Customer Support

The Huskemaw team is continually developing new and innovative products that incorporate practical solutions to varying field conditions. An example of this is our new "interlocking turret" which can be configured to each customer's specific needs. We encourage everyone to spend time at the range becoming familiar and proficient with their shooting system. Your Huskemaw scope will open up a whole new world in your hunting success. The ethics of long range hunting has been and will continue to be debated on a number of fronts. Our take is that each hunter must establish their own ethical boundaries and become a more precise shooter, regardless of shot distance.

INFO ON YOUR HUSKEMAW SCOPE

All Huskemaw scopes have the same basic features throughout. They are as follows.

Every scope has an Objective Lens, an **BDC** Turret, Wind Adjustment, a Magnification Ring, a Zero Index Ring, and a Focus Ring. Refer to the figure below for locations of these.

Figure 1. Scope Features and Locations

1. Objective Bell/Lens
2. **RFBC** Turret
3. Windage Adjustment
4. Magnification Adjustment
5. Zero Index Ring
6. Parallax Adjustment
7. Focus Adjustment

MOUNTING YOUR SCOPE

Now that we have an idea on the basics of your scope lets go briefly over the process of mounting it to your firearm. To properly mount your Huskemaw Scope you will need scope rings, a torque wrench, lapping bar, thread lube, and reticle leveling tool. These should all be available at most gunshops and/or optics dealers for purchase. If not contact us at Huskemaw Optics 866-754-7618.

To start, check the screw holes on the action for debris and clean if necessary. Most ring and base screws are pre lubricated, supplementing the lubrication is always advised. In addition to the threads lubricate the shoulder of the screw head that contacts the scope base. The amount of torque varies by type and size of the screw. Contact the manufacturer for exact specifications.

We utilize blue Loctite with initial installation of bases. Most base screws will need to be tightened to 30-40 in/lbs to prevent loosening. Rings are torqued to 20 to 24 in/lbs, please check manufacturer's specifications to prevent damage to the scope tube. A mild thread locking agent could be used at this stage as the pre-load on the ring screws is not enough to absolutely prevent loosening.

Figure 2. Scope Mounting Tools

RING LAPPING

For aluminum rings, it's recommended to lap the bottom half of the horizontally split ring for at least 75% contact. For steel rings, lap both the top and bottom half of the rings. Lapping the rings increases surface contact for a sturdy, slip-free mount. Rings that are not lapped place stress on the scope body and internal scope components.

Figure 3. Lapped Rings and Leveling scope

RETICLE ALIGNMENT

When using BDC-type compensation to shoot long ranges, cant and misalignment of the elevation reticle can cause significant error. A scope or reticle leveling tool will promote proper alignment before tightening the scope rings. Just follow the manufacturer's instructions.

EYE RELIEF

There are nearly 4 inches of eye relief in your Huskemaw Scope. Use as much eye relief as possible for your scope by moving it as far forward as possible in the rings. It is also recommended to use rings that mount your scope as low as possible without contacting the barrel to ensure a consistent cheek weld for accurate shooting.

BORE SIGHTING

Before taking the first shot some time spent bore sighting will save time and money not to mention frustration. Various tools are available to perform a bore sight on your firearm package, read and follow their instructions to achieve the best results.

If by chance tools are not available use this alternative method. Set up a target at 25 or 50 yards. Set up your gun on a solid rest and remove the bolt. The idea is to center the target in the very center of the barrel. Try centering the circle formed by the muzzle end inside of the circle formed by the chamber and throat. Once the bore is centered, just align the scopes reticle on the same target. Take a shot and make fine adjustments. Take three shots at 100 yards and adjust as needed.

ADJUSTING MAGNIFICATION

To adjust the magnification of your Huskemaw scope turn the adjustment ring clockwise or counterclockwise until the magnification value corresponds with the indicator.

Figure 4. Magnification Ring

FOCUSING THE RETICLE

The Fast Focus Eyepiece allows for simple and precise focus control of the Reticle. It is not intended to focus on the target. An easy method of adjustment is to obtain a view through your scope that does not have a lot of contrast, blue sky, painted wall etc., and then turn the adjustment ring until the reticle appears sharp and defined. A helpful pointer is to look away from the scope, let your eye relax, and then quickly check the reticle again for definition.

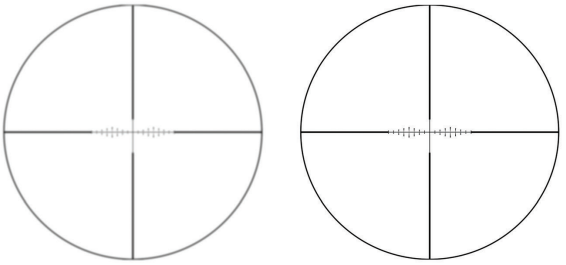
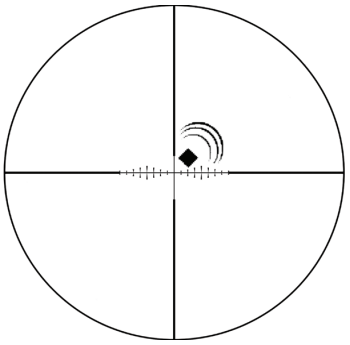


Figure 5. Unfocused and properly focused reticle

PARALLAX ADJUSTMENT

Parallax is the apparent movement of objects within the field of view in relation to the scopes reticle. To check the parallax error of a scope sight, select an object at normal shooting distance and move your head/eye side to side or up and down while keeping the rifle steady on the target. The apparent movement of the reticle in relation to the target is the parallax.



To adjust the parallax on your Huskemaw scope turn the parallax adjustment knob either clockwise or counterclockwise until there is no apparent movement in relation to the target and the reticle. A fast way to get a basic set on the parallax is to match the number on the parallax knob to your given distance

Figure 6 & 7. Parallax error and parallax adjustment dial.

Please visit our website Huskemaw.com and select the “VIDEO” tab, or our Youtube.com channel The Best of the West, and search for “Huskemaw Optics Scope Mount Instructions” to find instructional videos that coordinate with this manual.

WINDAGE AND ELEVATION ADJUSTMENTS

Your scope will arrive with an elevation-data collection turret located on the top of the scope marked in clicks. Each click will represent ⅓ Minute of Angle or MOA. The only scope model exeption is the 1-6x24 Tactical which has ½ MOA clicks. Consult the specification section of this manual for specific details on your scope model. The data collection turret is designed for the purpose of acquiring shot data to be used to create your custom turret. The windage knob, located on right side of your scope is marked in Minutes of angle ranging from 0-10-0. The windage turret must be set to zero if you choose to dial wind rather than hold wind in the reticle.

Figure 8.
Click calibrated
Windage Knob (0-10-0)

1/3 MOA calibrated
Elevation Turret (0-60)

BARREL BREAK IN

The BC Calculator requires an average chronographed velocity to create the most accurate turret. In our experience, velocity variations can be as much as 75 fps with the fi rst 100 rounds through a new barrel. For this reason, it is recommended to shoot 30 to 50 rounds to stabilize the velocity before gathering data for the true BC process.

There is much information available on break-in procedures, however we have found this simple process will help. Shoot once and clean removing carbon and copper repeating this process 10 times. Repeat again shooting three shot groups and cleaning it 5 times. At last, shoot 5 shot groups and clean and shoot until velocities stabilize. After barrel is broken-in, determine the load that presents the tightest group. Proper barrel break-in is simple but important for precision long range shooting.

Figure 9. Barrel Break In

COLLECTING DATA FOR YOUR CUSTOM TURRET

Our "True BC" Trade Marked/Service Marked process requires several pieces of external ballistics data. Once collected the most accurate bullet drop compensating turret can be created. The result will be a windage enabled BDC Turret. The process of collecting data requires several groups at various ranges to gather correct data. The following information will be used

1. Chronograph Velocity (Min 5 Shots)
2. Altitude at collection sight
3. Temperature at collection sight
4. A defined point of zero (Usually 200 Yards)
5. A Mid-Range Click Value (400-600 Yards)
6. A Long Range Click Value (800-1,000 Yards)

Note: The Long Range Target should be at least 75% of your desired longest range.

Once this information has been collected the process of creating an BDC turret can be started for ANY altitude or temperature. An example could be that the data was collected at sea level and your hunting tag is for the Rocky Mountains at around 7000 ft. Your turret could then be calibrated to perform at that altitude and air density.

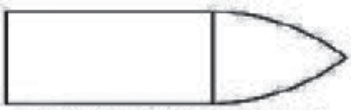
Remember that the less dense the air, the flatter the trajectory. It is important to use the correct turret for your area plus or minus 2000 ft. However, temperature changes can offset elevation changes, therefore, an 8000 foot 40 degree turret will have very little deviation from a 6000ft 80 degree turret.

THE HUSKEMAW TRUE BC PROGRAM HAS BEEN UPDATED!

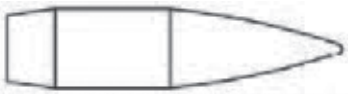
WE ARE EXCITED TO ANNOUNCE SEVERAL ENHANCEMENTS TO THE BC CALCULATOR!

The following bullet points give an overview of the new Huskemaw BC Calculator. We believe these improvements will provide improved functionality, more precise calculations and additional assets to include metric, further distance, multiple drag models, improved bullet selection and enhanced overall performance.

- The overall look and functionality of the interface has been simplified for easier navigation. Migragtion to a more robust JavaScript framework code has streamlined performance of the calculator.
- In addition to the G1 drag model, we have incorporated the G7 drag model to match a more broad range of bullet types. Not all bullets have a G7 value, only those with one will show in the drop down menu.



THE G1 STANDARD PROJECTILE



THE G7 STANDARD PROJECTILE

- Kinetic energy limitation graph which defines kinetic energy values suitable for medium or large game at longer distances. Graph is highlighted red once energy becomes questionable. (SEE GRAPH ON PAGE 18)
- Bullet selection is no longer a lengthy list of bullets (almost 1,000) but a 2-tiered system filtered by manufacturer and diameter to narrow the bullet search.
- Users may choose measurements in Imperial (yards) or in Metric (meters).
- Provision for additional data points (number of clicks to specific distances) Calculating the drop in BC value at distance (800 – 1,000 yards) to more accurately calculate number of clicks for a specified distance.
  Known as the McCoy Effect.
- Improved range card that will calculate out to 4,000 yards and display the load description.

TRUE BC PROGRAM

A significant benefit to using our online BC Calculator is the drop chart and range card. Both can be created on our program found at huskemawoptics.com Find and click on the BC calculator tab at top right of page.

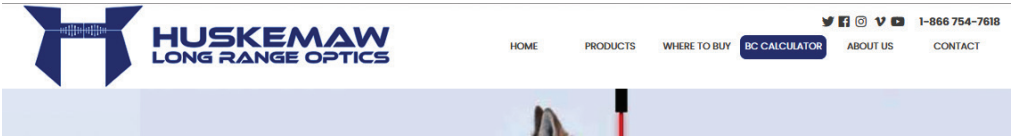
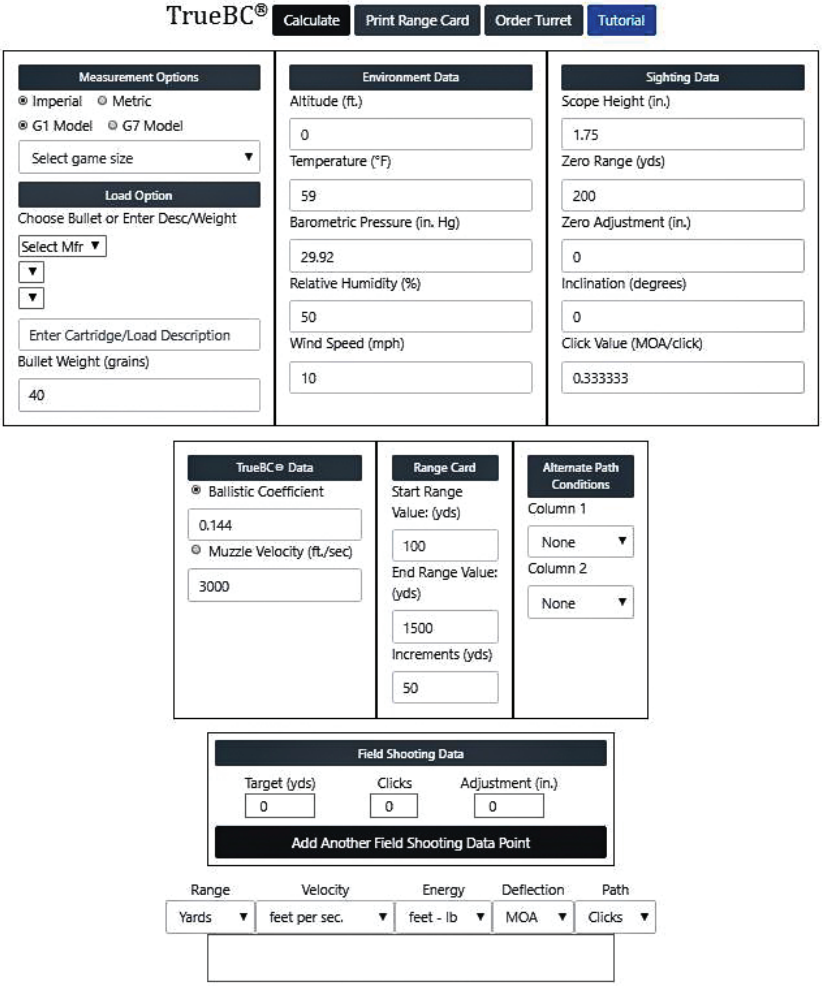
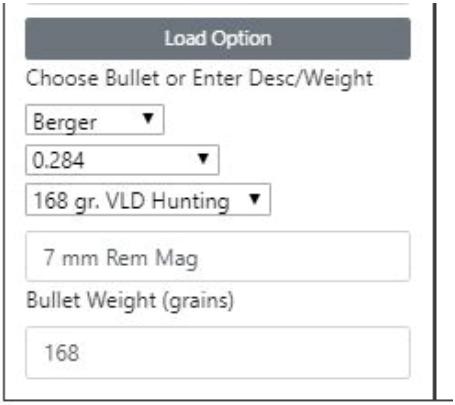


Figure 10. True BC Ballistics Form Example



Enter the appropriate information as needed. Refer to the diagrams below for further explanation, and watch the instrucional video on the web page.

Figure 11. True Ballistics Load Data



LOAD DATA

Select your bullet from the list. If your bullet is not available, then enter your load description and the bullet weight. The manafacturer ballistic coefficient will be used in another section.

SIGHTING DATA

SCOPE HEIGHT - Number of inches from the center of bore to center of scope.

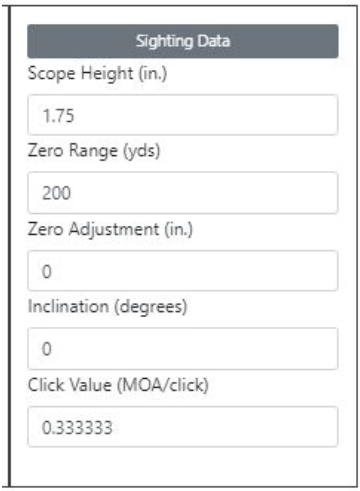
IMPACT RANGE - The range used to zero the rifle. Normally 200 yards works well.

IMPACT HEIGHT - The number of inches high or low off center of the zero.

INCLINE VALUE - The angle of incline when shooting.

CLICK VALUE - Enter the value in minutes of angle that each click of the turret equals.

Figure 12. Sighting Data



*NOTE: WHEN ALL OTHER DATA IS ENTERED THEN "CLICK" CALCULATE AT THE TOP RIGHT AND YOUR TRUE BC WILL BE CALCULATED.

ENVIRONMENTAL CONDITIONS

ALTITUDE - Enter the desired altitude the range card will be created for.

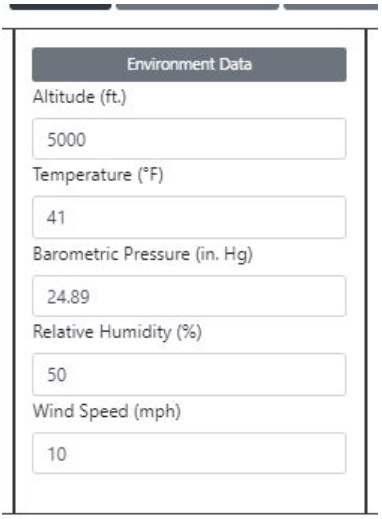
TEMPERATURE - Enter the desired temperature the range card will be created for.

PRESSURE - Enter the anticipated barometric pressure. Defaults to the mean.

HUMIDITY - Enter the anticipated humidity for the range card. Defaults to the mean.

WIND SPEED - Defaults to 10 mph, enter value here.

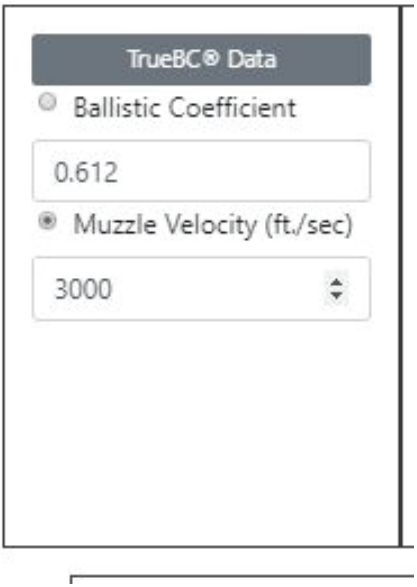
Figure 13. Environmental Conditions



"TRUE BC" PROGRAM

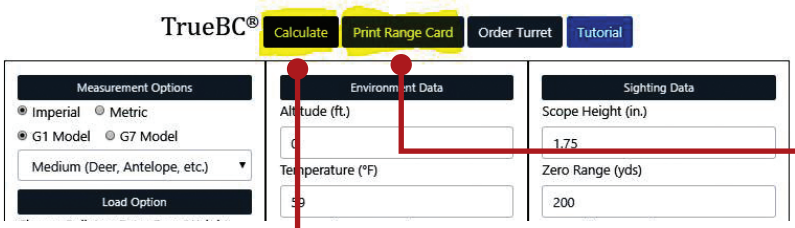
In the True BC Data Section the ballistic coefficient value will be retrieved for the selected bullet. If no bullet was selected, enter the manufacturer BC here manually. The same is true for the velocity it can and should be manually entered if not correct.

Figure 14. "True BC"Corrected Ballistics Coefficient



There are 2 charts to print off on this page: The RANGE CARD and a DROP CHART/ BALLISTICS CHART. The range card should be used to collect initial data that will be used to fill in the rest of the fields required on calculator to build your custom turret. Please see figures 15A and 15B for examples of Ballistics Chart and Range Card.

Figure 15A.- BALLISTICS CHART will form at bottom of page once "Calculate" button is clicked.



Range | Velocity | Energy | Deflection | Path
Yards | feet per sec. | feet - lb | MOA | Clicks

Range (Yards)	Velocity (fps)	Energy (ft-lb)	Wind Def. (MOA)	Path (Clicks)
100	2868.3	3068.6	0.4	3.5
150	2801.8	2927.9	0.6	2.2
200	2736.3	2792.6	0.8	-0.0
250	2671.8	2662.5	1.0	-2.7
300	2608.3	2537.4	1.2	-5.6
350	2545.7	2417.0	1.5	-8.8
400	2483.9	2301.2	1.7	-12.1
450	2423.0	2189.8	1.9	-15.6
500	2363.0	2082.6	2.2	-19.2
550	2303.8	1979.6	2.4	-23.0
600	2245.5	1880.6	2.6	-26.9
650	2187.9	1785.4	2.9	-31.0
700	2131.2	1694.1	3.2	-35.3
750	2075.3	1606.4	3.4	-39.7
800	2020.3	1522.3	3.7	-44.2
850	1966.1	1441.7	4.0	-49.0
900	1912.8	1364.6	4.3	-54.0
950	1860.4	1290.9	4.6	-59.1
1000	1808.9	1220.5	4.9	-64.4
1050	1758.5	1153.3	5.2	-70.0
1100	1709.0	1089.3	5.5	-75.8
1150	1660.6	1028.5	5.9	-81.8
1200	1613.3	970.8	6.2	-88.1
1250	1567.2	916.1	6.5	-94.6
1300	1522.3	864.3	6.9	-101.5
1350	1478.7	815.5	7.3	-108.6
1400	1436.4	769.6	7.6	-116.0

NOTE: DROP CHART/BALLISTICS CHART FIELDS IN RED TO SIGNAL QUESTIONABLE ENERGY AT EXTENDED RANGES

Figure 15B. - RANGE CARD
will form once "Range Card" button is clicked.
This will prompt a "pop up window" with a sheet for you to print off and write your data collection on.

9/10/[illegible] [illegible]

Range Card / Data Collection Sheet

Entered Values:	168 gr. VLD Hunting		
Sight Height:	1.75	**Range Data**	
Weight:	168	Velocity	_____
Bullet Coefficient:	0.618	Altitude	_____
Velocity:	3000	Temp.	_____
Wind Speed:	10	Pressure	_____
Zero Range:	200	Humidity	_____
Zero Drop (in):	0	Far Target Range	_____
Click Value:	0.333333	Clicks	_____
Altitude:	0	Inches	_____
Temperature:	59		
Pressure:	29.92		
Humidity:	50		
Incline:	0		
Maximum point blank range:	375		
Maximum point blank zero:	318		
Range at maximum height:	176		

Range (Yards)	Velocity (fps)	Energy (ft-lb)	Wind Def. (MOA)	Path (Clicks)
100	2848.4	3026.1	0.5	3.6
150	2772.1	2866.1	0.7	2.3
200	2697.0	2713.0	0.9	-0.0
250	2623.2	2566.6	1.2	-2.7
300	2550.7	2426.5	1.4	-5.8
350	2479.3	2292.6	1.7	-9.0
400	2409.0	2164.5	2.0	-12.5
450	2339.9	2042.0	2.2	-16.1
500	2271.9	1925.0	2.5	-20.0
550	2204.9	1813.3	2.8	-24.0
600	2139.1	1706.6	3.1	-28.2
650	2074.4	1604.9	3.4	-32.5
700	2010.8	1508.0	3.8	-37.1
750	1948.4	1415.9	4.1	-41.9
800	1887.3	1328.4	4.4	-46.9
850	1827.4	1245.5	4.8	-52.2
900	1768.8	1166.9	5.1	-57.7
950	1711.6	1092.6	5.5	-63.4
1000	1655.9	1022.7	5.9	-69.5
1050	1601.7	956.8	6.3	-75.8
1100	1549.1	895.0	6.7	-82.4
1150	1498.3	837.3	7.1	-89.4
1200	1449.3	783.4	7.5	-96.7
1250	1402.2	733.3	8.0	-104.3
1300	1357.1	687.0	8.4	-112.4
1350	1314.3	644.3	8.9	-120.8
1400	1273.8	605.1	9.4	-129.7
1450	1235.7	569.5	9.9	-139.0
1500	1200.1	537.2	10.4	-148.8

The following explains fields/columns of range card and chart:

RANGE-

Will be in yards or meters.

DEFLECTION/WIND-
MOA minutes of angle, clicks , or inches based on the click value entered in the sighting data section.

PATH-
MOA, clicks, or inches
For the purpose of collecting data for the BDC Turret set the path to clicks.

When any alternate path options are selected, additional columns will be added using the path unit of measure.

NOTE: The initial range card is printed for estimation only. Once the steps are followed to obtain the true ballistic coefficient the range card will be accurate and should match your click values.

Now that you have all the data to get your custom BDC Turret refer to the example below on what is going to be needed before calling in or going to our website. An example of the data needed to get an BDC turret engraved would look like the following.

Scope Sn#	BD52-00000
Load Description	7Rem168VLD
Zero Range	200 Yd Zero
Mfg G1 BC #	.617
Muzzle Velocity	2950
Altitude when Data Collected	3150
Temp when Data Collected	62 Deg
Mid Range Clicks	13clicks@400.28@600
Far Range Clicks	46clicks@800,67@1000

MANUAL DATA SHEET

To get your custom RFBC turret info to Huskemaw please visit our website at huskemaw.com or call us at Huskemaw optics 866-754-7618.

EXAMPLE- Desired Turret Specifications

A. 2,000' - 60°
B. 6,000' - 40°
C. 10,000' - 20°

DUAL STACK INTERLOCKING BDC TURRET

The patented dual-interlocking turret reveals a second turret underneath for another load, environmental condition or second revolution. Outer turrets can be calibrated for local shooting while the inner turrets could be built for hunts far away from home. The turrets are all windage enabled and can be engraved for different elevations and environments eg; 2000', 6000' and 10,000'.

There is 2000' coverage above and below each set elevation and 20 degrees F above and below each set temperature environment. Dual stacked turrets can also be engraved for different bullets/loads, continuous revolutions for extremely long range shooting, MOA, meters or a blend of the above.

Figure 16.
DUAL STACK INTERLOCKING BDC TURRET

US Patent 9,366,502

So essentially one double stack turret can handle shooting environments from 4000' to 12,000' and temperature from 10 to 70 degrees.

Please see note on page 20 about installation of dual stack turret.

INSTALLATION OF THE BDC TURRET

Once the data has been collected and submitted for your Custom BDC turret it can then be laser engraved and shipped to you. After receiving it turn the factory data collection turret to zero and remove the retaining screw while not rotating the turret. Remove the data collection turret and replace it with your brand new BDC turret aligning the 200 yd mark or your predetermined zero mark at the same location the zero was at. Test your zero at the range and if needed adjust accordingly. Now you are ready to push your Huskemaw towards its true potential. Now hold your crosshairs dead on to make the perfect shot.

Figure 17. Dialing the BDC Turret from 200 to 725 yards

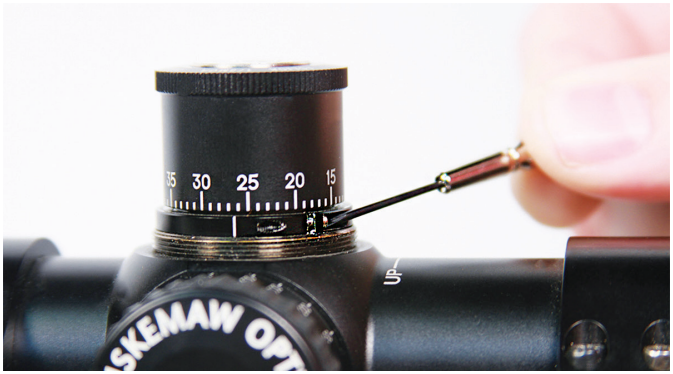
SETTING YOUR ZERO INDEX RING

Located directly below your BDC yardage turret (The Blue or Black) will be a black ring that will screw up and down on threads. This is the Zero index ring and will allow easy reset of your yardage turret if needed. To set this follow these easy steps. After data is collected and BDC turret is received and installed be sure that it is zeroed at 200yds. Next take the provided screwdriver that came with the scope and loosen the very small screw on the side of the zero index ring (if needed) then move only the black zero index ring up (counterclockwise)until it kisses the bottom of the turret. After that rotate the zero index ring away from the turret clockwise 1/4 turn to align the very next white line with the 200 yard zero line. Tighten snug the small screw in the zero index ring to keep it there. At this point the turret should turn 5-10 clicks clockwise past the 200 yard line then stop. After the turret stops rotate it back counterclockwise until the white line on the zero index ring

CAUTION: Do not over tighten zero index ring screw or tighten turret against zero index ring.

*NOTE: A portion of the dual stack turrets are slightly taller than a single stack. The result is the dual stack tightens against the zero index ring. Please call us and we will explain the process for resetting your zero index ring.

Figure 18. Setting Your Zero Index Ring



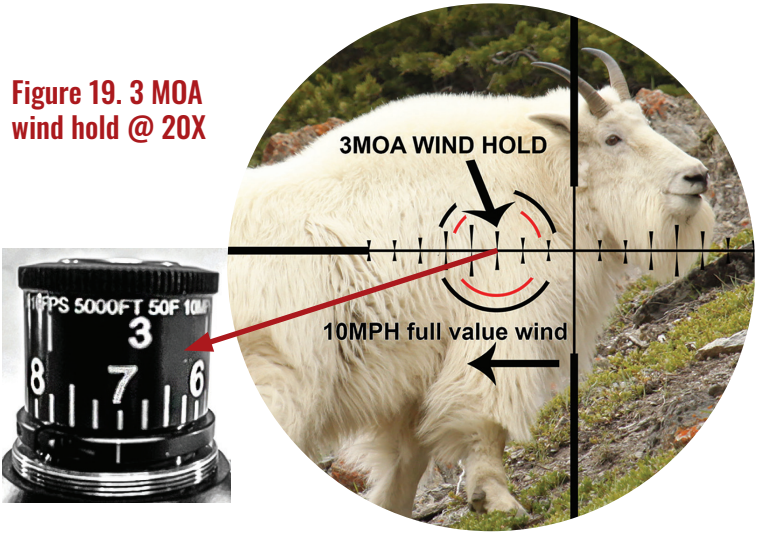
WIND HOLD COMPENSATION U.S. PATENT 9,366,502

Understanding how wind can and does affect the flight of your bullet is key to effective long range accuracy. This subject is very broad and requires more detailed information than we can provide in this manual. We have provided an overview in the next segment titled – Doping The Wind. Huskemaw has produced a DVD "How To Dope The Wind Beyond Belief" that provides extensive information on the science and techniques needed to compensate for wind in field conditions.

Your Huskemaw rifle scope comes equipped with our Hunt Smart Reticle and after your data is collected, a custom BDC turret. This system is the fastest and most accurate method available for wind compensation. Your Huskemaw turret is the only turret in the industry that can legally have wind compensation engraved on the turret (patented). To compensate for wind, you must adjust the turret for the known distance to target, evaluate crosswind velocity and value. The lower set of numbers is your distance to target and the upper set is the corresponding wind hold numbers based on MOA for a 10 mph full value wind.

Figure 19 represents an actual field scenario, so let's lay it out. The mountain goat is broad-side at 700 yards, wind is 10 mph full value blowing from right to left. The turret is dialed to 700 yards, your wind hold is indicated as 3 moa or the 3rd mark on the horizontal plane of the hunt smart reticle. If the wind was 5 mph halve the hold and 20 mph double the hold. Quick, easy and very precise.

Figure 19. 3 MOA wind hold @ 20X



DOPING THE WIND

Extreme range shooters spend their time studying wind, not drop charts. Wind speed and direction are the only variables that cannot be directly measured. The Huskemaw technology allows very rapid and precise compensation using a method of wind bracketing. This method is outlined below, and allows ethical one shot kills past 700 yards in windy conditions.

With this wind compensation technology, you are only required to bracket your cross-wind velocity as 5, 10, 15, and 20 miles per hour. This requires two determinations. First, you can estimate the total wind speed, then you need to determine the value of that velocity that is traveling across your line of fire.

Determining wind speed takes practice. A wind meter will help you to learn the 5, 10, 15, and 20 mph brackets. As you estimate a speed, view the movement of vegetation and dust, then use the wind meter to measure. Repeated practice will allow quick adjustments for changing wind conditions in the field without using the wind meter. A 5 mph wind will be felt distinctly on your face, with vegetation (leaves, grass, etc.) stirring continuously. A 10 mph breeze will raise dust and blow around loose paper, seeds, etc. A 15-20 mph wind will cause small trees and bushes to sway with varying intensity.

To determine the amount of wind that is blowing directly across your line of fire, use the simple wind rosette multipliers to correct for wind direction. For example, a 10 mph wind from 10 to 4 o'clock, multiply by .85 for a 8.5 mph cross wind.

Finally, with practice, mirage can be used as a true value wind indicator. To see the mirage adjust your scope to Max Power or 20X and manipulate the parallax adjustment

to focus on the mirage instead of the target. A straight up or boiling condition is not wind, see graphic below for mirage appearance and corresponding value. Mirage is handy, but like all methods of wind doping, only practice will allow satisfactory field use. For a comprehensive understanding of wind compensation look into purchasing our video "How to Dope the Wind BEYOND BELIEF".

Figure 20. Wind Rosette

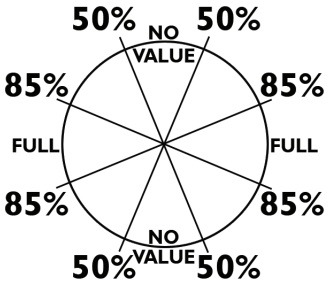
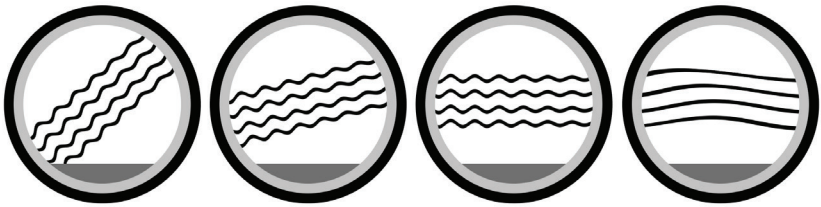


Figure 21. The appearance of mirage and relative wind speed.



5mph wind value - 10mph wind value - 15mph wind value - 20mph wind value

RANGE FINDERS AND FIELD APPLICATIONS

The advancement in technology of affordable rangefinders has opened the door to ethical long range applications for the discriminating hunter. When choosing a brand and model, get the most user friendly and basic model that meets your distance requirements. Most range-finders will consistently range about ¾ of their advertised distance. i.e. – Model 1600 will typically range 1,600 in the most favorable conditions, 1,200 in decent conditions and any one's guess in rain and/or snow. Reflectivity of the target is also a consideration.

We suggest ranging your target animal a minimum of 3X and then range above and below to help validate your range. The process of ranging and ultimately acquiring a correct range is greatly enhanced with practice and becoming familiar with all functions. Obtaining the correct range is the weakest link in your ability to make a long range shot. This is especially true in flat sage/grassland type country.

Make sure your range finder is set for yards, not meters, if your turret is based on yards.

Huskemaw Additional Tips and Techniques

HUSKEMAW QUICK RULES

A. 1 click at 1,000 yards, ½ click for 750 yards for each 1,000 feet elevation or 20° F temperature change from data on turret based on a higher BC bullet
B. Higher elevation, hotter temperature = click down
C. Lower elevation, colder temperature = click up
D. Angle Compensation – valid for both up angle and down angle shots

10° - 2%	30° - 15%
20° - 7%	40° - 25%

USING YOUR RETICLE AS A RANGING AND MEASURING TOOL

The Huskemaw Hunt Smart Reticle can be used as both a distance indicator and measure-ment tool in the field. The first step is to understand MOA and the various sub-tensions in your reticle. This method should only be used as a backup in the event your rangefinder is not functional. An example is outlined below: Size of target in inches ÷ MOA (reticle sub-tensions) or 18" Deer ÷ 3MOA = 6 X100 = 600 yards. Go to the scope specifications in Section 3 for sub-tensions or to huskemawoptics.com for a complete sub-tension schematic of your exact scope and reticle model.

WHY WE USE ⅓ & ½ MOA CLICKS

The advantage of using ⅓ moa clicks is you get 20 moa adjustment in one revolution of the turret. If we used ¼ moa clicks we would only get 15 moa adjustment in one revolution. All the Huskemaw scopes currently available utilize ⅓ moa per click with the exception of the 1-6X24 Tactical which has ½ moa per click. An example of the reality of ½ moa clicks is as follows: ½ moa click will move point of impact 5.024" at 1,000 yards. This in turn equates to the fact that your nearest click can be off no more than one-half of 5.024 or 2.51" at 1,000 yards from the center of the reticle.

VERIFYING YOUR SCOPE POINT OF IMPACT

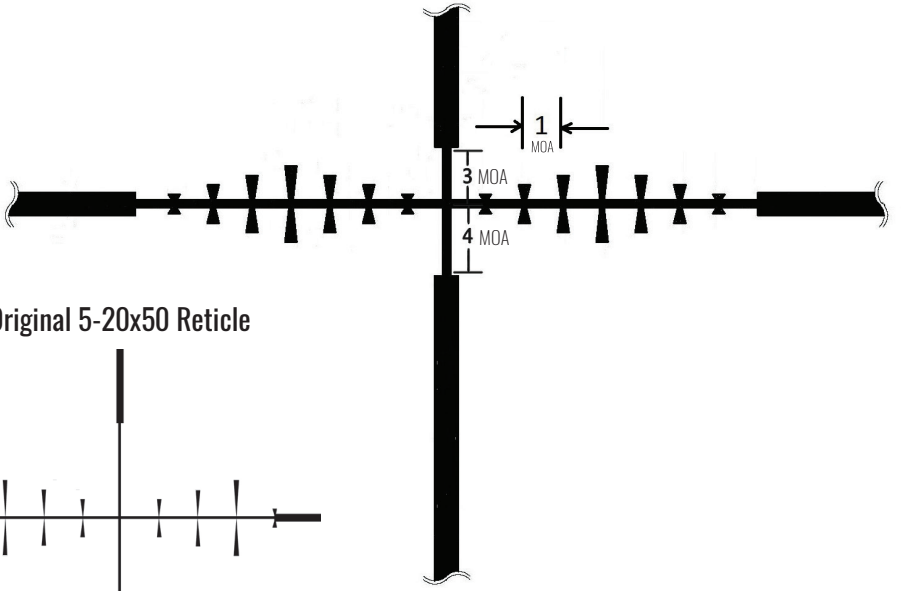
Upon arriving at your hunting/shooting location it is time well spent to prove the rifle and scope system. Range an inanimate target at 500+ yards. Dial the BDC turret to the distance and test fire with a spotter. Make necessary adjustments as needed for a precise hit at that distance. This process not only validates your turret, it also builds mental confidence in your ability to make the shot.

BLUE DIAMOND 5-20X50

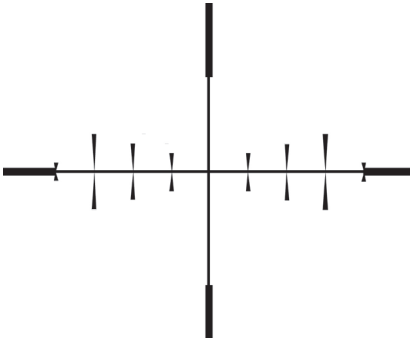
Our flagship scope is tried and true. It's simple yet highly efficient design has revolutionized the hunting industry by enabling customers to double their effective shooting range. It was the first scope to incorporate the ballistic compensating turret with the simple, yet powerful wind hold HuntSmart reticle

Magnification	5X-20X
Eye Relief	4 Inches
Focal Plane	Second
Overall Length	13.56
Weight	26.6 Ounces
Tube Diameter	30MM
Objective Lens Diameter	50MM
Eyepiece Diameter	43MM
Max Mounting Length	5.6 Inches
Field of View @ 100	17.9ft-5.2ft
Click Value	.333 MOA
Adjustments Per Revolution	60 Clicks/ 20 MOA
Maximum MOA Adjustment	75 MOA
Exit Pupil Size	10MM-2.5MM

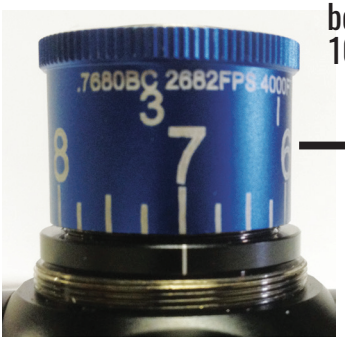
FIGURE 22. BLUE DIAMOND 5-20X50 RETICLE



Original 5-20x50 Reticle



In this example the amount of wind hold would be 3 Minutes of Angle at 700yds. Based on a 10mph Full Value Wind @Max Power



Wind Value

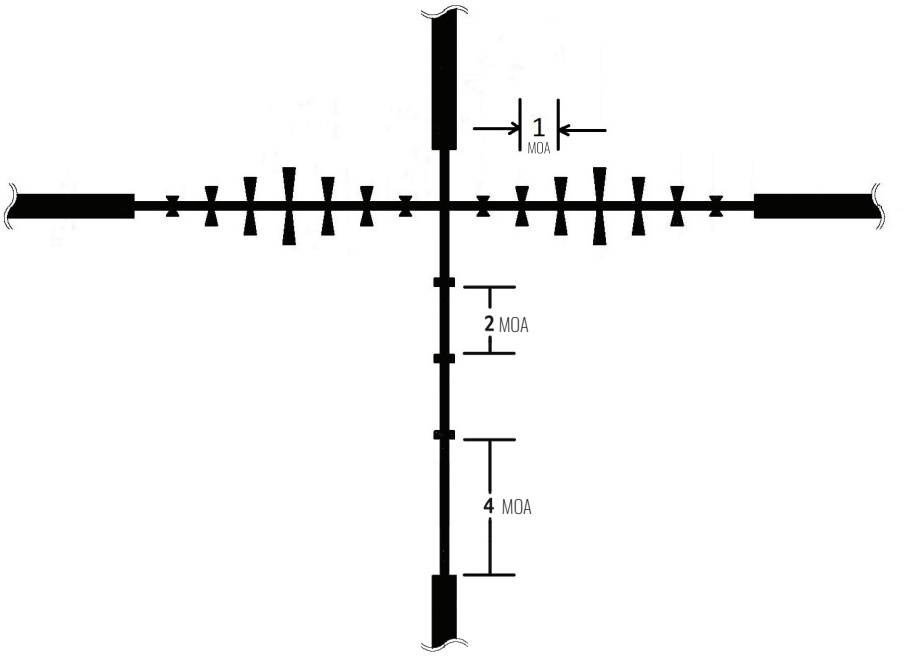
The Wind Values for the BDC Turrets are in Minutes of Angle.
Refer to the diagram for the Values for your 5-20 Blue Diamond at Max Power or 20x.
8 MOA wind hold reticle.

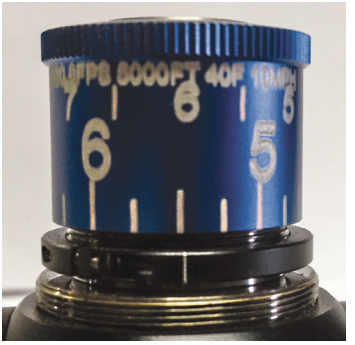
BLUE DIAMOND 4-16X42

The best of both worlds can be had with the 4-16! Light enough to pack, yet powerful enough to deliver precision long range shots, this scope is a very well rounded choice. As with all Huskemaw scopes, the 4-16 incorporates the BD-High Definition lens coatings to deliver superior low-light perfomance.

Magnification	4X-16X
Eye Relief	4 Inches
Focal Plane	Second
Overall Length	13.6 Inches
Weight	22 Ounces
Tube Diameter	30MM
Objective Lens Diameter	42MM
Eyepiece Diameter	43MM
Max Mounting Length	6.6 Inches
Field of View @ 100	24.4ft-6.3ft
Click Value	.333 MOA
Adjustments Per Revolution	60 Clicks/ 20 MOA
Max.MOA Adjustment	95 MOA
Exit Pupil Size	10.5MM-2.625MM

FIGURE 23. BLUE DIAMOND 4-16X42 RETICLE





In this example, the amount of wind hold would be 6 Minutes of Angle at 550yds. Based on a 10mph Full Value Wind @Max Power

Wind Value

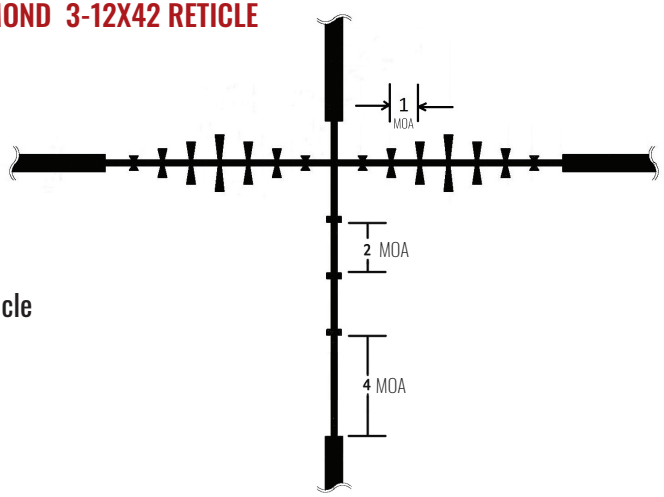
The Wind Values for the **BDC** Turrets are in Minutes of Angle.
Refer to the diagram for the Values for your 4-16 Blue Diamond at Max Power or 16x.
8 MOA wind hold reticle @16x.

BLUE DIAMOND 3-12X42

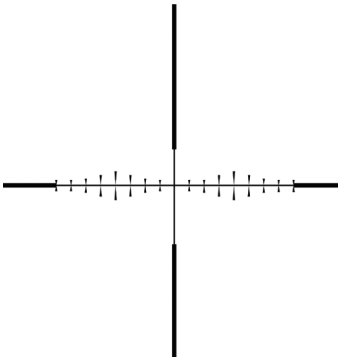
A value priced optic with exceptional performance, the 3-12 rifle scope has all the features of the 5-20 but in a low profile, lighter weight version. The 3-12 is absolutely the right scope for lighter applications, smaller calibers, muzzleloaders and tactical rifles.

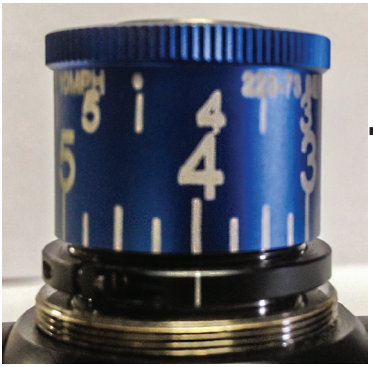
Magnification	3X-12X
Eye Relief	4 Inches
Focal Plane	Second
Overall Length	13.6 Inches
Weight	21.1 Ounces
Tube Diameter	30MM
Objective Lens Diameter	42MM
Eyepiece Diameter	43MM
Max Mounting Length	6.6 Inches
Field of View @ 100	35ft-8.7ft
Click Value	.333 MOA
Adjustments Per Revolution	60 Clicks/ 20 MOA
Max. MOA Adjustment	95 MOA
Exit Pupil Size	14MM-3.5MM

FIGURE 24. BLUE DIAMOND 3-12X42 RETICLE



Original 3-12x42 Reticle





In this example the amount of wind hold would be 4 Minutes of Angle at 400yds, based on a 10mph Full Value Wind @Max Power

Wind Value

The Wind Values for the **BDC** Turrets are in Minutes of Angle.
Refer to the diagram for the Values for your 3-12 Blue Diamond at Max Power or 12x.
8 MOA wind hold reticle @12x.

TACTICAL 5-30X56

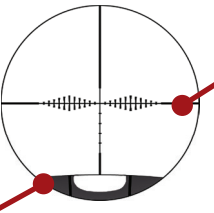
The Tactical 5-30x56 offers the highest magnification in the Huskemaw Optics lineup and is another revolutionary product in long range hunting. The dual-interlocking turret reveals a second turret underneath for another load, environmental condition or second revolution, capable of over 100 MOA's of adjustment. This scope also features an internal bubble level.

Magnification	5X-30X
Eye Relief	4 Inches
Focal Plane	Second
Overall Length	14.4
Weight	35.3 Ounces
Tube Diameter	34MM
Objective Lens Diameter	56MM
Eyepiece Diameter	43MM
Max Mounting Length	6.4
Field of View @ 100	18.1ft-3.3ft
Click Value	.333 MOA
Adjustments Per Revolution	90 Clicks / 30 MOA
Max. MOA Adjustment	90 MOA
Exit Pupil Size	11.2MM-1.86MM

FIGURE 25. TACTICAL TACTICAL 5-30X56 RETICLE AND INTERNAL BUBBLE LEVEL

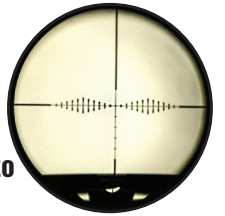
Patented Dual Stack Interlocking Turrets

The patented dual-interlocking turret reveals a second turret underneath for another load, environmental condition or second revolution. US Patent 9,366,502

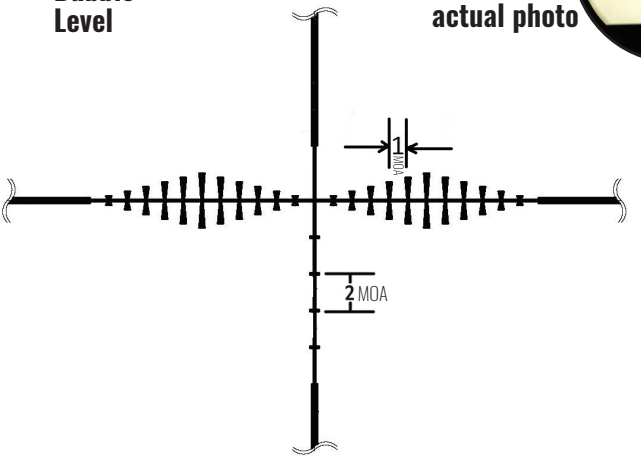


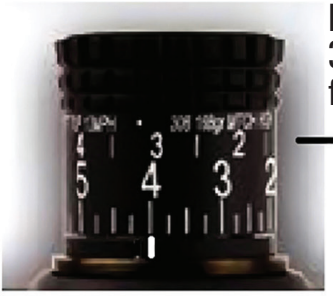
12 MOA Hashmarks

Internal Bubble Level



actual photo





In this example, the amount of wind hold would be 3 minutes of angle at 400yds. Based on a 10mph full value wind @ max power

Wind Value

The Wind Values for the **BDC** Turrets are in minutes of angle. Refer to the diagram for the values for your 5-30 tactical at max power or 30x.

12 MOA wind hold reticle @30x.

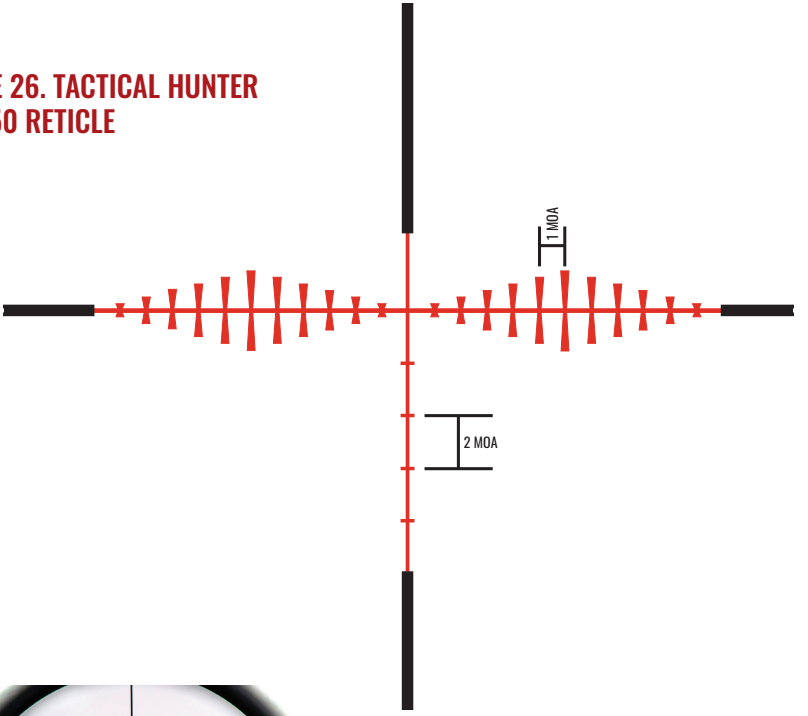
The newest addition to the Huskemaw Tactical lineup combines a 50mm objective lens from our flagship 5-20x50 Blue Diamond with some of the tactical features of the 5-30x56, making it a great optic for both tactical and hunting applications.

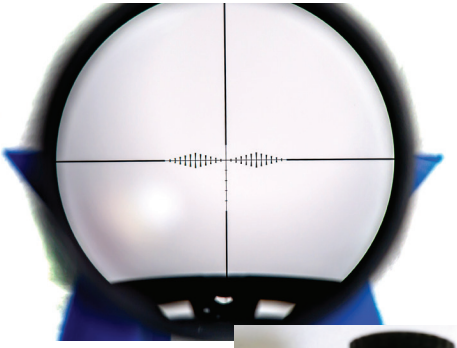
The Tac Hunter 5-20 uses Schott F2 glass with the highest level of multi-coated lenses for exceptional light transmission and high refraction index. The 12 MOA partially illuminated reticle has 10 levels of intensity to expand low light functionality. Simply put, this rifle scope performs well in low light conditions.

The 34mm main tube enables 110 MOA vertical adjustment and 70 MOA horizontal adjustment. The patented dual stack interlocking turrets allow for 30 MOA in each revolution and can be customized for MOA, yardage, or meters (or a combination these) for an endless amount of possibilities!

Magnification	5X-20X
Eye Relief	4 Inches
Focal Plane	Second
Overall Length	14.25
Weight	31.4 Ounces
Tube Diameter	34MM
Objective Lens Diameter	50MM
Eyepiece Diameter	43MM
Max Mounting Length	6.2
Field of View @ 100	17.9ft-5.2ft
Click Value	.333 MOA
Adjustments Per Revolution	90 Clicks / 30 MOA
Max. MOA Adjustment	110 MOA
Exit Pupil Size	10MM-2.5MM

FIGURE 26. TACTICAL HUNTER 5-20x50 RETICLE



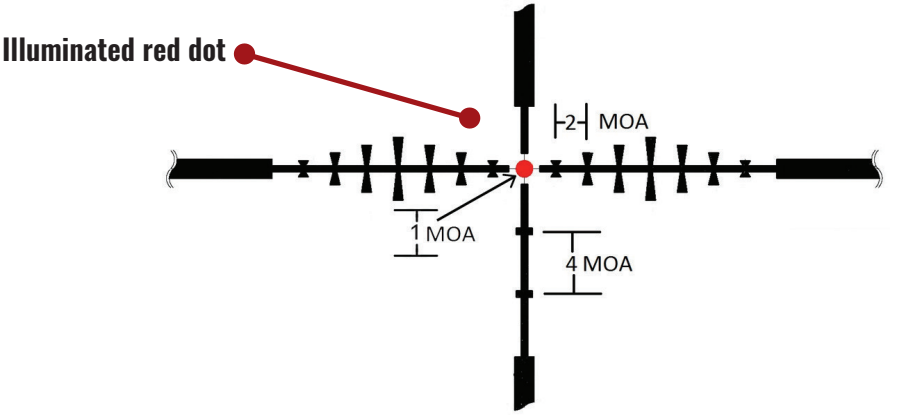


DUAL STACK TURRETS ALLOW FOR 30 MOA PER REVOLUTION AND CAN BE CUSTOMIZED FOR ANY COMBINATION OF MOA, YARDAGE, OR METERS.

This Huskemaw product is the most versatile compact optic on the planet. The 1-6 Tactical scope not only serves as an excellent option for tactical, law enforcement and sport shooters; it also makes a great choice for hunters in a variety of applications. In addition to the hunt smart reticle, this scope features an illuminated red dot with 5 intensity settings each and a power off between each setting.

Magnification	1X-6X
Eye Relief	4 Inches
Focal Plane	Second
Overall Length	10.8
Weight	19.4 Ounces
Tube Diameter	30MM
Objective Lens Diameter	24MM
Eyepiece Diameter	43MM
Max Mounting Length	6.2 Inches
Field of View @ 100	113ft-18.8ft
Click Value	.5 MOA
Adjustments Per Revolution	60 Clicks/ 30 MOA
Max MOA Adjustment	120 MOA
Exit Pupil Size	24MM-4MM

FIGURE 27. TACTICAL 1-6X24 RETICLE



In this example the amount of wind hold would be 3.25 Minutes of Angle at 300yds. Based on a 10mph Full Value Wind @Max Power

Wind Value

The Wind Values for the **BDC** Turrets are in Minutes of Angle. Refer to the diagram for the Values for your 1-6 Tactical at Max Power or 6x.

8 MOA wind hold reticle @6x.

BD BINOCULARS 10X42

After 3 years of field testing from sea level to 12,000 feet, Huskemaw rolled out a superb offering in a light-weight, compact package. The BD-high density lens coatings deliver extreme clarity and light transmission. Functionality and durability are built into every pair of the HO 10x42 HD binoculars.

Length	5.6"
Weight	24.6 oz
Objective Diameter	42 MM
Field of View	6.5 degrees
Focus Min-Max	2 YDS - infinity

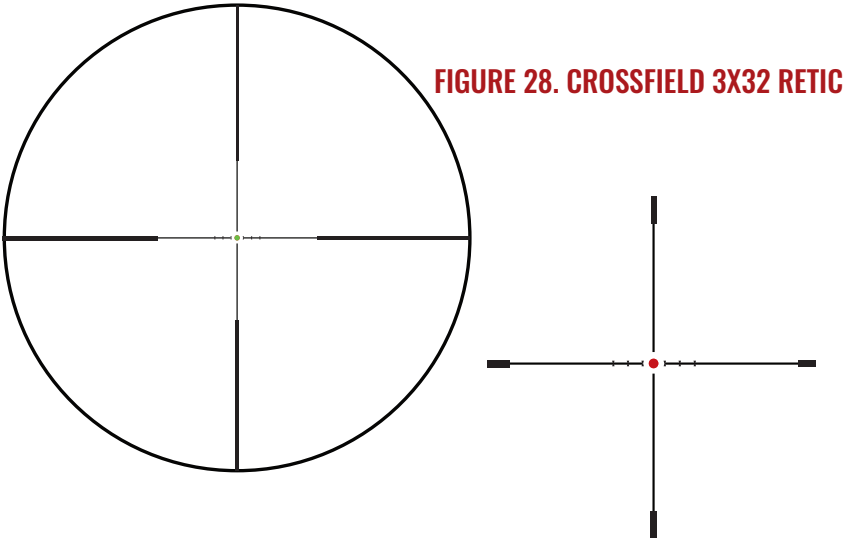


FIGURE 28. CROSSFIELD 3X32 RETICLE

Huskemaw Optics Crossfield is a fixed power 3 x 32 Scope that features a calibrated ADC turret to precisely match the trajectory of your high-speed crossbow at extended ranges. High definition image resolution and multicoated lenses provide premium light gathering for bright, sharp images. The illuminated red or green center dot has varying levels of brightness. The rugged construction is shockproof, waterproof and fog-proof for solid performance in the most challenging conditions.

Magnification	3x
Eye Relief	3.5 in
Focal Plane	Second
Overall Length	9.4 in
Weight	17.2 ounces
Tube Diameter	30mm
Objective Lens Diameter	32mm
Eyepiece Diameter	34mm
Max Mounting Length	4.6 inches
Field of View @ 100	21 ft
Click Value	1 MOA
Adjustments Per Revolution	60 clicks / 60 MOA
Max MOA Adjustment	180 MOA

THERE ARE 3 OPTIONS TO GET YOUR CROSSFIELD MOUNTED AND DATA COLLECTED FOR A CUSTOM TURRET BUILT JUST FOR YOUR CROSSBOW!

OPTION 1: COLLECTING DATA WITH DROP DATA TURRET

SECTION 1. MOUNTING SCOPE TO CROSSBOW

A. Set your rings on the scope rail. Tighten nut to 30 inch lbs.
B. Place the scope in the rings.
C. Install the top rings. Verify scope is level. Adjust to proper eye relief. Tighten screws in a crossing pattern to 25 inch lbs.
D. Lift up crossbow, verify you have it set to maximize your field of view.

SECTION 2. SETTING ZERO STOP

A. Loosen set screw on Zero Stop (with screwdriver provided) and screw to the bottom, then lightly tighten.
B. Adjust turret Up or Down, to get your turret in the middle.
C. Shoot crossbow at 10 yards from target to verify impact.
D. Make corrections for impact.
E. Shoot at 20 or 30 yds to establish "ZERO". Make corrections up or down until established.
F. Once zero'd, loosen top silver turret screw, lift off turret, reset with 0 facing you. Tighten screw (hand tighten) then loosen zero stop screw and adjust up until Turret Tab stops on the Zero Stop Tab, then tighten zero stop screw.

SECTION 3. DATA COLLECTION (CUSTOMIZED TURRET) DOCUMENT DATA AS COLLECTED

A. Move back to 30yds, dial up 3-6 clicks to verify 30 yds. If high or low, dial in to range.
B. Move back to 40yds, dial same number of clicks, verify and dial in 40 yds.
C. Move back to 50yds, dial in same number of clicks, verify and dial in 50 yds.
D. Move back to 60yds, dial in same number or 1 extra, verify and dial in 60 yds.
E. Move back to 70yds, dial in same number of clicks plus 1 or 2 if needed. Dial in 70 yds.
F. Use same method to continue to maximum yardage based on one full revolution.
G. Email in turret info to contact@thebestofthewest.net

SECTION 4. INSTALLATION OF TURRET

A. Once turret is made and received, loosen top screw.
B. Remove data collection turret. Be careful not to lose ZERO position.
C. Install new yardage turret utilizing appropriate mark on zero stop ring.
D. Tighten screw(hand tighten, snubbed slightly with coin).
E. IF the tab on the new turret is in a different spot than on your blank turret, loosen and adjust zero stop up to make them meet (assure zero position).
F. Now you are ready to check ZERO and shoot for distance.

OPTION 2: ARROW SPEED/WEIGHT TURRET

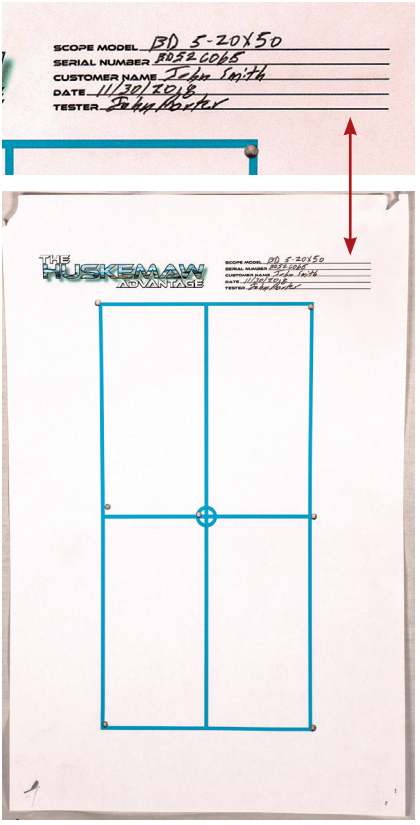
A. Order Huskemaw crossbow scope.
B. Give us the grain weight of bolt and broadhead.
C. Give us the speed in FPS of your crossbow.
D. Give ZERO range to start from.
E. Once received install scope and establish ZERO, Per Section 1 and 2
F. Then onto **SECTION 4: INSTALLATION OF THE TURRET.**

OPTION 3: SCOPE MOUNT JOB

If you don't have the time or the range, send in your crossbow with at least 6 bolts and the correct weight field points for data collection. Data collected to 100 yds +
NOTE: The Huskemaw Crossfield scope is the latest product offering from Huskemaw. We have provided 2 methods for you to gather your own data for Huskemaw to build a customized turret matching the trajectory of the arrow from your crossbow. The collection of actual drop data is naturally the most precise, especially beyond 50 yards. The method utilizing crossbow speed and arrow weight is also precise, just not quite as refined. This is a choice we leave to you the consumer. Thank you for your business and we encourage you to look further into our full rifle scope line, binoculars, and accessories.
Please call us with any questions you may have! 1-866-754-7618
www.huskemawoptics.com

HUSKEMAW RETURNED SCOPE TESTING PROCEDURES

ARE YOU HAVING PROBLEMS WITH YOUR HUSKEMAW OPTIC? PLEASE CONSIDER THE SCOPE TEST BELOW BEFORE RETURNING YOUR SCOPE UNDER WARRANTY REPLACEMENT.



The following is the process for testing a returned Huskemaw Rifle scope. We are a company that prides itself on customer service and back our products 100%. Of the returned scopes we receive, 88% of those scopes test out with no problems. Unfortunately, when a rifle begins to shoot erratically, most owners immediately blame the scope. Many variables can change your scope/rifle point of impact. Please consider the following before sending your scope back: loose actions screws, loose rings and/or bases, copper build up in your barrel, lack of or poor bedding, ammunition variances and barrel heat. If in fact your scope tests with a problem, we will immediately send a refurbished scope (or new scope depending on availability).

FIGURE 28. SCOPE TEST EXAMPLE - 50 yard box test

HUSKEMAW'S STANDARDIZED SCOPE TESTING PROCEDURES

When we receive a returned scope, we run it through a gauntlet of tests to pinpoint what the problem may be:

1. Visual check looking for any damage that may inhibit functionality.

2. Scope placed in Collimator and tested for both vertical and horizontal tracking in a grid pattern based on the click value of the scope.
3. Scope is mounted on an accurized BOTW Sig Series 7 Rem Mag and preparations in place to test under recoil for tracking and point of impact changes.
4. Scope is then shot in a graduated box pattern at 50 yards. This process involves 10 actual shots.
5. If the scope passes ALL of the above testing procedures, the customer is contacted and the scope returned.
6. A picture of the 50 yard box test will be provided.

This test can be performed by Huskemaw Technicians, or we can walk you through an at-home test. Please call us at 307-587-2787 to discuss your options.

WARRANTY AND REPAIR

If your Huskemaw product fails to perform in any way please contact a Huskemaw Representative to determine if the problem can be solved without returning the product.

PLEASE FOLLOW THESE STEPS WHEN GETTING READY FOR A RETURN:

- Call Huskemaw at 866-754-7618 for an RMA
- Or email our warranty department at Warranty@thebestofthewest.net
- Remove all rings, covers or other accessories.
- Record the serial number and have it available.

SHIP TO
Huskemaw Optics 115 W. Yellowstone Ave
Cody, WY 82414 Attn. Warranty Repair

CONDITIONS OF WARRANTY:
All Huskemaw Rifle Scopes provide a lifetime warranty. The warranty is subject to the following conditions:

- Huskemaw Optics will repair or replace unit at our discretion.
- **PLEASE NOTE: Every returned scope is tested at our facility to isolate whether it is scope failure or failure elswhere. If scope is found to perform as intended, we will return the scope to you. SEE STANDARDIZED SCOPE TESTING PROCEDURES above.**
- Claims under warranty are null and void if the defect has been because of improper handling or if the serial number has been obliterated.
- When submitting claims under warrantyplease return the Huskemaw Scope with a description of the claim to the Customer Service department of Huskemaw Optics.

RECORD OF PURCHASE

Serial Number:

Date of Purchase:

I cannot say enough good things about my BOTW Mountain Hunter shooting system with the Huskemaw scope. I have the 6.5 x 284 caliber and it consistently shoots 3/8" MOA at 200 yards and 1" MOA at 400 yards, which gives a guy a great deal of confidence. I took this ram at 378 yards and there was never a doubt that the shot would be good.

Jim Bernardin

I LOVE my Huskemaw 5-20x50 scope! It has lengthened my range dramatically. So far, I am able to hit a 9 inch metal target at 700 yards and it helped me to harvest my ram with ease at 415 yards.

Janice L. Anderson

Leo and Cari Goss traveled to the Yukon to hunt Dall sheep with Northcurl Outfitters and Mac Watson when they found this band of rams they followed them for 10 hours waiting for an opportunity to put a stalk on them and close the deal. With darkness closing in and 10 hours of Cari convincing her guide she could easily shoot 500 yards with her Huskemaw scope, Mac finally gave the green light and Cari delivered with a perfect 475 yard shot to anchor her beautiful ram, Leo quickly followed up on a heavy-broomed ram to complete the Dall double header.

CONGRATULATIONS!
YOU NOW HAVE

THE HUSKEMAW ADVANTAGE

- PATENTED* WINDAGE ENABLED RFBC TURRET THAT WORKS IN TANDEM WITH THE HUNT SMART RETICLE
  * US PATENTS 8,365,455 & 9,366,502
- ZERO INDEX RING
- 6 MODELS OF VARYING MAGNIFICATION RANGES
- ONE-PIECE SCOPE BODY INCORPORATING 30 MM OR 34 MM TUBE
- HIGHEST GRADE MULTI-COATED LENSES
- LIFETIME WARRANTY
- INTERLOCKING DUAL STACK TURRET NOW AVAILABLE
- SPECIALIZED CROSSBOW SCOPE

EVERY HUSKEMAW OPTIC IS OF EXCEPTIONAL QUALITY AND DESIGNED TO DELIVER THE BEST COMPENSATION

HUSKEMAW.COM | 1-866-754-7618 | CODY, WY