.338 NORMA MAG: LONG RANGE LETHALITY

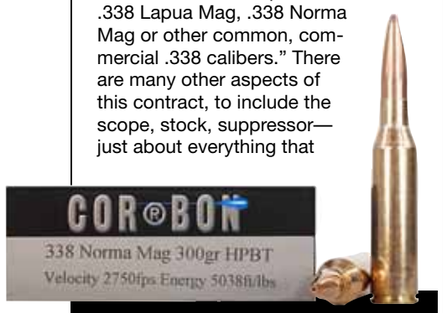
Ensuring future generations of military snipers are stoked for optimum performance!

DoD PHOTO

BY DAVID BAHDE

One of the true values of government contracts is the technology that is developed to meet them. The firearms industry is no exception. One needs to only look as far as the M16 to see the results of the government replacing a weapon system, which has spawned one of the largest sectors of the tactical firearms market. This has been true for almost every request the government has made when it comes to weapons, accessories, optics, or anything that goes on a weapons system.

The PSR contract is the government's submission for a Precision Sniper Rifle. Although the M24 and M40 are in inventory, a larger caliber rifle reaching out a bit farther was required, 1,500 meters to be exact. Current calibers, other than .50 BMG, run out of gas at 1,200 yards. What USSOCOM wanted was a rifle that could interdict soft targets out to 1,500 meters (1,640 yards). You needed a bigger bullet, and the original Draft Performance Specification issued in 2009 requested a .338 caliber variant. Under Type 4-n-PSR it states it is "caliber specific to .338 Lapua Mag, .338 Norma Mag or other common, commercial .338 calibers." There are many other aspects of this contract, to include the scope, stock, suppressor—just about everything that attaches to the system. But the bullet size at least was initially set. Since its inception the contract has continued to change a bit, but the current contract still requires the ballistics of the .338, and most likely a 300-grain bullet.

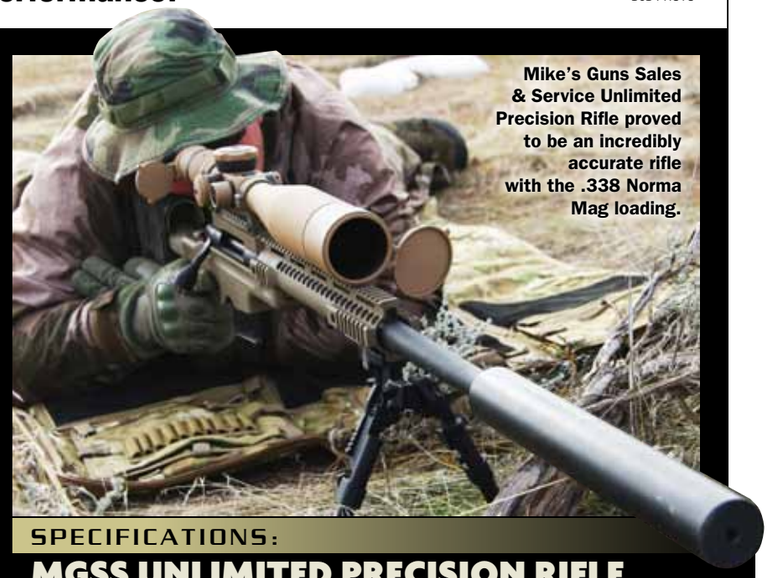


CorBon, known for its high-quality ammunition, makes an excellent .338 Norma load. As this load increases in popularity, more major manufacturers will likely bring it to the market.

A number of innovations in the long-range tactical rifle world—to include guns that switch barrels and calibers, folding stocks, and scopes—have come out of this.

.338 Norma Mag Cartridge

Having expended thousands of .338 Lapua Mag over the years, its capabilities are well known to me. Much of that time was spent at ranges between 1,000 and 1,500 yards. Most of the



Mike's Guns Sales & Service Unlimited Precision Rifle proved to be an incredibly accurate rifle with the .338 Norma Mag loading.

SPECIFICATIONS:

MGSS UNLIMITED PRECISION RIFLE

CALIBER:	.338 NORMA MAG
BARREL:	26 INCHES
OA LENGTH:	36.5 INCHES (FOLDED), 45.5 INCHES (EXTENDED)
WEIGHT:	15 POUNDS (EMPTY)
SIGHTS:	NONE SUPPLIED
STOCKS:	UPR FOLDING WITH AR PISTOL GRIP
ACTION:	REMINGTON 700 BOLT ACTION (LONG ACTION)
FINISH:	HARDCOAT ANODIZED
CAPACITY:	5+1
PRICE:	$4,250

MGSS Jet Suppressor is incredibly well built and performs as well or better than any .338 caliber suppressor on the market. The "bi-flex" design allows for solid suppression while adding less overall length to the barrel.

rifles used were the best you could get, built by top-notch builders consistently producing sub-inch groups at 300 yards. Four-inch groups at 1,000 yards were the norm. With the 300-grain Sierras 6-inch groups were common at 1,200 yards. Some time was spent at 1,500 yards and 15 inches or so was the norm; the best was around a foot. Fired on the ground with the rifle on a bag or bipod, they were indicative of real deployments.

The 250-grain bullets ran out of gas at 1,500 yards, and although the 300-grain custom loads at the time were better, they were not consistent. So, when the .338 Norma Mag was brought to my attention, it was time to test it out at some longer ranges. Earlier testing out to 600 yards indicated this was an accurate round, but it truly comes into its own, especially as compared to the .338 Lapua Mag past 1,200 yards.

Rifle Details

Mike Brown with Mike's Gun Sales & Service (MGSS) has built some incredibly accurate rifles for me in the past. He is also incredibly familiar with this caliber. A Remington 700 Long Action was sent to him and soon returned in a platform that was commensurate with the PSR contract. It is placed in his new UPR (Unlimited Precision Rifle) stock—a drop-in stock made from a solid billet of aluminum. It has adjustments for length-of-pull and cheekweld, with one of the most solid folding mechanisms around. Locked in place you might as well be shooting a fixed stock. The forend supports night vision or any other attachment. Utilizing the AICS magazines provides a reliable feeding and rugged magazine. The barrel is a 26-inch M24 contoured barrel in a 5R configuration. It was contoured to accept the Jet Bi-flex suppressor already in my inventory. This was an early prototype, built like a tank, quiet, and has proven to be incredibly consistent. The rifle uses a tactical bolt knob as well as a side-activated bolt release. The scope base was designed at the request of some military operators to protect the internals from the dust and dirt they were encountering in the desert. It is a true representation of what could be submitted for the PSR contract.

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The .338 Norma Mag is optimized for the 300-gr. SMK bullet. The change in case length and allows for proper seating and maximum use of the appropriate powder in the longer bullet.

Two different scopes were used for testing. The first is an old 3.2-17x U.S. Optics scope that has been on my long-range rifles for years. The early testing at 100 to 600 yards was done with this scope. The long range shooting was completed with the U.S. Optics PSR scope. This is representative of the actual scope they submitted for the scope portion of the PSR contract. It is a 5-25x scope using a 34mm tube and 56mm objective. It is a side-focus first focal plane scope with the Premier Gen 2 XR reticle installed. The adjustments are in mils for both elevation and windage. Both the windage and elevation knobs also include a zero stop feature and hard clicks at 1 Mrad, something that is becoming the standard for military and law enforcement scopes.

The loads were homegrown. Having used Black Hills .338 Norma ammunition it was excellent, and CorBon now has a load as well, so it is not that factory ammunition is not available. It is just this was a test of the caliber not the ammunition. Loading it myself just removed one factor from the equation. For this load Norma Brass was used with the Sierra 300-grain BTHP over 90.5 grains of Ramshot Magnum powder and Winchester Large Magnum primers, with an overall length of 3.602 inches. It makes 2,750 feet per

Black Hills Ammunition has been the leader when it comes to factory ammunition. They have been producing excellent load designs specifically to meet PSR requirements. From 1,500 yds, the author was able to shoot a 8.25" group.

The .338 Norma produces some of the best accuracy possible from a .338 magnum. Author produced this 4.45" group from 1,200 yards.

second (fps) at the muzzle. All of the testing was done with new brass and loaded to as close to exact match standards as it is possible for me to do. The rifle was tested in temperatures ranging from -5 degrees to 50 degrees over the course of a few months.

Short Range

In my experience at least this caliber tends to like 300 yards as much as it does 100 yards. It is not uncommon for me to get better groups at 300 yards. It is also the range this rifle will be zeroed at. It is however easier to start zeroing at 100 yards so that is where things began. After break-in and zeroing the scope it was group time. The best group produced measured 0.29 inches from center-to-center, so it seemed my load was certainly good as well as consistent.

Moving to 300 yards the accuracy was still excellent. This combination consistently grouped at right about 1.25 inches at this range, with my best at 1.17 inches.

(continued on page 89)

The UPR stock manufactured by Mike's Guns is ergonomic, solid as a rock and has one of the best folding mechanisms available.

U.S. OPTICS PSR SCOPE Military-Grade Technology

BY DAVID BAHDE

Obviously the PSR contract is all about longer range, out to 1,500 meters, so this is a big scope. It is a 5-25x scope built on the U.S. Optics TPAL (Side Focus) platform using a 34mm tube and a 56mm objective. The reticle is a Premier Gen II XR reticle and is lighted using an operator-friendly push-button design—one is a simple on and off, while the others change the intensity. Set it and forget it if needed, as it remembers the last setting. The Premier Gen II XR reticle uses what is commonly called a "Christmas tree" design, providing for holdover and windage hold using the reticle. It is very fast and allows for excellent second-shot accuracy.

KNOBS

The elevation knob is a large EREK knob with .10 Mrad clicks. At each single Mrad there is a "hard" detent, which allows you to feel each adjustment so finding your elevation in the dark or with gloves is really easy. It also uses a zero stop feature that allows you to simply turn the knob back until it stops, returning to zero. The windage knob is also graduated in mils with a windage stop that provides for 5 mils in either direction. This also makes it easy to return to zero and prevent over-adjusting for windage.

LENS

The ocular lens is a low-profile design with power adjustments that move without moving your scope cover. The rapid-focus eye adjustment allows you to quickly focus the reticle to your eye. It is a side focus scope removing parallax out to the longest ranges. The objective is fitted with the honeycomb light diffuser to protect the user from being spotted due to lens glint. It accomplishes the task without occluding as much light as many of the others do. Coated in Cerakote, this scope is tested to 66 feet in total saltwater submersion.

It is rugged, repeatable, very ergonomic and incredibly clear and precise. It is the perfect mating to your well-tuned precision rifle, especially if it takes you out to the longer ranges. All of U.S. Optics scopes are built one at a time as per your order and all of these features can be added. If you are looking for the top-of-the-line in a 5-25x scope, take a good look at U.S. Optics—you will probably like what you see. Find out more by calling 714-582-1956 or visiting usoptics.com

(continued from page 69)

Given more time at this range it may come down. That is still holding at well under .5 MOA so it is about as accurate as I can shoot and was holding consistently for range.

Long Range

All the testing was done from prone, with a bipod from a drag bag. All in all, well over 100 rounds were expended at these ranges. Once the proper elevation and windage was established at 1,200 yards, 5-shot groups were fired to gather some consistency. A 4x8 target backer with a standard NRA bullseye on it was used. Consistent 5- and 6-inch groups were the norm at 1,200 yards, with the best group measuring 4.45 inches.

The real fun begins at 1,500 yards. Consistent 12-inch groups were the norm. The best, however, was an impressive 8.25 inches. This was completed on a sunny 50-degree day with no wind, and probably a good chunk of luck, but it was there for sure.

Wrap Up

The idea here was to see if the Norma out-paced the Lapua at 1,500 yards. For me it did. Starting at 1,200 yards my groups were tighter and more consistent and even better at 1,500 yards. This not news, as many military shooters have pointed this out and most every operator I have talked to prefers the Norma. It was good to see it for myself though.

If opinion and anecdote were the only criteria for the PSR contract, the .338 Norma would be a no brainer—but logistics issues, cost, and compatibility with NATO play into this. From a pure ballistics standpoint and from the view of a long-range shooter it does perform very well at extreme range, and in my experience better than the Lapua Mag. As a side benefit the UPR stock was excellent as was the optic. It has excellent functionality as a police tactical rifle stock. The 25x scope is a bit much for me, but it can be had in 17x with all the same goodies, again, as shooters we all win. Who knows how the whole PSR contract will work out, but if this system is any indication of where it is going the real winners will be the military snipers that deploy them, and nothing could be more important than that! SW

FOR MORE INFORMATION

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U.S. OPTICS
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READING THE WIND

BY EDUARDO ABRIL DE FONTCUBERTA

DoD PHOTO

A Marine sergeant utilizes a Kestrek device to measure wind direction, elevation, barometric pressure and wind estimates, and then relays those measurements to the pilots of the KC-130J Super Hercules cargo airplanes.

For most long-range rifle shooters the biggest percentage of misses are due to bad windage corrections. Most of the times for not having proper wind tables and a wind value to work with. Even having those two, you are only estimating the true wind along the bullet path, so you may miss the first round. Without wind data, the chances are that you will miss one round after the other.

WINDMETERS

There are two basic families of wind meters, the directional and the omnidirectional. Most military and tactical models are of the directional, type like the Kestrel family, and most competitive target shooters use omnidirectional models such as the Kaindl Windtronic 2.

Why is there a difference—are they both not supposed to be reading the wind for a rifle shot? Well, there is a subtle difference. The omnidirectional type will not give you the direction of the wind, just the wind vector value. Nothing will give you wind changes as quick as a Windtronic 2 on a pole over your shooting position, but it will not display the direction it comes from. The reason for this is that competitive shooters get the direction indication from the wind flags along the range and their goal with the windmeter is reading wind intensity and wind strength changes accurately.

Military snipers have a completely different set of requirements for the same shot. They need to know wind intensity just the same as competitive shooters, but as they do not have wind flags they get the direction by orienting the meter to the wind and getting a maximum value. That will be the wind direction.

MILITARY WEATHER STATIONS

Some advanced military weather stations such as the superb Kestrel 4500NV, the standard for military snipers, can be mounted on a vane equipped platform installed on top of a small tripod. That combines with its digital compass to give the shooter the actual wind component that is affecting the shot. Just by pointing towards the target and getting an azimuth reading, the 4500NV will do the math and display the wind component.

This feature is awesome, so why is it not the windmeter of choice for top competition shooters? The Kestrel 4500NV turns around with the wind, oriented by its tripod mounted vane, so you may end up looking at the back of the Kestrel windmeter, unable to see the display.

Now you know the type of windmeter that will better suit you depending on your needs, just remember that most Kestrel top models are also full featured weather stations too, and some even have Bluetooth to send data to your ballistic computer. It may seem nothing more than a gizmo, but I found that it gave me a capability I never had before. Just by placing the tripod mounted Kestrel 4500NV-BT a few yards away from me on a suitable spot, or on a tree, I could get the weather readings directly on my LoadBase 3 ballistics software while being still and stealthy on my sniper hide.

No matter what windmeter you end up buying, buy it thinking ahead. If you need the extra weather station information buy a Kestrel 4500 and if you only need a wind meter get a Windtronic 2 at a lesser price, and save some bucks. Do not buy an "el-cheapo" unit as I did years ago, as you will end up buying the "good" one later. As in most things in life, quality comes at a price and Kestrel and Kaindl are the two companies most shooters and snipers trust their shots to.

FOR MORE INFORMATION CONTACT:

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