

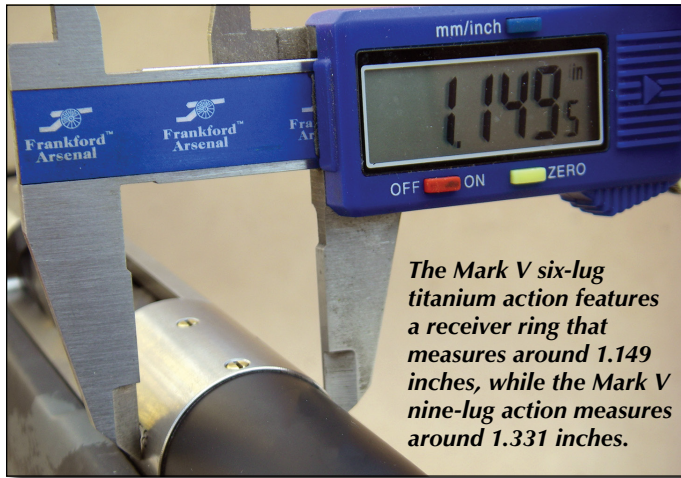
Weatherby's New Mark V Backcountry Ti



Brian Pearce

Weatherby has been busy in the past couple of years, which has resulted in a trim new Mark V Backcountry Ti rifle that weighs less than 5 pounds, and when combined with the company's new 6.5-caliber cartridge it is a great combination for open country hunting. In addition to being a complete departure from previous

Weatherby cartridge designs, the 6.5 Weatherby Rebated Precision Magnum (RPM) offers practical performance, respectable barrel life and the accuracy sought after by many hunters and shooters. With the company under the direction Adam Weatherby, grandson of Roy Weatherby, operations have been moved from Paso Robles, California, to Sheridan, Wyoming, a much friendlier environment for manufacturing firearms and ammunition.



The Mark V six-lug titanium action features a receiver ring that measures around 1.149 inches, while the Mark V nine-lug action measures around 1.331 inches.



The 6.5 Weatherby RPM case (right) has slightly less powder capacity than the .264 Winchester Magnum (left). Note the 35.25-degree shoulder angle of the 6.5 RPM.



The 6.5 Weatherby RPM (right) is based on a "stretched" 6.5-284 Norma case (left).



Weatherby is currently offering the Mark V in nine-lug (left) and six-lug (right) variations, with the 6.5 Weatherby RPM being built on the latter.

During World War II, Roy Weatherby (1910-1988) began experimenting with wildcat cartridges in an effort to reach greater velocities than provided by ordinary sporting cartridges. Most of his cartridges were based on the .300/.375 H&H Magnum belted case and necked accordingly. Each featured a rather unique double-radius shoulder design that is controversial; however, all cartridges offered significant powder capacity and reached new levels of velocity.

By 1945 Weatherby borrowed a large sum of money and began building custom rifles and producing ammunition on a full-time basis. While early rifles were built on 1903 Springfield, Winchester Model 70, FN commercial Mauser 98 and other actions, by 1957/58 Weatherby had designed his own action known as the Mark V. It was unique and featured nine locking lugs, 56-degree bolt lift (now 54-degrees), a countersunk bolt face, rotating extractor (push feed system), two position bolt

mounted safety and many other features. One of its virtues was its outstanding strength, and it was soon advertised as "The World's Strongest Action."

Early manufacture was in California, but production was soon moved to West Germany, with J.P. Sauer & Sohn producing rifles from 1959 through 1971, with some being imported as late as 1973. From 1971 through 1995, Howa Machinery in Japan produced the Mark V.

Beginning in 1995, production was moved to the state of Maine. However, soon after moving headquarters from Atascadero to Paso Robles, California, Mark V production was moved back to that state. As indicated, today the Mark V is produced in Wyoming. While Weatherby collectors love early Mark V rifles, the fact is that with each of the above production moves, the rifles were improved in design and quality, making them more reliable and accurate.

Shooting the 6.5 RPM Cartridge

Weatherby's New Mark V Backcountry Ti



The safety is a two-position design.

Roy Weatherby preferred what he referred to as a “handsome” and “nice rifle,” and this was the foundation of his business and was appealing to many hunters, shooters and collectors. By his definition, this translated into a rifle with a wood stock, preferably with beautiful grain and high luster finish, cut checkering patterns, contrasting forend caps and pistol grips (usually from rosewood), white line spacers, high polish blue finish, etc. For anyone wanting a true custom rifle, the Weatherby Custom Shop could accommodate any practical feature from highly figured walnut with ivory inlays to engraving with silver, gold and even diamond inlays. As Roy’s son Ed Weatherby joined the business, he brought new ideas, including rifles with a synthetic stock. Roy opposed the idea, as he considered them homely and felt that their customer base would much rather



The rifle features a threaded barrel that comes standard with a recoil-reducing brake and thread protector.

have a “nice rifle.” However, Ed moved forward with his ideas, and the Mark V Fibermark appeared in 1983 and became an instant success. In the decades since, the product line has been expanded extensively to include many synthetic stock variants, stainless steel, etc., that serve to satisfy today’s hunters and rifleman.

This brings us to the new Mark V Backcountry Ti that features a six-lug action with a notably smaller receiver ring than the traditional nine-lug Mark V. For comparison, the six-lug receiver ring measures 1.149 inches in diameter while most nine-lug versions measure around 1.330 inches. The six-lug action also features a notably smaller bolt body while the countersunk bolt face is suitable for cartridges featuring a rim diameter of .473 inch, such as the .30-06 and others, but it cannot accommodate cartridges on the larger belted magnum case. The bolt lift remains 54 degrees.

As its name indicates, the Mark V Backcountry Ti features a titanium receiver mated to a spiral-fluted steel bolt body; a combination that results in the action and complete bolt assembly weighing a mere 1.125 pounds (without trigger assembly). For comparison, the standard steel Mark V nine-lug action weighs 2.18 pounds. The fluted barrel is 24 inches long and is threaded, with both a “thread protector” and “brake” furnished as standard. Outside barrel diameter at the muzzle is .548 inch. Total rifle weight is 4.9 pounds when chambered for the 6.5 Weatherby RPM. In addition to the Backcountry Ti, a steel version is also offered at less cost. As standard equipment, a TriggerTech trigger is installed and broke cleanly at 3.1 pounds right out of the box.

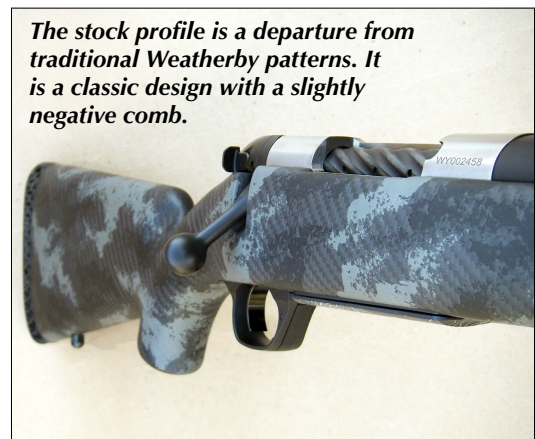
While titanium has a reputation of being difficult to machine, modern techniques and tooling allow much more precise cuts and minimize galling and high



The Backcountry Ti features a hinged floorplate with an etched topographical map.

parts rejection. To help prevent coining, a condition wherein titanium peens from head thrust and high pressure and can cause headspace to become excessive, the bolt assembly and locking lugs are constructed of high tensile chrome-moly steel that is CERA-KOTE finished.

The Backcountry stock profile is a distinct departure from traditional Weatherby configuration. For example, from the very beginning Weatherby rifles have been primarily fitted with Monte Carlo style stocks, although there have been a few variants fitted with traditional classic style stocks. The Backcountry stock is a classic design without a cheekpiece. However, like so many modern hunting rifles designed to be fired from a variety of positions, including prone, the stock features a slightly negative comb, and rather than a Weatherby pattern square forend tip, it is rounded. My only real criticism of the stock includes the 3D Hex recoil pad that seems overly hard; however, since the recoil of the 6.5 Weatherby RPM is modest, this is something of a moot point.



The stock profile is a departure from traditional Weatherby patterns. It is a classic design with a slightly negative comb.

Overall, the stock is trim, lightweight, comfortable and features a 13 $\frac{1}{2}$ -inch length of pull.

The lightweight stock is reported to be manufactured by AG Composites and is constructed of carbon fiber using manufacturing methods that result in a desirable combination of strength and weight. It is finished in a unique gray, distinguishing sponge pattern. The barrel channel provides free floating of the barrel.

Several years ago, while hunting with Adam Weatherby and another employee, I suggested they develop a new 6.5 cartridge. We discussed my ideas, including ballistics and if the new cartridge should fit a short action length (2.810 inches), standard length (3.340 inches) or the long action (3.600 inches). I could tell by the conversation that they were holding their cards closely, so to speak. Soon thereafter, the fast 6.5-300 Weatherby Magnum was introduced and is advertised to push a Barnes 127-grain LRX at 3,531 fps, a Swift 130-grain Scirocco at 3,476 fps and a Swift 140-grain A-Frame at 3,395 fps. While this cartridge has been popular, it provided greater velocity, powder capacity and barrel wear than I wanted.

This brings us to the 6.5 Weatherby RPM advertised to push a Barnes 127-grain LRX bullet at 3,225 fps or a Nosler 140-grain AccuBond at 3,075 fps, which delivers all of the ballistic performance I originally had in mind. It is based on the 6.5-284 Norma case, but stretched with a case length of 2.570 inches and an overall cartridge length of 3.340 inches (the same as the 30-06). While the 6.5-284 Norma has a 35-degree shoulder angle, the 6.5 Weatherby RPM shoulder is 35.25 degrees. Water capacity measures 81.5 grains, which was checked by using a once-fired, full-length sized case with water filled level with the case mouth.

For readers who may not be familiar with this case, its roots go back to the .284 Winchester originally introduced in 1963 and designed specifically for the Win-



Factory 6.5 Weatherby RPM ammunition chronographed just under 3,000 fps using Nosler 140-grain AccuBond bullets.

chester Model 88 lever-action and Model 100 autoloading rifles. It was intended to duplicate the ballistics of the .270 Winchester and .280 Remington cartridges. However, it had an overall length of 2.800 inches and was a short-action cartridge. It featured a .500-inch head diameter, but the rim was rebated and measured .473 inch to permit correct function in the above rifles, which was the same as the .30-06. It was a “short magnum” that was way ahead of its time. Naturally, wildcatters soon necked it to 6.5 (and other calibers), which became a world-class long-range target cartridge. In 1999, Norma legitimized it by introducing the 6.5-284 Norma



Brian used a Leupold VX-3i LRP 6.5-20x50mm scope to test the new rifle and cartridge.

to the Commission Internationale Permanente (CIP) and began producing loaded ammunition. Its version, intended mostly for target work, has an overall length of 3.228 inches to achieve greater powder capacity and allow bullets to be seated out for top accuracy. As indicated, the 6.5 RPM is based on a lengthened 6.5-284 case and cannot be formed from any existing case.

Back in the day, I became fond of the performance of the .264 Winchester Magnum, but it had certain shortcomings. If memory serves correctly, it was originally

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The new 6.5 Weatherby RPM (right) is designed to function in standard .30-06 (left) 3.340-inch actions.

advertised to push a 100-grain bullet at 3,700 fps and a 140 grain at 3,200 fps, but real velocities from a 26-inch barrel were notably less. Today it is advertised to push a 140-grain bullet at 3,030 fps. The 6.5 RPM exceeds .264 ballistics while producing lower extreme spreads, greater accuracy, efficiency and longer barrel life. Due to its .473-inch rebated rim, it can be housed in the trim Weatherby Mark V six-lug action.

While the 6.5 RPM will not

Weatherby Backcountry Ti Specifications

Action: Bolt action, push feed, six lugs, 54-degree bolt lift
Receiver: Titanium
Cartridge: 6.5 Weatherby Rebated Precision Magnum
Capacity: Three rounds
Barrel: Fluted, CERAKOTE finish, threaded with protector and brake
Barrel Twist: 1:8, four grooves
Barrel Length: 24 inches
Safety: Two-position
Weight: 4.9 pounds
Stock: Carbon fiber, Gray Sponge pattern
Length of Pull: 13 $\frac{1}{2}$ inches
Trigger: TriggerTech; 3.1 pounds
MSRP: \$3,449

6.5 Weatherby Rebated Precision Magnum Handloads

bullet (grains)	powder	charge (grains)	overall loaded length (inches)	velocity (fps)			
120 Nosler Ballistic Tip	IMR-7828	62.0	3.330	2,976			
		63.0		3,022			
		64.0		3,082			
		65.0		3,145			
		66.0		3,195			
		67.0		3,258			
		64.0		3,330	3,011		
		65.0		3,051			
		66.0		3,100			
		67.0		3,159			
129 Hornady SST	H-1000	63.0	3.332	2,872			
		64.0		2,901			
		65.0		2,953			
		66.0		2,999			
		67.0		3,044			
		68.0		3,091*			
		63.0		3.332	2,912		
		64.0		2,958			
		65.0		3,011			
		66.0		3,071			
140 Nosler Partition	Retumbo	64.0	3.327	2,845			
		65.0		2,879			
		66.0		2,929			
		67.0		2,984			
		68.0		3,024			
		69.0		3,076			
		62.0		3.327	2,897		
		63.0		2,931			

(Continued)

outrun the .26 Nosler or 6.5-300 Weatherby Magnum, it will easily exceed the ballistics of the 6.5 Creedmoor, .260 Remington, 6.5-284 Norma and even the relatively new 6.5 PRC. It offers an excellent blend of velocity, moderate recoil and respectable barrel life.

The 6.5 RPM is the first Weatherby cartridge that doesn't feature a double-radius shoulder. Rather, its 35.25-degree shoulder provides positive headspace control and serves to increase efficiency. It is also noteworthy that while Weatherby has traditionally chambered its rifles with a comparatively long freebore, the 6.5 RPM features a more traditional length leade that places bullets closer to the rifling for greater accuracy.

To test the Mark V Backcountry Ti, a Leupold VX-3i Long Range Precision 6.5-20x 50mm scope was installed and features a first focal plane TMR reticle. This scope offers features sought after by modern hunters, including argon/krypton waterproofing. It's shockproof, features blackened lens edges, DiamondCoat 2 exterior lens coatings, click adjustments, side focus (side parallax adjustment), a tactical power selector and other enhancements. Due to its Twilight Max light management system, it offers outstanding resolution and definition. As this is written in the middle of hunting season, there are literally no "low" rings available in any of the stores in my region, so "medium"

(Continued)

6.5 Weatherby Rebated Precision Magnum Handloads

bullet (grains)	powder	charge (grains)	overall loaded length (inches)	velocity (fps)
140 Nosler Partition	RL-25	64.0	3.327	2,988
		65.0		3,025
		66.0		3,074*
	H-1000	61.0	3.327	2,815
		62.0		2,834
		63.0		2,859
		64.0		2,890
		65.0		2,917
		66.0		2,949
147 Hornady ELD Match	RL-33**	65.0	3.335	2,733
		66.0		2,758
		67.0		2,790
		68.0		2,833
		69.0		2,861
		70.0		2,891
	Magnum**	71.0	3.335	2,928
		63.0		2,759
		64.0		2,798
	RL-25	65.0	3.335	2,848
		66.0		2,887
		67.0		2,933
		67.5		2,955
		61.0		2,786
		62.0		2,831
		63.0		2,896
		64.0		2,942*

* Potentially most accurate with that particular bullet.

** Federal 215 primers

Notes: A Weatherby Mark V Backcountry Ti 6.5 RPM with a 24-inch barrel (1:8 twist) and Leupold VX-3i Long Range Precision 6.5-20x 50mm scope was used to test all loads. CCI BR-2 primers were used throughout except where noted. Bullet diameter: 6.5mm/.264 inch; maximum COAL: 3.340 inch; maximum case length: 2.570 inches; suggested trim to length: 2.560 inch.

Be Alert - Publisher cannot accept responsibility for errors in published load data. Listed loads are only valid in the test firearms used. Reduce initial powder charge by 10 percent and work up while watching for pressure signs.

Leupold QRW rings were used. While they worked fine, lower rings would have provided a better cheek weld. Even with a rather large 30mm main tube scope with a 6-20x variable along with steel rings, the total weight of the rifle was less than 7 pounds.

At press time, the only factory load available was the Nosler 140-grain AccuBond bullet at an advertised 3,075 fps, but it actually chronographed 2,969 fps. After initial sight in, four three-shot groups produced an average of just under an inch.

Next, the barrel was cleaned and development of handload data began. At the time of this writing there is no lab tested data available. However, I was able to cal-

culate beginning charge weights, which were then checked for pressure and performance, and charges were increased to near maximum. Ultimately, I was able to more or less duplicate 140-grain factory load performance using Nosler 140-grain Partition bullets pushed with Hodgdon H-1000, Retumbo and Alliant Reloder 25 powders. Using the two latter powders I was able to exceed factory load velocities by more than 100 fps. As can be seen in the accompanying table, additional bullet weights and powders were selected, including Hornady's 129-grain SST pushed to over 3,200 fps with 69 grains of Reloder 25 powder. Switching to the 147-grain ELD Match bullet, Alliant Reloder 33, Reloder 25 and

Ramshot Magnum each reached around 2,950 fps. This bullet features a high G1 ballistic coefficient of .697 and is certain to prove an excellent long range option. Most of the handloads proved capable of sub-MOA accuracy.

It should be noted that most handloads were developed with a CCI BR-2 Large Rifle primer, which produced adequate ignition with most loads. The exceptions were loads containing Reloder 33 and Ramshot Magnum powders, which were capped with a Federal 215 Large Rifle Magnum primer.

The Mark V six-lug action is designed to accommodate cartridge lengths up to 3.340 inches, so to maintain reliability in the magazine, overall loaded cartridge lengths had to be kept within that figure. Experiments were conducted with bullets seated out (when compared to listed lengths) to possibly improve accuracy. While there were accuracy increases, they were not significant.

Weatherby has developed a rifle and cartridge that are modern and are certain to be anxiously accepted by shooters and hunters. **R**

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