

Magnums

Still Going Strong

Current hype would suggest that belted magnum cartridges are obsolete, but wearing a belt isn't out of fashion quite yet.

By Craig Boddington
B&C Professional Member
Photographs courtesy of author

One advantage of using time-proven, popular cartridges is the array of factory loads—and, for handloaders, a rich legacy of load recipes.

Scene one: The doe stepped out of the still-dark trees, looking behind her. I peered through the maze of trunks and made out a dark form against the snow. He took his time advancing into the clearing. Long before he got there, through narrow windows of vision, I had taken a hard look at his antlers and made up my mind. When he was completely clear, I shot him carefully behind the shoulder. While I worked the bolt the big-bodied Saskatchewan whitetail dashed into the trees on the far side, collapsing at the limit of my vision.

Scene two: It was the eleventh morning of a ten-day hunt. The night before we had finally found a mature ram, but darkness caught us before we could close in. We pulled into the timber and shivered in saddle blankets through a long night. We found him again at midmorning, bedded. I set up on my backpack, then waited endlessly for the ram to rise. Eventually he did, offering a quartering shot at about 265 yards.

Scene three: My partner had climbed a high ridge to glass while I





These two cartridges are the most popular of the belted magnums, and among our most popular hunting cartridges.

7mm Remington Magnum

300 Winchester Magnum





watched the crossing. After a time I heard his shot, and I climbed up to help with the packing. I found him admiring a fine Quebec-Labrador caribou, but as I climbed I also spotted a huge bull in the next valley, bedded near the shore of a small lake. We left his caribou for a little while and made an approach. The wind caught us before I was ready, but the bull still dropped in his bed, and now we had a lot of work and a lot of packing to do.

In the first instance I was using a 7mm Remington Magnum; in the second, a .300 Weatherby Magnum; in the third, a .300 Winchester Magnum. Current hype would have us believe that the belted magnums we grew up with, as well non-magnum favorites like the .270 Winchester and .30-06, are as obsolete as the flint-tipped spear. Campfire arguments are fun, and new cartridges keep guys like me in business. But, truthfully, any of those shots could have been made with equal success with a wide range of cartridges. Belted, unbelted, magnum, non-magnum, 6mm to at least .375, provided I did my job none of these game animals would have known the difference. Nor would I.

Extra-large animals require a bit more power, and shooting in extra-open country is indeed simpler with extra-fast, flat-shooting cartridges. But for at least 90 percent of the hunting most of us do, there is a tremendous spectrum of suitable cartridges. I started reading gun magazines in the late 1950s and began my hunting career in the mid-1960s. At that time we were in the middle of "magnum mania," when every new cartridge wore a belt and carried the "magnum" suffix in its name. I bought into it. Like so many beginners I started with a .243, but it wasn't long before I upgraded to a .264 Winchester Magnum, and I thought

FROM THE TOP: Accuracy fanatics have long complained about the too-short neck on the .300 Winchester Magnum, but cartridge design is a fairly minor element in hunting rifle accuracy. This .300 Winchester Magnum made by Ray Riganian doesn't seem to mind the short cartridge neck. ■ Almost any of the magnums can be improved a bit by careful handloading, and with the belted magnums we have decades worth of load recipes to call upon. ■ The author used a Match Grade Arms .300 Winchester Magnum to take this excellent Quebec-Labrador caribou. The .300 Winchester Magnum is incredibly effective from a .30-06 length case; for very good reason it's one of our most popular hunting cartridges.

it was magic. Come to think of it, with teenage eyes and reflexes and no consciousness of how difficult shooting at game can be, it probably was magic!

Over time, things cooled down a bit. Many of us clung to our magnums, and many of us returned to our old non-magnum standbys. Then things changed again. In recent years we have seen an unprecedented rash of long and short fat-cased unbelted magnums, a new magnum mania rivaling that of a generation ago. It would appear that our belted magnums are now obsolete, and we'd best get to trading before the values of our rifles drop to nothing.

TO BELT OR NOT TO BELT

Because of the extreme costs of research and development, not to mention tooling, most cartridges are based on some previous development. The .30-06 spawned not only direct progeny like the .25-06, .270, .280, and .35 Whelen, but also the entire .308 Winchester family based on a shortened case. Holland and Holland's .375 H&H Magnum spawned the Super .30, the cartridge we know as the .300 H&H Magnum (and, to be accurate, several other H&H proprietary cartridges based on this case). Both the .375 H&H and the .300 H&H

became extremely popular. This meant not only availability of brass to tinker with, but also that the case-head diameter of .532-inch became fairly standard.

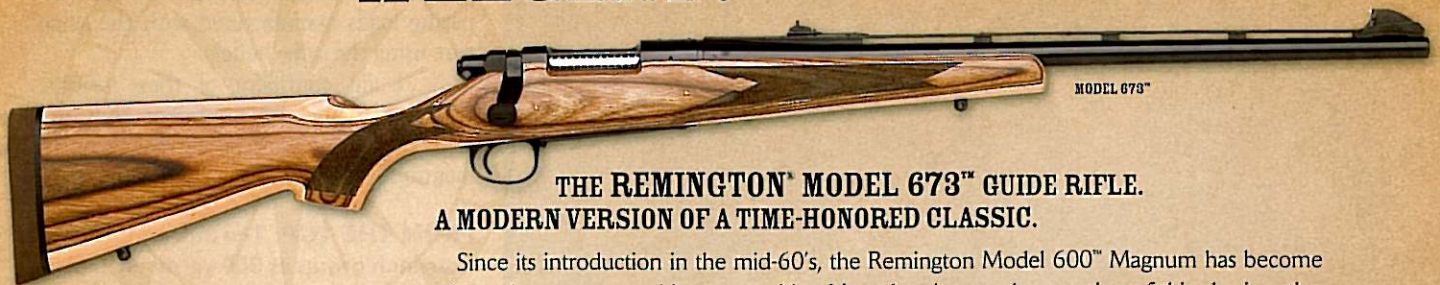
That long, tapered, relatively fat (compared to the .30-06) case was perfect for tinkering. With the exception of Weatherby's extra-small .224 and .240 Weatherby Magnums; and the company's extra-large magnums based on the .378 Weatherby Magnum case, until the new era of Ultra Mags, Short Mags, Short Action Ultra Mags, and Super Short Mags almost every cartridge we can think of that has been called a "magnum" has been based on Holland and Holland's basic .375 H&H case, introduced in 1912.

That case just happens to have a belt. Technically, it is a "belted rimless" case, meaning that the case has a rim-diameter belt of brass ahead of the extractor groove. Some older literature suggests that part of the purpose to the belt was to strengthen the case in the critical base area. Whether this is true or not, dozens upon dozens of high-pressure rimless cartridges have proven this unnecessary. Technically, however, what the belt does do is provide an index for headspacing, not much different than with rimmed cartridges like the .30-30 and .45-70.

This means that case-to-chamber fit can be a bit sloppy with unimpeded functioning—but accuracy will suffer if case-to-chamber fit is inconsistent. Bottlenecked rimless cartridges, like the .30-06 family and all the unbelted magnums, headspace on the shoulder of the case. This also means that case-to-chamber fit must be more precise, which is definitely conducive to better accuracy. This is one of the hypes surrounding the new unbelted magnums. It's true, except that its great fallacy is that case-to-chamber fit isn't necessarily sloppy in belted magnums, and definitely is not with properly loaded ammo.

I view it as an accident of history that, until recently, most of our high-performance cartridges happen to wear a belt. American gunmaker Charles Newton had a whole family of high-performance unbelted cartridges before 1920, but commercial success was limited. In Europe, Wilhelm Brenneke developed several high-performance unbelted cartridges, several of which remain popular in Europe today. By any standards these were all "magnums," but were not called such. The word "magnum" itself was taken from the French word for an extra-large bottle of champagne. Before the advent of smokeless powder, British

INSPIRED BY A LEGEND. DESTINED TO BECOME ONE.



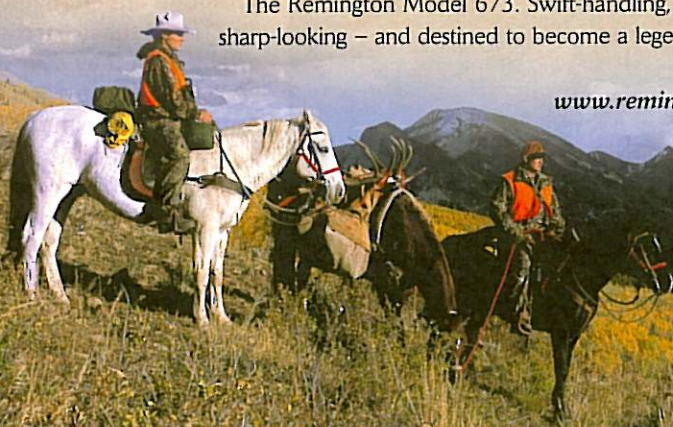
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600 YDS



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Winchester
Magnum

.270
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7mm
Remington
Magnum

7mm
Weatherby
Magnum

.300
Winchester
Magnum

.300
H&H
Magnum

.300
Weatherby
Magnum



**Belted
Magnums**
Still Going Strong

gunmakers used the term to describe a cartridge using a larger case on an existing bullet diameter. It was American marketing genius—and nothing more than marketing—that somehow linked the belted case to the magnum moniker.

Now, of course, they are trying to de-link it, which is a good thing. The belt has nothing to do with case strength or cartridge performance, and is not the only (nor the most precise) effective headspacing index, so it is superfluous. On the other hand, the belt does very little harm. The only real drawback I can think of is that it eats up unnecessary space in the magazine well or, put another way, actions perfectly sized for belted cases must be slightly larger and thus heavier than is really necessary.

ACCURACY

If you believe everything you read, it's easy to conclude that the new unbelted magnums based on fatter cases offer a certain path to enhanced accuracy. It is true that, because of more consistent ignition, cartridges that are shorter and fatter tend to be more accurate than cartridges that are longer and slimmer. It's no great secret that if you pitted ten .308 Winchester rifles against ten otherwise identical .30-06 rifles the .308s would probably win the accuracy race. By the same token, if you pitted ten .300 WSM or .300 RSAUM (Remington Short Action Ultra Magnum) rifles against ten otherwise identical .300 Winchester or .300 Weatherby rifles, the short magnums would probably average slightly smaller groups—provided, of course, you were comparing loads manufactured with the same care using the same bullets.

I am confident of these results. However, I am also confident that the difference would not be earthshaking in magnitude. And, in any such test group,

FROM THE TOP: The author fired this four-inch group at 600 yards with a Kenny Jarrett rifle chambered to the standard 7mm Remington Magnum.

■ These are just a few of many belted magnums from 6.5mm to .30 caliber. Although unbelted magnums are not "in," all of these cartridges are just as effective as they ever were, and remain well-suited for a wide variety of North American big game. ■ The author used a 7mm Remington Magnum to take this big-bodied Saskatchewan whitetail. The 7mm Remington Magnum is the most popular of all belted magnums, and for good reasons: It's flat shooting, versatile, and powerful enough for most North American hunting.

there would be individual rifles that defied the rules. This is because, while “inherent accuracy” of cartridge design is real, it is far from the most important component of rifle accuracy. Far more important are good barrels, precise chambering and crowning, proper barrel-to-action assembly, and good bedding. More important, too, is ammunition loaded well and consistently with good components.

A classic example is the .300 Winchester Magnum. In their efforts to wring the utmost velocity out of a .30-06-length case based on the fatter .300 H&H case cut to length and blown out, its designers gave it a relatively short neck. Cartridge design convention has long maintained that, to ensure a proper and consistent grip on the bullet during ignition, a neck length of more or less full caliber (for a .308-inch bullet, a neck length of .308 inches) is desirable. The .300 Winchester has a much shorter neck, and rifle-accuracy fanatics have complained about this since its inception in 1963. Okay, so its design isn't optimum. But it has a lot of powder capacity for such a short case, and because of this it's pretty darned fast. Rifles vary infinitely, but fans of the .300 Winchester Magnum will be quick to produce groups that defy the rules.

Maybe the .300 Winchester Magnum won't win benchrest matches, but we have all seen rifles in this chambering that were genuine tackdrivers—cartridge design be damned.

Come to think of it, the other factors are so much more important that fans of any given belted magnum can probably wave tight little groups in our faces. I have a Rifles, Inc. .300 Weatherby Magnum that will shoot sub half-inch groups all day long, and last year I shot a four-inch group at 600 yards with a Kenny Jarrett rifle chambered to the standard 7mm Remington Magnum. Start with a really good barrel, assemble the rifle correctly, feed it good ammo, and you will get accuracy almost regardless of what the case looks like. Perhaps that same barrel would shoot a bit better with a short, fat case designed for accuracy. Perhaps. But ultimate accuracy is elusive, and improvements are generally incremental and almost never exponential. And almost irrelevant if we're talking about hunting accuracy. Thus, all the belted magnums are capable of this when chambered in a decent rifle.

PERFORMANCE

The intent of this series of articles is not to be confusing. At the outset I recommended that different writers should discuss the

various classes of hunting cartridges. Depending on viewpoint and experience this may have been more or less confusing, but it would have saved me the great risk of seeming to contradict myself. Believe me, I'm trying not to. I like the new unbelted magnums. I don't buy them as a sugar pill for accuracy, but I like very much the performance levels they house in shorter, lighter, and more rigid actions. On the other hand, I have many old friends among the belted magnums I grew up with. And, if I had a third hand, as I grow older I often question the need for “magnum performance” at all.

But the real issue isn't whether you need a certain performance level. Rather, if you want it, and if it gives you more confidence, then you should have it. The various belted magnums based on the 93-year-old .375 H&H case are proven performers. Some are better than others. The .264 Winchester Magnum is somewhat overbore diameter, meaning the hole is a bit too small for the case diameter. Especially with the powders available circa 1960. There was a bit of blue sky in its initially published factory figures, and it needed a 26-inch barrel to achieve its potential. That didn't matter much to me in the mid-1960s. My initial .264 was a Remington with 24-inch barrel. I'd have

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been just as well off with a .270 Winchester, but I didn't know what I didn't know. That rifle gave me wonderful confidence, and the results showed it.

Most of the belted magnums that have achieved lasting popularity deliver real performance. Good examples are perennial favorites like the 7mm Remington Magnum, .300 Winchester Magnum, and .300 Weatherby Magnum—in order, the most popular of the belted magnums and among our most popular hunting cartridges. There are also some unsung heroes, specifically Weatherby's short magnum trio of the .257, .270, and 7mm Weatherby Magnums. The .257 and .270 Weatherby are, respectively, the fastest factory cartridges in their calibers. The .270 WSM comes very close to the .270 Weatherby, but does not equal it. The 7mm Weatherby Magnum, with a shorter neck, sharper shoulder, and less body taper, will run about 100 fps faster than the 7mm Remington Magnum. The .300 Winchester Magnum does very well from a .30-06-length case, but it cannot match the larger case capacity of the longer .300 Weatherby Magnum.

At some point you reach diminishing returns. This is what overbore capacity is really all about; you can fit more powder into the case, but you can't effectively burn it. Some of our magnums, both belted and unbelted, are definitely overbore capacity. The .264 was and is, and so are the 7mm STW and 7mm Remington Ultra Mag (RUM). So long as it isn't gross this isn't a huge problem, especially not with today's slower-burning powders. What it means is that powder selection is limited, longer barrels are required to achieve maximum velocity, and throat erosion is accelerated.

To varying degrees this applies to all the magnums, but velocity and resultant energy are there, and at some point case capacity tells the tale. What I mean is, although the shorter, fatter cases of the WSMs and RSAUMs are more efficient, the longer-cased belted magnums have more powder capacity and beat them in down-range performance. It depends somewhat on who is doing the loading—and how the loads are compared. As they say, figures lie and liars figure; you can cook the books a bit and make a ballistics chart say anything you want it to. But in any fair comparison of loads, the .270 Weatherby Magnum is slightly faster than the .270 WSM. The 7mm Remington Magnum is slightly faster than the 7mm RSAUM and 7mm WSM, and the .300 Winchester Magnum is slightly faster than the .300 WSM and .300 RSAUM. The “full-length” (.375 H&H-length) belted magnums like the 7mm STW and

.300 Weatherby Magnum are significantly faster. On the other hand, with greater capacity from the fatter case, the 7mm and .300 RUMs are capable of greater velocity.

Only you can decide how much velocity and energy you really need (or want)—and how much recoil and muzzle blast you are willing to withstand to get it. All the magnums exact a price in this coin, and the belted magnums also exact a toll in gun weight and barrel length for optimum performance. None of this is bad or good; it just is. We American hunters tend to have two cravings. We want more accuracy than we really need for most hunting purposes; and we want more velocity (and energy and flat-shooting capabilities) than we really need for most of our shots at game. The belted magnums are still capable of delivering both.

POPULARITY

The two most popular of all magnum cartridges, and ranking high among the most popular of all hunting cartridges, are the 7mm Remington Magnum and .300 Winchester Magnum. Lagging a bit behind, probably because it was considered a Weatherby proprietary for many years, and also because it requires a full-length (.375 H&H-length) action, is the .300 Weatherby Magnum. While it isn't always best to go along with the crowd, there is some safety in numbers. The advantage to popular cartridges is the great wealth of factory loads available.

There are literally dozens and dozens of good factory loads for the 7mm Remington Magnum and .300 Winchester Magnum, and a very reasonable assortment of factory loads for the .300 Weatherby Magnum. An assortment of factory loads isn't critical, but it means a greater selection of hunting bullets and a better opportunity to find the most accurate loads for your particular rifle. To some extent this goes out the window if you handload; you have available the full range of component bullets for your bore diameter. However, and this is also important, with our popular belted magnums we have a rich legacy of loading data spanning several decades. The new cartridges are great, and they do exactly what they are purported to do—but it will be a long time, if ever, before they are available in as great a variety of factory loads, or with as extensive a cookbook of load recipes.

In the meantime, our tired old belted magnums continue to do the great job they have done for many, many years. Whether you need “magnum performance” or not is up to you—but if you use a belted magnum, like it, and it gives you confidence, it isn't necessary to abandon your old favorite. Not yet! ■