

# Rifle Cartridge Families List

By Chuck Hawks

When an ammunition company introduces a cartridge based on a new case, it often becomes the basis of a "family" of rifle cartridges, being necked-up and down to accept bullets of different diameters. The .458 Winchester Magnum case is a good example of this, as it forms the basis of Winchester Magnums ranging from .264 to .458 caliber.

In addition, wildcatters seize upon almost every new case to come down the pike and neck it up and down, blow it out and change the shoulder angle. Some of these creations become reasonably popular and a few have eventually been adopted by big loading companies and standardized. The .25-06 and .35 Whelen, both wildcats standardized by Remington, are good examples. A few of the best known wildcats are included in the lists below, but space constraints preclude listing most wildcats, including all "improved" versions of standard cartridges. For example, the .257 Roberts Ackley Improved is not listed below, although the .257 Roberts is.

Listed below are some of the most popular cartridge families. All of these families include reasonably well known, factory loaded and SAAMI or CIP standardized cartridges.

## **Super Short Magnum Family**

These cartridges were introduced by Winchester, starting in 2003. They are based on the .300 WSM rebated rim case (rim diameter .532") absurdly shortened to a length of 1.670" (maximum COL 2.360"), producing the most unlikely looking series of cartridges to have been offered in the modern era. Despite the name, these are not magnum cases in powder capacity or performance.

- .223 WSSM
- .243 WSSM
- .25 WSSM

## **The .38-55 Winchester Family**

These are all rimmed cartridges based on the straight .38-55 case necked-down to accept various bullet diameters. The .38-55 was introduced by Marlin in 1884. In 1894, the best known member of this family was created by necking-down the case to accept .30 caliber bullets. This became the famous .30-30 Winchester, introduced in 1895 in the then-new Model 1894 Winchester rifle, the all-time best selling hunting rifle/cartridge combination ever made.

The Herrett cartridges are based on shortened, blown-out, sharp-shouldered versions of the .30-30 case. These operate at higher pressure than the others members of the family and are intended primarily for use in T/C Contender and Encore single shot pistols or carbines.

- .219 Zipper

- .22 Accelerator (saboted .30-30 case offered by Remington)
- .25-35 Winchester
- 7-30 Waters
- .30 Herrett
- .30-30 Winchester
- .32 Winchester Special
- .357 Herrett
- .35-30 (wildcat)
- .38-55 Winchester (.38-55 Ballard)

### **.308 Winchester Family of Short Action Cartridges**

These cartridges are based on the .308 Winchester rimless, bottleneck case, which is itself based on a shortened .30-06 case with a standard .473" rim diameter. The civilian .308 Winchester was introduced in 1952 and two years later it was adopted by the NATO powers as the 7.62x51mm NATO military cartridge. The parent .308 Winchester has a case length of 2.015" and a COL of 2.810".

- .243 Winchester
- .260 Remington (6.5-08 A-Square)
- 7mm-08 Remington
- .308 Winchester
- .338 Federal
- .358 Winchester

### **.284 Winchester Family of Short Action Cartridges**

The .284 Winchester, introduced in 1963, is a .308 length case with a fatter body and a rebated .473" diameter rim that was originally intended to offer approximate .270 Win. and .280 Rem. case capacity and performance from the short action Winchester Model 88 and Model 100 rifles. Although a commercial flop, the .284 Winchester has been extensively wildcatted and some .284-based wildcats have become more popular than the parent cartridge.

- 6mm-284 (wildcat)
- .25-284 (wildcat)
- 6.5mm-284 Norma
- .284 Winchester
- .30-284 (wildcat)
- .375-284 McPherson (wildcat)
- .416-284 McPherson (wildcat)

### **Short Magnum Families**

These are all designed to cycle through short (.308 Win. length) actions and use the standard .532" diameter magnum case rim. There are four distinct families of short magnum cartridges, none of which are interchangeable with each other. The 6.5mm and .350 Rem. Magnums of 1965-1966 are the

original short magnums and they are based on a shortened and necked-down .458 Win. Mag. belted case. The WSM cartridges are based on what is essentially a radically shortened and blown out .404 Jeffery case, while the Rem. SAUM cartridges are based on a radically shortened Ultra Mag case. Both of the latter lines were introduced in 2001 and have a rebated rim, similar case capacity and look much the same, but dimensional differences prevent interchange. The Ruger Compact Magnums (RCM) of 2008 are based on a shortened .375 Ruger rimless, beltless case with .532" rim *and* base diameters.

- 6.5mm Remington Magnum
- .350 Remington Magnum
  
- .270 WSM
- 7mm WSM
- .300 WSM
- .325 WSM
  
- 7mm Rem. SAUM
- .300 SAUM
  
- .300 RCM
- .338 RCM

### **7x57mm Mauser Family**

The 7x57mm Mauser, developed in 1892, is the great grand daddy of most modern rimless, bottleneck rifle cartridges. Even the classic American .30-06, although longer, shares the basic design and .473 rim diameter of the 7x57. At 57mm (2.235"), the 7x57 case is actually between the later .30-06 Springfield and .308 Winchester in length. The cartridges below are based on the 7x57 case, sometimes shortened slightly or with an altered shoulder angle.

- 5.6x57mm RWS
- 6mm Remington (.244 Remington)
- .257 Roberts (.257 Roberts +P)
- 6.5x57mm Mauser (6.5x57mm RWS)
- 7x57mm Mauser (.275 Rigby)
- 8x57mm Mauser
- .338x57 O'Connor (wildcat)
- 9.3x57mm Mauser

### **.30-06 Springfield Family**

The rimless, bottleneck .30-06 Springfield started life in 1903 as the .30-03 Government, loaded with a 220 grain RN bullet at a muzzle velocity of 2300 fps. It was designed after the U.S. Army encountered the 7x57 Mauser cartridge in the hands of Spanish troops during the Spanish-American War and realized that it was fundamentally superior to the rimmed .30-40 Krag (then the U.S. service cartridge)

for use in bolt action repeating rifles. In 1905, Germany introduced a 154 grain spitzer bullet at 2880 fps in their 8x57JS military cartridge, greatly extending its lethal range. The U.S. was forced to follow suit a year later and the .30-03 cartridge had its neck shortened by 0.07" and was loaded with a 150 grain spitzer bullet at a muzzle velocity of 2700 fps to become the "Ball Cartridge, Caliber .30, Model of 1906." This unwieldy name was quickly abbreviated to ".30-06" and that is how the cartridge has been known ever since.

The .30-06 is essentially a lengthened 7x57 case and uses the same .473" rim diameter. Its 3.340" COL eventually came to be the norm for "standard length" rifle actions. The .30-06 case has been necked-up and necked-down to accommodate practically all bullet diameters. Here are the most commonly encountered members of the .30-06 family.

- 6mm-06 (wildcat)
- .25-06 Remington
- 6.5mm-06 (wildcat)
- .270 Winchester
- 7mm-06 (wildcat)
- .280 Remington (7mm Rem. Express)
- .30-06 Springfield
- 8mm-06 (wildcat)
- .333 OKH (wildcat)
- .338-06 A-Square
- .35 Whelen (.35-06)

#### **.458 Winchester Family of Standard Length Magnums**

These are all based on the .458 Winchester Magnum case, introduced in 1956, which is itself based on a shortened .375 H&H Magnum case. Except for the straight cased .458 Win. Mag., the rest of this family uses a necked-down, sharp shouldered version of this belted case. They have a .532" rim diameter and a COL intended for use in standard (.30-06 length) actions.

- .264 Winchester Magnum
- 7mm Remington Magnum
- .308 Norma Magnum
- .300 Winchester Magnum
- .338 Winchester Magnum
- .358 Norma Magnum
- .416 Taylor (A-Square)
- .458 Winchester Magnum

#### **Weatherby Standard Length Magnums**

These cartridges are based on the .375 H&H case shortened, blown-out and provided with the trademark Weatherby double radius shoulder. They are belted cases with a .532" diameter rim, 2.549"

case length and 3.360" maximum COL. They are designed to work in rifles with a standard (.30-06) length action. The commercial success of the shortened Weatherby Magnums, the design of which dates back to the middle 1940's, inspired Winchester to introduce their series of standard length magnum cases, starting with the .458 Win. Mag. in 1956.

Note that the .224 Wby. Mag. and .240 Wby. Mag. are not part of this family. They are based on unique, smaller diameter, belted cases. The little .224 has a rim diameter of .429" and the .240 has a .473" rim diameter.

- .257 Weatherby Magnum
- .270 Weatherby Magnum
- 7mm Weatherby Magnum

### **.375 H&H (full length) Magnum Family**

The .375 Holland & Holland Magnum was the first of the belted magnum cartridges, introduced in 1912. It is a rimless case with a .532" rim diameter that headspaces on a belt around the case head. The .375's case length is 2.850" and the COL is 3.60", thus it requires a long or magnum length action. Many of the later cartridges based on the .375 case are blown out to increase powder capacity and given sharper shoulders. Several of the famous Weatherby Magnums, for instance, are in this category.

- .244 H&H Magnum
- .275 H&H Magnum
- 7mm STW
- .300 H&H Magnum (.300 Belted Rimless Magnum)
- .300 Weatherby Magnum
- 8mm Remington Magnum
- .340 Weatherby Magnum
- .375 H&H Magnum (.375 Belted Rimless Magnum)
- .375 Weatherby Magnum
- .400 H&H Magnum
- .416 Hoffman (A-Square)
- .416 Remington Magnum
- .450 Watts (wildcat)
- .458 Lott

### **Remington Ultra Mag Family**

Remington's Ultra Mag series of cartridges are based on a new case very similar (but not quite identical) to the .404 Jeffery. These are "super size" magnums, as long as the .375 H&H, but fatter and un-belted with a .534" diameter rebated rim. Case length is 2.850", base diameter is .550" and COL is 3.60" The first of the series, the .300 Ultra Mag, was introduced in 1999.

- 7mm Rem. Ultra Mag

- .300 Rem. Ultra Mag
- .338 Rem. Ultra Mag
- .375 Rem. Ultra Mag

### **.378 Weatherby Magnum Family**

Jack O'Connor showed Roy Weatherby a .416 Rigby case and the result was the 1953 introduction of the .378 Weatherby Magnum, based on a belted version of the venerable Rigby case. This huge case is 2.913" long, has a .579" rim diameter and a .5817" head diameter immediately in front of the belt. The maximum COL is 3.655". After the successful introduction of the .378 Magnum, which actually uses standard .375" diameter bullets, Weatherby necked their giant case up and down from .30 to .45 caliber and Holland & Holland recently adopted it as the basis for their .465 Magnum.

- .30-378 Weatherby Magnum
- .338-378 Weatherby Magnum
- .378 Weatherby Magnum
- .460 Weatherby Magnum
- .465 H&H Magnum

This listing of cartridge families is, of course, not complete. The obsolescent cartridges based on the .44-40 WCF parent case and the Dakota Magnum cartridges, for example, are not included. Neither are the short and long Lazzeroni Magnums. In the interest of brevity, I had to draw the line somewhere. However, I hope that it gives some insight to the most commonly encountered cartridge families.