

Bolt Face & Action Database

August 29, 2020 by **AJ** — **1 Comment**

With new calibers and cartridges popping up almost weekly, as so many gunsmiths and precision rifle builders want to improve on designs, re-barreling and chamber change of rifles is becoming much more common. The main question for shooters that want to re-barrel and re chamber their rifles to a new caliber or cartridge, is firstly if the new cartridge base will fit in and extract with the current bolt face, secondly if the new cartridge will fit in the action and cycle out of the magazine, and lastly what other if any custom work needs to be done either to the bolt or the action.

We have found quite a few smaller fragmented resources showing pieces of the information needed in various forums and chat groups on the internet and social networks, but decided to compile a larger database or type of bolt face diameter database in one spot, for all to see and learn from, and will periodically update the database as we learn of new calibers and cartridges becoming available and popular. One resource showing all the bolt face diameter sizes for the different calibers and cartridges.



If you disagree with anything listed in this database, or want to add anything new to it, please do go ahead and **contact us** with your recommendations for changes or additions as we are also still in the ongoing learning process and appreciate any feedback and information we can find.

The first database or bolt face diameter chart, is of the Various cartridges that can work with the same bolt faces and action lengths. There are basically four main bolt face diameters and two action lengths that cover most cartridges, with just a few falling outside of those. Generally short-action would be suitable for cartridges with a COAL of 2.3 – 2.8 inches, long-action would be suitable for cartridges with a COAL of 2.8 – 3.34 inches and magnum-action would be suitable for cartridges with a COAL of 3.34 inches and longer.

Bolt Face Database

Bolt Face Diameter (inches)	Caliber	Action Length
.318 +/-	5.7×28	Short Action
.384 +/-	17 Rem	Short Action
.384 +/-	204 Ruger	Short Action
.384 +/-	222 Rem	Short Action
.384 +/-	223 Rem	Short Action
.384 +/-	350 Legend	Short Action
.384 +/-	20 Nosler	Short Action
.384 +/-	22 Nosler	Short Action
.384 +/-	24 Nosler	Short Action
.445	6mm PPC	Short Action
.470 +/-	220 Swift	Short Action
.470 +/-	225 Win	Short Action
.470 +/-	22-250 Rem	Short Action
.470 +/-	22 Creedmoor	Short Action
.470 +/-	22XC	Short Action

Bolt Face Diameter (inches)	Caliber	Action Length
.470 +/-	22 GT	Short Action
.470 +/-	22×47 Lapua	Short Action
.470 +/-	243 Win	Short Action
.470 +/-	250 Savage	Short Action
.470 +/-	260 Rem	Short Action
.470 +/-	6mm Norma BR	Short Action
.470 +/-	6mm Creedmoor	Short Action
.470 +/-	6mm XC	Short Action
.470 +/-	6mm GT	Short Action
.470 +/-	6×47 Lapua	Short Action
.470 +/-	6mm Super LR	Short Action
.470 +/-	6mm-284	Short Action
.470 +/-	6.5/284 Norma	Short Action
.470 +/-	6.5mm Creedmoor	Short Action
.470 +/-	6.5×47 Lapua	Short Action
.470 +/-	7mm-08 Rem	Short Action
.470 +/-	270-08	Short Action
.470 +/-	270 Redding	Short Action
.470 +/-	270 Sig Fury	Short Action

Bolt Face Diameter (inches)	Caliber	Action Length
.470 +/-	284 win	Short Action
.470 +/-	300 Savage	Short Action
.470 +/-	308 Win	Short Action
.470 +/-	338 Federal	Short Action
.470 +/-	35 Rem	Short Action
.470 +/-	358 Winchester	Short Action
.540+/-	223 WSSM	Short Action
.540+/-	243 WSSM	Short Action
.540+/-	25 WSSM	Short Action
.540+/-	270 WSM	Short Action
.540+/-	6.5 x 300 Weatherby	Short Action
.540+/-	6.5 PRC	Short Action
.540+/-	6.5mm GAP 4S (SAUM)	Short Action
.540+/-	7mm Rem saum	Short Action
.540+/-	7mm WSM	Short Action
.540+/-	300 Rem saum	Short Action
.540+/-	300 WSM	Short Action
.540+/-	325 WSM	Short Action
.540+/-	350 Rem Mag	Short Action

Bolt Face Diameter (inches)	Caliber	Action Length
.470 +/-	6mm Rem	Long Action
.470 +/-	240 Weatherby Mag	Long Action
.470 +/-	257 Roberts	Long Action
.470 +/-	25-06 Rem	Long Action
.470 +/-	6.5×55 Swedish	Long Action
.470 +/-	6.5-06 A-Square	Long Action
.470 +/-	270 Win	Long Action
.470 +/-	7×57 Mauser	Long Action
.470 +/-	7×64 Brenneke	Long Action
.470 +/-	280 Rem	Long Action
.470 +/-	30-06 Springfield	Long Action
.470 +/-	8mm Mauser	Long Action
.470 +/-	338/06 A Square	Long Action
.470 +/-	35 Whelen	Long Action
.540 +/-	257 Weatherby	Long Action
.540 +/-	26 Nosler	Long Action
.540 +/-	264 Win Mag	Long Action
.540 +/-	270 Weatherby Mag	Long Action
.540 +/-	7mm Rem Mag	Long Action

Bolt Face Diameter (inches)	Caliber	Action Length
.540 +/-	7mm Weatherby Mag	Long Action
.540 +/-	7 STW	Long Action
.540 +/-	28 Nosler	Long Action
.540 +/-	28 Sherman Magnum	Long Action
.540 +/-	7mm Rem Ultra Mag	Long Action
.540 +/-	300 H & H	Long Action
.540 +/-	300 Win Mag	Long Action
.540 +/-	300 PRC	Long Action
.540 +/-	30 Sherman Magnum	Long Action
.540 +/-	300 Weatherby Mag	Long Action
.540 +/-	300 RUM	Long Action
.540 +/-	303 Brit	Long Action
.540 +/-	8mm Rem Mag	Long Action
.540 +/-	338 Win Mag	Long Action
.540 +/-	338 EDGE	Long Action
.540 +/-	340 Weatherby Mag	Long Action
.540 +/-	338 RUM	Long Action
.540 +/-	375 H & H	Long Action
.540 +/-	375 Weatherby	Long Action

Bolt Face Diameter (inches)	Caliber	Action Length
.540 +/-	375 RUM	Long Action
.540 +/-	416 Rem Mag	Long Action
.540 +/-	458 Win Mag	Long Action
.540 +/-	458 Lott	Long Action
.585 +/-	300 Norma Mag	Long Action
.585 +/-	338 Norma Mag	Long Action
.585 +/-	30/378 Weatherby	Long Action
.585 +/-	338 Lapua	Long Action
.585 +/-	33XC	Long Action
.585 +/-	338/378 Weatherby	Long Action
.585 +/-	378 Weatherby mag	Long Action
.585 +/-	37XC	Long Action
.585 +/-	416 Rigby	Long Action
.585 +/-	416 Weatherby Mag	Long Action
.585 +/-	460 Weatherby Mag	Long Action
.585 +/-	470 Nitro Express	Long Action
.640	375 CheyTac	Magnum Action
.640	408 CheyTac	Magnum Action
.640	505 Gibbs	Magnum Action

Next up is a database showing the more precise diameters of the case heads of the difference cartridges, and the COAL (cartridge overall length) most common on those cartridges.

Case Head & COAL Database

Caliber	Case Head	COAL
17 Rem	.378"	2.17"
17 Mach4	.378"	1.77"
204 Ruger	.378"	2.26"
22 RemJet	.439"	1.66"
22 Hornet	.35"	1.8"
22 KHornet	.35"	1.75"
22 Spitfire	.356"	1.65"
218 Bee	.408"	1.63"
218 Mashburn	.408"	1.63"
221 Fireball	.378"	1.84"
222 Rem	.378"	2.2"
222 RemMag	.378"	2.33"
223 Rem	.378"	2.3"

Caliber	Case Head	COAL
223 RemAI	.378"	2.3"
350 Legend	.378"	2.26"
220 Russian	.441"	2.07"
22 PPC	.44"	2.07"
219 Zipper	.506"	2.4"
22 BR	.473"	2"
225 Win	.473"	2.43"
224 WeatherbyMag	.43"	2.38"
22-250 Rem	.472"	2.35"
22 XC	.471"	2.75"
22 Creedmoor	.473"	2.825"
22 GT	.473"	2.6"
220 Swift	.473"	2.7"
22x47 Lapua	.473"	2.795"
220 Redline	.534"	2.8"
224 Clark	.473"	3.08"
22 CheetahMkl	.473"	2.5"
223 WSSM	.535"	2.36"
22 SavHiPower	.492"	2.51"

Caliber	Case Head	COAL
6mm-223 Rem	.378"	2.26"
6mm PPC	.441"	2.19"
6mm BR	.473"	2.2"
6mm XC	.471"	2.75"
6mm GT	.473"	2.6"
6×47 Lapua	.473"	2.795"
6mm Creedmoor	.473"	2.825"
6mm Super LR	.473"	2.8"
6mm TCU	.378"	2.5"
6mm-284 Win	.473" (rebated)	2.83"
243 Win	.473"	2.65"
6mm Rem	.473"	2.83"
240 WbyMag	.473"	3.08"
6.17 Spitfire	.53"	2.8"
243 WSSM	.535"	2.36"
240 Apex (BeltedNE)	.475"	3.21"
256 WinMag	.44"	1.78"
25-21 Stevens	.376"	2.3"
25-25 Stevens	.376"	2.63"

Caliber	Case Head	COAL
25 Rem	.421"	2.53"
250 Sav	.472"	2.4"
257 Roberts	.467"	2.99"
25-'06 Rem	.473"	3.25"
25-284 Win	.473" (rebated)	2.93"
257 WbyMag	.53"	3.3"
6.3 Scramjet	.53"	3.58"
6.5 Japanese	.466"	2.85"
6.5 Carcano	.449"	2.94"
6.5×54 Mann-Schoen	.453"	2.99"
6.5mm-257 Bob	.467"	2.75"
6.5×47 Lapua	.473"	2.795"
260 Rem	.473"	2.84"
6.5mm Creedmoor	.473"	2.825"
6.5mm GAP 4S (SAUM)	.534"	2.85"
6.5 PRC	.532"	2.955"
6.5×55 Swede	.476"	3.03"
6.5mm-284 Win	.5"	2.95"
6.71 Phantom	.53"	2.8"

Caliber	Case Head	COAL
6.5mm-'06 A-Square	.473"	3.2"
6.5 RemMag	.532"	3.05"
264 WinMag	.532"	3.35"
26 Nosler	.534"	3.34"
270 Win	.473"	3.35"
270 WSM	.535"	2.86"
270 WbyMag	.53"	3.28"
270-08	.473"	2.8"
270 Redding	.473"	2.8"
270 Sig Fury	.472"	2.8"
7×33 Sako	.394"	1.73"
7mm TCU	.378"	2.68"
7mm BR	.473"	2.33"
7-30 Waters	.506"	2.55"
7mm-08 Rem	.473"	2.8"
7×57	.473"	3.02"
284 Win	.473"(rebated)	2.95"
7×64 Brenneke	.473"	3.3"
280 Rem	.473"	3.33"

Caliber	Case Head	COAL
7.21 Tomahawk	.577"	2.8"
7mm SAUM	.534"	2.84"
7mm WSM	.535"	2.86"
7mm RemMag	.532"	3.29"
7mm WbyMag	.53"	3.26"
28 Nosler	.534"	3.34"
28 Sherman Magnum	.532"	3.7"
7mm STW	.532"	3.6"
7mm-300 WbyMag	.532"	3.72"
7mm RUM	.534"	3.6"
7.21 Firebird	.577"	3.6"
7mm Dakota	.545"	3.33"
28-30 Stevens	.412"	2.82"
7mm H&H	.532"	3.22"
7mm Rigby	.528"	3.25"
300 Sherwood	.37"	2.2"
7.35 Carcano	.449"	2.9"
300 Whisper	.378"	2.26"
303 Sav	.503"	2.52"

Caliber	Case Head	COAL
300 Sav	.473"	2.6"
308 Win	.473"	2.8"
7.5×54 MAS	.482"	2.99"
7.5 Schmidt-Rubin	.495"	3.03"
30-'06 Springfield	.473"	3.34"
30 Gibbs	.471"	3.34"
300 SAUM	.534"	2.83"
7.82 Patriot	.577"	2.8"
300 WSM	.535"	2.86"
30-338 WinMag	.532"	3.34"
308 NormaMag	.532"	3.28"
300 H&H	.532"	3.65"
300 WinMag	.532"	3.34"
300 PRC	.532"	3.7"
30 Sherman Magnum	.532"	3.775"
300 WbyMag	.53"	3.56"
300 RUM	.534"	3.6"
300 Dakota	.545"	3.43"
7.82 Warbird	.577"	3.6"

Caliber	Case Head	COAL
30-378 WbyMag	.603"	3.67"
7.62×45 Czech	.441"	2.45"
7.62×39 Russian	.443"	2.19"
303 Brit	.525"	3.08"
7.7mm Japanese	.471"	3.17"
7.65 ArgentineMauser	.473"	2.95"
310 Cadet	.405"	1.59"
8×57 Mauser	.473"	2.99"
8mm-'06 Spr	.473"	3.18"
8×60 S	.473"	3.1"
8×64 Brenneke	.52"	3.65"
8×64 Sauer	.499"	3.2"
8×68 SMag	.524"	3.4"
8mm RemMag	.532"	3.6"
318 WestleyRichards	.465"	3.35"
33 Jeffrey	.534"	3.45"
338 Federal	.473"	2.75"
338-'06 A-Square	.473"	3.34"
8.59 Galaxy	.577"	2.8"

Caliber	Case Head	COAL
338 Win Mag	.532"	3.34"
340 Weatherby Magnum	.53"	3.68"
338 RUM	.534"	3.6"
338 Norma	.588"	3.60"
338 EDGE	.534"	3.80"
330 Dakota	.545"	3.33"
8.59 Titan	.577"	3.6"
338 Lapua Mag	.588"	3.68"
33XC	.580"	4.6"
338-378 WbyMag	.603"	3.76"
36 NitroExpress	.48"	2.98"
400-350 NE-Rigby	.52"	3.55"
350 RigbyMag	.525"	3.57"
35 Rem	.46"	2.51"
358 Win	.473"	2.78"
35 Whelen	.473"	3.26"
350 RemMag	.532"	2.93"
358 NormaMag	.532"	3.28"
37XC	.580"	4.8"

Caliber	Case Head	COAL
9.3×57 Mauser	.469"	3.23"
9.3×62 Mauser	.473"	3.29"
400-375 BeltedNE	.466"	3"
375 H&H	.532"	3.6"
375 Ruger	.532"	3.34"
376 Steyr	.504"	3.11"
375 WbyMag	.53"	3.69"
375 Rum	.535"	3.6"
375 Dakota	.545"	3.33"
378 WbyMag	.603"	3.65"
375 RimlessNE2-1/4	.473"	2.94"
10.15×61 Jarmann	.615"	3.06"
404 Basic	.542"	3.6"
416 Taylor	.532"	3.38"
416 RemMag	.532"	3.6"
10.57Meteor	.577"	3.62"
416 Dakota	.545"	3.65"
500-416 RimlessNE	.59"	3.91"
416 WbyMag	.603"	3.75"

Caliber	Case Head	COAL
416 Rigby	.59"	3.75"
404 Jeffreys	.537"	3.53"
10.75×68 Mauser	.492"	3.16"
425 WestleyRichards	.467"	3.3"
11.2×72 Schuler	.536"	3.85"
11.75×36 Montenegrin	.555"	1.73"
43 Mauser	.586"	3"
458 WinMag	.532"	3.3"
458 Lott	.532"	3.6"
450 Dakota	.582"	3.74"
460 WbyMag	.603"	3.71"
461 Gibbs	.626"	3.85"
470 Capstick	.532"	3.6"
50 Beowulf	.445"	2.24"
505 Gibbs	.64"	3.75"
500 Jeffrey	.615"	3.5"
50 BMG	.804"	5.45"
585 Nyati	.66"	3.53"
600-577 Rewa	.66"	3.7"

FAQ for Bolt Face Diameters

What Calibers Use a .308 Bolt Face?

As the .308 Winchester cartridge uses the .470 +/- bolt face, all of the other calibers and cartridges listed on the bolt face chart above, with the .470 +/- bolt face diameter, use the same bolt face as the .308 Winchester.

What Bolt Face is a 6.5 Creedmoor?

As can be seen on the bolt face database chart at the top of this page. The 6.5mm Creedmoor uses the same .470 +/- bolt face as the .308 Winchester cartridge.

What is the Bolt Face?

The bolt face is the surface of the rifle bolt, that makes contact with the cartridge case head. It also usually hold the cartridge in position inside a rifle action, and usually has a ejector pin that ejects the empty fired cartridge case, after the shot has been fired. In center fire rifles, the firing pin comes through a hole in the bolt face, to strike the primer in the cartridge case which sets off the propellant to fire the bullet.

Will a 308 Action Work for 6.5 Creedmoor?

As both the .308 Winchester and the 6.5mm Creedmoor cartridges work in short actions, and use the same .470 +/- bolt face, a .308 Winchester action or rifle will work with a barrel chambered for 6.5mm Creedmoor cartridges.

What Bolt Face is .22-250?

.22-250 Remington cartridge uses a .470 +/- bolt face.

What Bolt Face is 6.5 PRC?

The 6.5 PRC cartridge has a .532" case head and uses the .540 +/- standard magnum bolt face.

What calibers can a 30-06 be converted to?

As the .30-06 Springfield has a .473" case head and uses the .470 +/- bolt face, any cartridges list on the above two bolt face diameter and action length database charts above, that also use the .470 +/- bolt face, and have a COAL of 3.34" or shorter, will work with .30-06 actions. However, it is a waste of space to use short action cartridges in long actions.

What calibers use a 308 case?

The .308 Winchester is the parent case to familiar cartridges like the .243 Winchester, .260 Remington, 7mm-08 Remington, .338 Federal, .358 Winchester and all their associate wildcat cartridges and calibers developed from them.

Please do contact us if you have any new calibers or cartridges you think we should add to the bolt face diameter chart above, we love learning about and teaching others about bolt face sizes and which are compatible. There are many changes that are quite easily compatible, like changing from a 308 Winchester action and chamber, over to a 6.5mm Creedmoor, or 6mm Creedmoor or even .22 Creedmoor. You can even change a .22-250 over to a .22-250 Ackley Improved, or a 22XC or a 22GT and even the same .22 Creedmoor mentioned above. When studying the bolt face charts above, you will see the the possibilities are endless.

It makes sense when you are quite heavily into precision rifle shooting, and going to change your barrel to a custom or competition barrel in any case, to just buy the rifle or action you want in any compatible bolt face action, and then fit the new barrel and cartridge chamber onto it, instead of having to wait for the action or rifle manufacturers to first have to produce the caliber rifle you want.

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Julius says

November 10, 2021 at 3:13 pm

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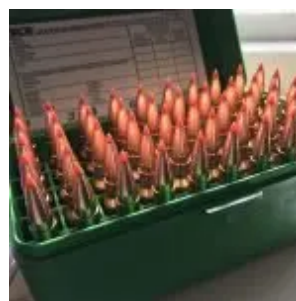
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