

Gunsmithing Tools

Headspace Gages

The proper use of **Headspace Gages** is the most reliable way to test rifle chamber length.



Safety and performance are on the line. Improper headspace may be dangerous to the shooter as well as an impairment to accuracy.

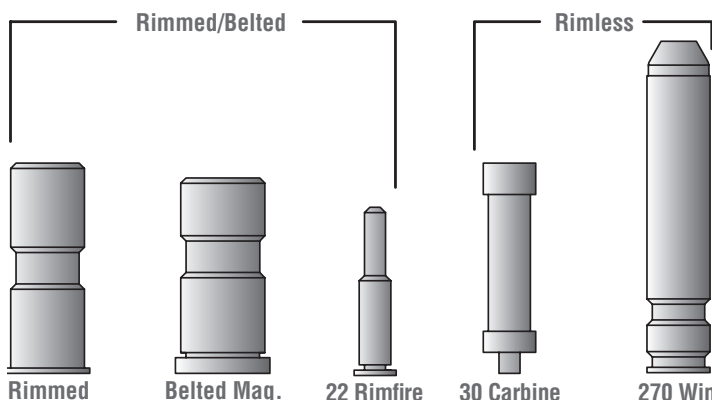
Excessive headspace may lead to gas leakage around the case or head separation and the sudden release of high pressure gas. Insufficient or excessively tight headspace may cause malfunctions such as failure to lock. It often makes extraction difficult and may cause dangerous stresses on the mechanism, which may, in turn, shorten component life expectancy or lead to failure.

Features

- Large caliber selection of both rimmed/belted and rimless gages.
- Three lengths of Headspace Gages for most rifle calibers offered (GO, NO-GO, FIELD).
- Manufactured from top-quality, hardened steel and precision ground to ANSI and SAAMI tolerances.
- Headspace tolerance ground to a very exacting $\pm .00015"$.
- Each Headspace Gage thoroughly inspected with NIST-certified measurement tools.

Ordering Information

Headspace Gages are available to fit a wide variety of rifle chambers.



5.56 NATO and 7.62 NATO Headspace Gages

Specifically designed and manufactured to check slightly longer NATO chambers.



The 5.56 NATO maximum chambering requires a slightly longer headspace than the commercial 223 cal. Rem. The 7.62 NATO chambering requires a longer headspace than the commercial 308 Win.

Two Headspace Gages (minimum and maximum chambers) are available for each NATO chambering. There is not a mid-range NO-GO gage available.

Features

- Minimum rifle chamber gage checks to ensure that the rifle will accept the longest (headspace dimension) NATO ammunition cases that are currently manufactured.
- Maximum rifle chamber gage checks to ensure that the rifle does not have excessive headspace.

| Order Number | Description | Length |
|---------------------------------|-----------------|---------|
| 5.56 NATO Headspace Gage | | |
| HG0223G | Minimum chamber | 1.4636" |
| HG556NATOMax | Maximum chamber | 1.4736" |
| 7.62 NATO Headspace Gage | | |
| HG762NATOMin | Minimum chamber | 1.6355" |
| HG762NATOMax | Maximum chamber | 1.6455" |

Note:

The 7.62 NATO Headspace Gages do not conform to SAAMI tolerances.

Web



Our website provides extensive information about how to choose the correct Headspace Gage. Go to forsterproducts.com and click **Gunsmithing » Headspace Gages**.

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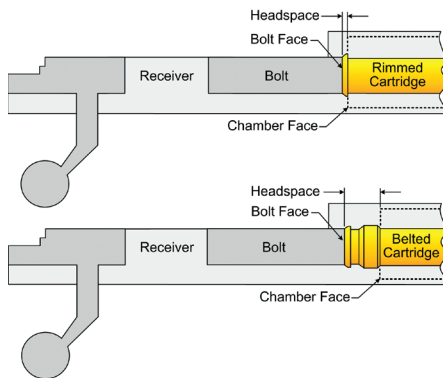
What Is Headspace?

According to the Sporting Arms and Ammunition Manufacturers' Institute (SAAMI), which sets product standards for firearms and ammunition, headspace is "the distance from the face of the closed breech of a firearm to the surface in the chamber on which the cartridge case seats." Some shooters are under the misconception that headspace is fixed over the life of the firearm. Headspace can increase after repeated use of ammunition that causes too much pressure. One should routinely check rifle chamber headspace every thousand rounds.

Headspace is measured differently depending on whether the firearm's caliber uses rimmed, belted, or rimless cartridges.

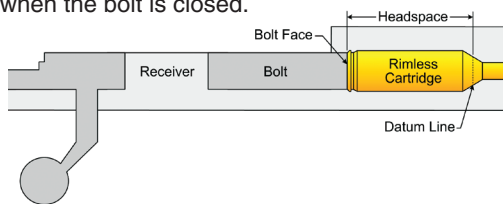
Rimmed and Belted Cartridges

Headspace = distance between the bolt face and the top of the rim (chamber face) when the bolt is closed.



Rimless Cartridge

Headspace = distance between the bolt face and a datum line (determined by SAAMI) where the front of the cartridge rests on its shoulder when the bolt is closed.



Choosing the Correct Headspace Gauge

Forster Products offers three lengths of headspace gages per rifle caliber. In order from the shortest to longest, they are **GO**, **NO-GO**, and **FIELD**:

- 1. GO:** Corresponds to the minimum chamber dimensions. If a rifle closes on a GO gage, the chamber will accept ammunition that is made to SAAMI maximum specifications. The GO gage is essential for checking a newly-reamed chamber in order to ensure a tight, accurate, and safe chamber that will accept SAAMI maximum ammo.
- 2. NO-GO:** Corresponds to the maximum headspace we recommend for gunsmiths' chambering new bolt-action rifles. This is *not* a SAAMI-maximum measurement. If a rifle closes on a NO-GO gage, it may still be within SAAMI specifications, or it may have excessive headspace. To determine if there is excessive headspace, the chamber should then be checked with a FIELD gage. The NO-GO gage is a valuable tool for gunsmiths' reaming new chambers, in order to ensure tight and accurate headspace.
- 3. FIELD:** Corresponds to the longest safe headspace. If a rifle closes on a FIELD gage, its chamber is dangerously close to, or longer than, SAAMI-specified maximum chamber size. If chamber headspace is excessive, the gun should be taken out of service until it has been inspected and repaired by a competent gunsmith. FIELD gages are slightly shorter than the SAAMI maximum in order to give a small safety margin.

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Table 2. Headspace Gage Order Guide

| Cartridge's Rifle Chamber | Headspace Gage | GO Order No. | NO GO Order No. | FIELD Order No. |
|---------------------------|-----------------------------|--------------|-----------------|-----------------|
| 219 Donaldson Wasp | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 219 Zipper | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 22 Short | 22LR (Rimfire) | HG22RimG | HG22RimN | HG22RimF |
| 22 Long | 22LR (Rimfire) | HG22RimG | HG22RimN | HG22RimF |
| 22LR Match | 22LR (Rimfire) | HG22RimG | HG22RimN | HG22RimF |
| 204 Ruger | 204 Ruger | HG0204G | HG0204N | HG0204F |
| 22 PPC | PPC | HG0PPCG | HG0PPCN | HG0PPCF |
| 22 Savage Hi Pwr. | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 22-250 | 22-250 | HG2225G | HG2225N | HG2225F |
| 22-284 | 284 Win. | HG0284G | HG0284N | HG0284F |
| 220 Swift | 220 Swift | HG0220G | HG0220N | HG0220F |
| 222 Rem. | 222 Rem. | HG0222G | HG0222N | HG0222F |
| 222 Rem. Mag. | 222 Rem. Mag. | HG222MG | HG222MN | HG222MF |
| 223 Rem. | 223 Rem. | HG0223G | HG0223N | HG0223F |
| 243 Win. | 243 Win. | HG0243G | HG0243N | HG0243F |
| 6mm-284 | 284 Win. | HG0284G | HG0284N | HG0284F |
| 6mm PPC | PPC | HG0PPCG | HG0PPCN | HG0PPCF |
| 6mm Rem. 244 | 244 Rem. | HG0244G | HG0244N | HG0244F |
| 6x45 | 223 Rem. | HG0223G | HG0223N | HG0223F |
| 6x47 | 222 Rem. Mag. | HG222MG | HG222MN | HG222MF |
| 244 Rem. | 244 Rem. | HG0244G | HG0244N | HG0244F |
| 25-06 | 30-06 Spring. | HG3006G | HG3006N | HG3006F |
| 25-35 WCF | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 25-284 | 284 Win. | HG0284G | HG0284N | HG0284F |
| 257 Roberts | 257 Roberts | HG0257G | HG0257N | HG0257F |
| 257 STW | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 257 Wby. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 260 Rem. | 243 Win. | HG0243G | HG0243N | HG0243F |
| 264 Win. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 6.5-06 | 30-06 Spring. | HG3006G | HG3006N | HG3006F |
| 6.5-284 | 284 Win. | HG0284G | HG0284N | HG0284F |
| 6.5 Rem. Mag. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 6.5 SKAN | 6.5 SKAN | HGSKANG | HGSKANN | — |
| 6.5 STW | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 6.5x55 Swede | 6.5x55 Swede | HG6555G | HG6555N | HG6555F |
| 6.5 Creedmoor | 6.5 Creedmoor | HG65CRG | HG65CRN | HG65CRF |
| 6.5x257 Roberts | 257 Roberts | HG0257G | HG0257N | HG0257F |
| 270 Wby. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 270 Win. | 30-06 Spring. | HG3006G | HG3006N | HG3006F |
| 270-284 | 284 Win. | HG0284G | HG0284N | HG0284F |
| 275 H&H | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 280 Rem. | 280 Rem. | HG0280G | HG0280N | HG0280F |
| 284 Win. | 284 Win. | HG0284G | HG0284N | HG0284F |
| 7mm-08 | 243 Win. | HG0243G | HG0243N | HG0243F |
| 7mm-Int. R | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 7mm Mauser (7x57) | 257 Roberts | HG0257G | HG0257N | HG0257F |
| 7mm Rem. Mag. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 7mm Wby. Mag. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 7-30 Waters | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 30 Carbine | 30 Carbine | HG0030G | HG0030N | HG0030F |

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Table 2. Headspace Gage Order Guide (continued)

| Cartridge's Rifle Chamber | Headspace Gage | GO Order No. | NO GO Order No. | FIELD Order No. |
|----------------------------------|-----------------------------|--------------|-----------------|-----------------|
| 30 Herrett | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 308 Norma Mag. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 307 Win. | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 308 Win. | 243 Win. | HG0243G | HG0243N | HG0243F |
| 7.62x54 Russian | 7.62 x 54 Russian | — | BG762RN | BG762RF |
| 300 Blackout | 300 Blackout | HG0300G | HG0300N | HG0300F |
| 30-06 | 30-06 Spring. | HG3006G | HG3006N | HG3006F |
| 30-284 | 284 Win. | HG0284G | HG0284N | HG0284F |
| 30-30 | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 30-338 Win. Mag. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 30-378 Wby. | Large Wby. Mag. .603" O.D. | BGWBYG | — | BGWBYF |
| 30-40 Krag | 30-40 | BG3040G | BG3040N | BG3040F |
| 300 H&H | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 300 Win. Mag. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 300 Wby. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 303 British | 303 British | BG303G | BG303N | BG303F |
| 303 Savage | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 32 Win. Sp. | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 32-40 | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 8mm Mauser (8x57) ⁽¹⁾ | 8x57 Mauser | HG8X57G | HG8X57N | HG8X57F |
| 8mm Mauser (8x57) ⁽²⁾ | 8x57 Mauser | HG8MMOLDG | HG8MMOLDN | HG8MMOLDF |
| 8mm Rem. Mag. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 338 Federal | 243 Win. | HG0243G | HG0243N | HG0243F |
| 338 Win. Mag. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 338-06 | 30-06 Spring. | HG3006G | HG3006N | HG3006F |
| 340 Wby. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 35 Whelen | 30-06 Spring. | HG3006G | HG3006N | HG3006F |
| 35-284 | 284 Win. | HG0284G | HG0284N | HG0284F |
| 350 Legend | 350 Legend | HG350LG | HG350LN | HG350LF |
| 350 Rem. Mag. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 356 Win. | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 358 STA | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 358 Win. | 243 Win. | HG0243G | HG0243N | HG0243F |
| 375 H&H | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 375 Win. | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 378 Wby. | Large Wby. Mag. .603" O.D. | BGWBYG | — | BGWBYF |
| 38-55 WCF | 30-30 WCF | BG3030G | BG3030N | BG3030F |
| 416 Rem. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 416 Wby. | Large Wby. Mag. .603" O.D. | BGWBYG | — | BGWBYF |
| 458 Win. Mag. | Std. Belted Mag. .535" O.D. | BG300MG | BG300MN | BG300MF |
| 460 Wby. | Large Wby. Mag. .603" O.D. | BGWBYG | — | BGWBYF |

Notes:

- (1) Used for checking the current SAAMI-specified 19° shoulder angle.
- (2) Used for checking the 20° 48' shoulder angle. This chamber is no longer manufactured.

Tip



1. **GO:** Corresponds to the minimum chamber dimensions.
2. **NO-GO:** Corresponds to the maximum headspace recommended for gunsmiths chambering new bolt action rifles.
3. **FIELD:** Corresponds to the longest safe headspace.

Go to forsterproducts.com and click Gunsmithing for more information about these three Headspace Gage lengths.

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Table 3. Caliber Interchangeability for Rimmed/Belted Headspace Gages

| Use This Headspace Gage | To Check These Cartridges' Rifle Chambers |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22 Rimfire | 22 Short 22 Long, 22 LR Match |
| 30-30 WCF | 219 Donaldson Wasp 219 Zipper 22 Savage Hi Pwr. 25-35 WCF 7-30 Waters 7mm Int. R 30 Herrett 303 Savage 32 Win. Sp. 307 Win. 32-40, 356 Win. 375 Win. 38-55 WCF |
| Std. Belted Mag. .535" O.D. | 257 Wby. 257 STW 264 Win. 6.5 STW 6.5 Rem. Mag. 270 Wby. 275 H&H 7mm Rem. Mag. 7mm Wby. Mag. 300 H&H 300 Wby. 300 Win. Mag. 30-338 Win. Mag. 308 Norma Mag. 338 Win Mag. 8mm Rem. Mag. 340 Wby. 350 Rem. Mag. 358 STA 375 H&H, 416 Rem. 458 Win. Mag. |
| Large Wby. Mag. .603" O.D. | 30-378 Wby. 378 Wby. 416 Wby. 460 Wby. |

Table 4. Caliber Interchangeability for Rimless Headspace Gages

| Use This Headspace Gage | To Check These Cartridges' Rifle Chambers |
|-------------------------|-----------------------------------------------------------------------------------|
| PPC | 22 PPC 6mm PPC |
| 223 Rem. | 223 Rem. 6x45 |
| 243 Win. | 243 Win. 260 Rem. 7mm-08 308 Win. 338 Fed 358 Win. |
| 244 Rem. | 244 Rem. 6mm Rem-244 |
| 257 Roberts | 257 Roberts 6.5x257 Roberts 7mm Mauser (7x57) |
| 284 Win. | 284 Win. 22-284 6mm-284 25-284 6.5-284 270-284 30-284 35-284 |
| 30-06 Spring. | 25-06 6.5-06 270 Win. 30-06 8mm-06 338-06 35 Whelen |

Web



Go to our Video Library to view our Headspace Gage video.



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WARRANTY

All Forster Products are warranted against defects in materials and workmanship for the life of the product. Parts excluded from the warranty are those that, by nature of their function, are subject to normal wear (such as springs, pins, etc.) or that have been altered, abused, or neglected. If the product is deemed defective by workmanship or materials, it will be repaired, reconditioned or replaced (at Forster's option). This warranty supersedes all other warranties for Forster Products, whether written or oral.

ISO 9001: 2015 accredited

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