

### THE WILSON CARTRIDGE CASE GAGE

#### INTRODUCTION TO WILSON CASE GAGE:

Congratulations on your purchase! We thank you for supporting our MADE IN THE USA family owned business! LE WILSON is the ORIGINAL Case Gage Manufacturer, we have been making Case Gages since 1936! By using WILSON TOOLS & GAGES, you are on your way to developing more accurate uniform handloads. The Case Gage has several uses and allows for proper case prep in determining case length and can be used as a basis for setting up full length sizing dies. Below we have outlined how to best use your Gage and enjoy years of use.

This is a one piece, non-adjustable gage for checking fired and resized cartridge cases for head to datum and over-all case length. Our Gage are NOT made with chambering reamers, but with special cut reamers giving extra clearance both in front of and behind the shoulder so as to eliminate any possibility of contact except at the gaging point.

#### INSTRUCTIONS

##### Step 1: Clean Gage with Solvent, Check Contents

Wipe all oil from inside of the gage and all gaging surfaces. Look into the Gage to see that it is free of any and all debris.

##### Step 2: Check Case Headspace in Gage

Hold the gage in a horizontal position and insert the AS-FIRED case into the gage so it rests firmly against the shoulder of the Gage. Always check as-fired cases before sizing. This provides a basis for sizing. ALL chambers are NOT equal in headspace!

##### Step 3: Now hold the Gage in the Vertical Position

The step on the head side of the gage measures min/max headspace. Shoulder datum to head length measurements will be set to SAAMI specifications if available for your particular caliber. Take note of how your AS-FIRED case sits in the gage. Does it sit above, below or in-between the min/max steps of the gage? If you have the **WILSON Case Gage Depth Micrometer**, you can use this to take a measurement as to where the case sits in the gage. If not, you may use a straight edge, such as a metal or plastic ruler or scale.

##### Step 4: Determine how much to size

Did you know that you sizing die can be adjusted? This is done by threading the die, slightly clockwise (more sizing) or counter-clockwise (less), sometimes just 1/8th of a turn can make all the difference in getting the correct case size.

**YOU WILL NEED TO DECIDE ON ONE OF THREE OPTIONS**

- 1) Do I want to size for a specific chamber?
- 2) Do I want to size to fit several chambers of the same caliber?
- 3) Do I want to load to SAAMI specifications?

##### Option 1 - LE WILSON Preferred Method

Measure AS-FIRED cases, then adjust sizing die to push back shoulder approx .002" for bolt gun and .004" for semi-autos

##### Option 2

Measure AS-FIRED cases from both gun's chambers, then adjust die to size the larger case so it will fit the smaller of the two chambers. Push shoulder back .002" for bolt actions and .004" for semi-autos.

##### Option 3

Adjust sizing die so AS-FIRED brass will sit at max or slightly under max headspace. If using this option it is best to check each case, especially if you are using a mixed bag of brass or range brass. We DO NOT recommend using mixed brass as the majority of issues in reloading arise from using mixed brass. If you do, it is best to separate your brass into three piles; over max, in between max/min and under min. That way you will see a more consistent size and can adjust your die for each batch.

##### Step 5: Check Case Length in Gage

Once you have completed sizing all your cases, you can then move onto verifying your Cartridge Case Length is within correct specifications or if you need to trim.

**PLEASE NOTE:** If you have cases that are over max headspace you will not get an accurate reading on case length and you will NOT be able to use the gage for this measurement unless you size to at least max headspace.

- 1) Set Case Head on flat clean surface, such as granite or steel works best.
- 2) Slide the WILSON Case Gage over the top of the case so it rests on your flat surface. The gage should be over the top of the case.
- 3) Slide a ruler or scale over the top of the max end of the gage. If the case clips the straight edge, your case is over length and will need to be trimmed before loading.
- 4) You can then slide the straight edge in the lower step. If your case clips the straight edge you are between min/max Case Length. Finally, if your case does not touch the straight edge you are under min case length.

**CAUTION: Do not hold gage in hands to measure case length. Head of Case and End of Gage need to be on the same surface for the reading to be accurate.**

Top of gage= min/max headspace  
.005" groove



Caliber will be shown here

Case Length min/max on this side  
.010" groove



### NOTE ON HEADSPACE:

In the making of rimless ammunition and in the chambering of rifles for the same, a close relationship should be maintained between the cone-to-head length of the cartridge and the same dimension (headspace) in the chamber. This is because uniform ignition depends on this fit, as the shoulder in the chamber supports the cartridge against the blow of the firing pin. In many rimless calibers the cone-to-head length of a new cartridge will be slightly greater than the cone-to-bolt face length (headspace) of a correctly chambered rifle. Thus, there may be some "feel" when closing the bolt of a new cartridge.

## Frequently Asked Questions

- 1) My cases sit over max headspace but still chamber in my gun.  
Usually points to a slightly oversized chamber. You can still use the gage but the key is to base your sizing off of your AS-FIRED cases. Insert AS-FIRED case in gage, measure, resize, then measure again. However, you will NOT be able to use the gage to measure min/max case length.
- 2) My cases do not fit in the gage.  
If your cases do not fit in the gage, then you may have the incorrect caliber gage, an improperly re-chambered rifle, or a variation of your current caliber. (260 Rem vs. 260 Ackley Improved).
- 3) My new brass falls below the min step on the gage.  
This can be very common for several calibers of NEW/UNFIRED brass. Some calibers will sit up to .030" below the min step. Brass manufacturers will do this when they know there is a large variance in headspace for a particular caliber.
- 4) My cases have different headspace measurements after sizing.  
If you are sizing from more than one gun or a mixed batch of brass from the range, you could run into this issue. This is due to the fact that some of the brass will be harder, (More spring back when sizing) There will be a variance in headspace (Over Max, under min, etc.). It would be best to separate into three piles before sizing to achieve more consistent results.
- 5) How do I know how much I am sizing my shoulder back?
  - 1) Measure an AS-FIRED de-primed case (Using LE Wilson Depth Micrometer) - Take note of that measurement
  - 2) Run that same case through your Full Length Sizing Die at it's current setting.
  - 3) Put the case back into the Case Gage and take another measurement. Take note.
  - 4) You will want to adjust the die to size back the shoulder about .002" on a bolt gun or .004" for semi-autos
- 6) My case passes in the gage but will NOT chamber in my gun.  
The cartridge case gage is not made to measure body diameters or neck diameters. The reason we do not measure body diameters is because we do not want the body of the case to interfere with the headspace measurement. And in MOST cases if you push the shoulder back to where you want it... The sizing die should also size the body to the desired dimension.
- 7) Why does head-space make a difference in my reloads?  
The gage helps to prevent over-sizing, in turn, this extends brass life, increases safety of your reloads and you will benefit from a more accurate shot as your cases will be very close to your chamber dimensions. The reduction of excess movement of your brass in your chamber upon firing, results in a more accurate round.

### LIMITED WARRANTY

L.E. Wilson, Inc. ("Seller") warrants, to the original purchaser only, that all Seller's tools and gages will be free from defects in material or workmanship under normal use for a period of one year from date of purchase ("normal use" means use as described in accompanying instructions and as shown at [www.lewilson.com](http://www.lewilson.com)). SELLER'S SOLE OBLIGATION AND YOUR EXCLUSIVE REMEDY under this Limited Warranty and, to the extent permitted by law, any warranty or condition implied by law, shall be, at Seller's option, the repair or replacement of a tool or gage, without charge, which is defective in material or workmanship and which has not been altered, misused, carelessly handled, or repaired by persons other than Seller. To make a claim under this Limited Warranty, you must return the complete tool or gage, shipping prepaid, to Seller at P.O. Box 324, Cashmere, WA 98815. Please include a dated proof of purchase with your tool or gage. You may contact Seller at (509) 782-1328 to discuss the problem.

SELLER MAKES NO FURTHER WARRANTIES, AND DISCLAIMS ANY AND ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO ITS PRODUCTS, INCLUDING WITHOUT LIMITATION MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

### LIMITATION OF LIABILITY

SELLER, INC. ("SELLER") SHALL NOT BE LIABLE FOR ANY PERSONAL INJURY OR DEATH WHICH MAY ARISE IN THE COURSE OF, OR AS A RESULT OF, PERSONAL, COMMERCIAL, OR INDUSTRIAL USES OF ITS PRODUCTS. IN NO EVENT SHALL SELLER HAVE ANY OBLIGATION OR LIABILITY FOR ANY EXEMPLARY, PUNITIVE, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, USE OR GOODWILL), WHETHER BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER THEORY OR FORM OF ACTION. THE TOTAL LIABILITY OF SELLER FOR DAMAGES RELATING TO ANY OF ITS PRODUCTS SHALL BE LIMITED TO THE PURCHASE PRICE OF SUCH PRODUCTS.