

# Illinois Reloading Lab's

## Brass Comparative Results Phase II

September 2016

Performance at the range.

Regardless of the numbers, the most important test for any rifle brass is how it performs when loaded and fired. To compare the four brands, the following test was developed at the Illinois Reloading Lab facility.

- 1) Select 10 of the most consistent cases (using the data above) from within each brands 50 count lot.
- 2) Run each piece through a die that only ensure the neck's ID (Internal Dimensions) were perfectly round
- 3) Each case was loaded with
  - a. Federal 210M (Match Grade) primers
  - b. 46.04 grains of Hodgdon CFE223 (yes we did measure powder to the hundredths of a grain)
- 4) 40 Hornady 168 grain .308 match BT bullets we chosen (with consistent wt and length base to Ogive)
- 5) Each bullet was hand seated to the same exact depth with the Lab's L.E. Wilson Micrometer Seater
- 6) Each completed round was measured for bullet concentricity and corrected (if needed) to .001 or less

Since the intent of the assessment was to show the differences between the brands, no case uniforming, resizing, trimming or deburring was done to any of these cases. We wanted to show how each brand performed "as-is".

The Rifle Used for this test was an enhanced Remington 700 SPS Varmint. 1 in 12 Rt Twist, 26 in, .84" diameter (at the muzzle) barrel. The action sits in a HS Precision stock, Jewel trigger (tuned to 2.5 pounds), David Tubb Speedlock firing pin and spring. Our optics are Leupold Mark 4, 8.5x25 attached to a 20MOA LaRue Tactical quick release 30mm ring/base package. All shots were from a bench rest at 100 laser measured yards. Weather conditions were 85 degrees HOT with high humidity and a 3-6mph right to left quarter value wind. We purposely choose this range due to the real world conditions.

The session started with 2 fouling rounds to allow the rifle to settle in. and carbon up.

Evaluation rounds were fired in 3 shot groups with 1 minute between each shot to allow for barrel cooling.

After each 3 shot group, the rifle was left to cool for 5 minutes before the next brand was fired.

The order of firing was Brass "A", Brass "B", Kinetic and Brass "C". Three, "3 shot" groups were fired from each brand in round robin fashion to eliminate any shooter errors from impacting the results. The best **3 shot group** was chosen (as long as it was consistent with the other two).



Brass "A"



Brass "B"



Kinetic



Brass "C"

Group Sizes were measured using the center of the two furthest bullet holes with a digital Dial Caliper.

"A" Group Size = .3965 3<sup>rd</sup> Place

"B" Group Size = .3765 1<sup>st</sup> Place

Kinetic Group Size = .3840 2<sup>nd</sup> Place

"C" Group Size = 1.0590 4<sup>th</sup> Place

**Final Conclusion** – When you invest hard earned money on match quality brass you should expect consistency, predictability and small group size. A phrase commonly used by precision marksman is "Speed doesn't win matches, accuracy does". So for those of you looking for quality brass, the results of this evaluation may come as a surprise. Street prices for our participants are as follows:

Brass "A" Box of 100 @ 74.99= \$0.75 per piece

Brass "B" Box of 50 @52.99= \$1.06 per piece

Kinetic Box of 100 @55.00= \$0.55 per piece

Brass "C" Bag of 100 @41.99= \$0.42 per piece

Looks like you don't have to break the piggy bank to get solid performing match brass. Other brass may come with a premium price and the results are noteworthy. But the Kinetic Brass really performed. I have to give credit to the team at Kinetic Industries. The group size difference between first and second place (Kinetic) was a mere .0075 of an inch, but at nearly half the price I have to declare **KINETIC INDUSTRIES the winner in this study**. If Kinetic was able to presort their brass by weight before packaging and watch their neck thickness variance, they would really take the brass industry by storm.