

# BSC

Produced by 11-time National High-Power Champion, David Tubb

## [Bearing Surface Comparator]

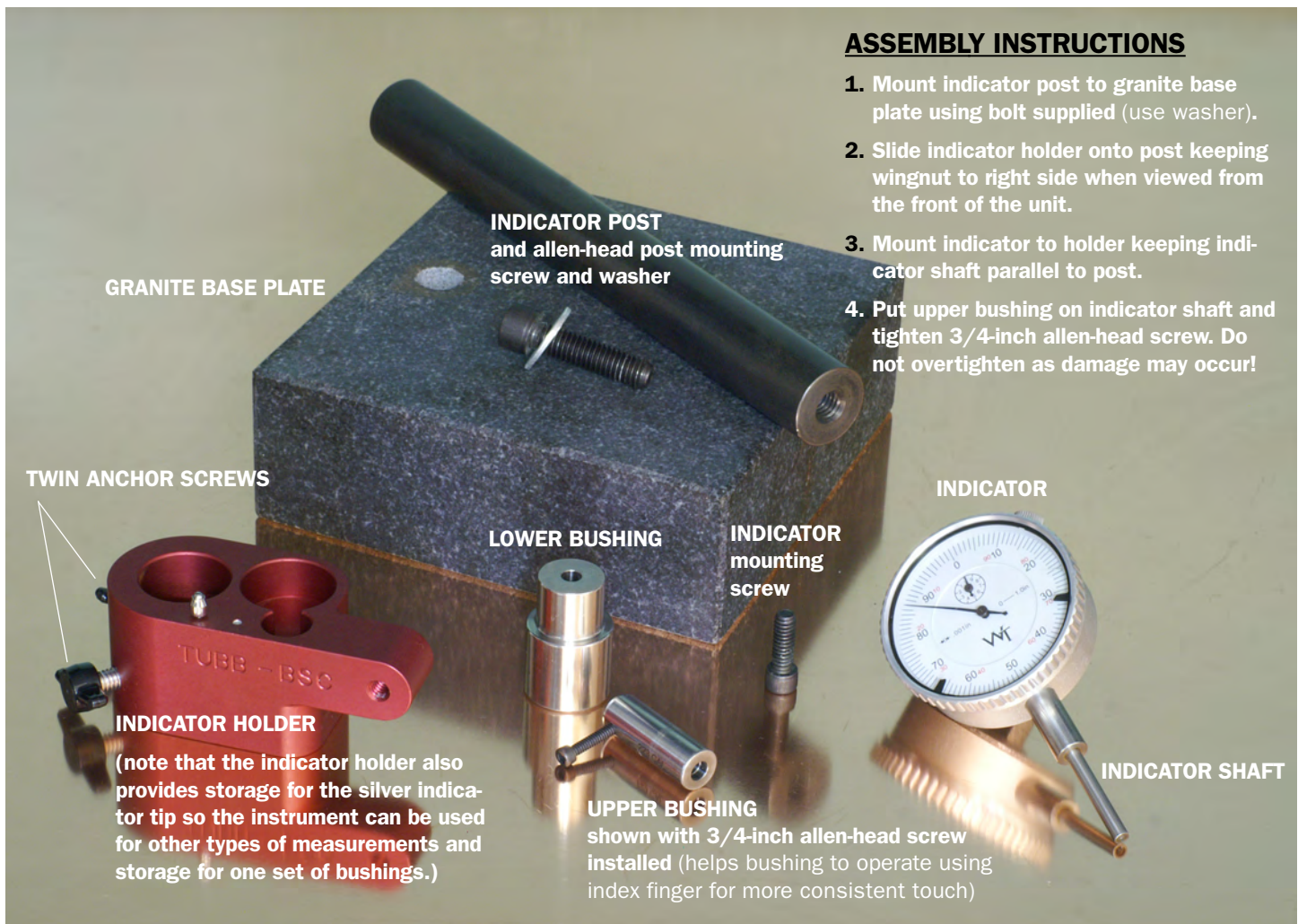
segregates bullets by bearing surface

### TOOL OVERVIEW

Grouping bullets together that are more nearly the same helps attain the goal of eliminating as many variables as possible. The Superior Shooting Systems Inc. Bearing Surface Comparator [BSC] provides an effective way to measure the surface of the bullet which is in contact with the bore of your barrel. Small differences (even a few thousandths) in bullet bearing surfaces generate enough more (or less) friction that the velocity and pressures of the load are affected. Uniforming bullets into a consistent measurement range will allow your standard deviation and extreme spreads to become closer, and, as a result, shoot smaller groups on target.

### ASSEMBLY INSTRUCTIONS

1. Mount indicator post to granite base plate using bolt supplied (use washer).
2. Slide indicator holder onto post keeping wingnut to right side when viewed from the front of the unit.
3. Mount indicator to holder keeping indicator shaft parallel to post.
4. Put upper bushing on indicator shaft and tighten 3/4-inch allen-head screw. Do not overtighten as damage may occur!



The BSC is designed as a caliber-specific instrument with different caliber attachments (bushings) available that fit from .222 through .338 diameter (caliber) bullets. A caliber set consists of two different tapered bore diameter bushings. Order sets by calling Superior Shooting Systems Inc. 806-323-9488.

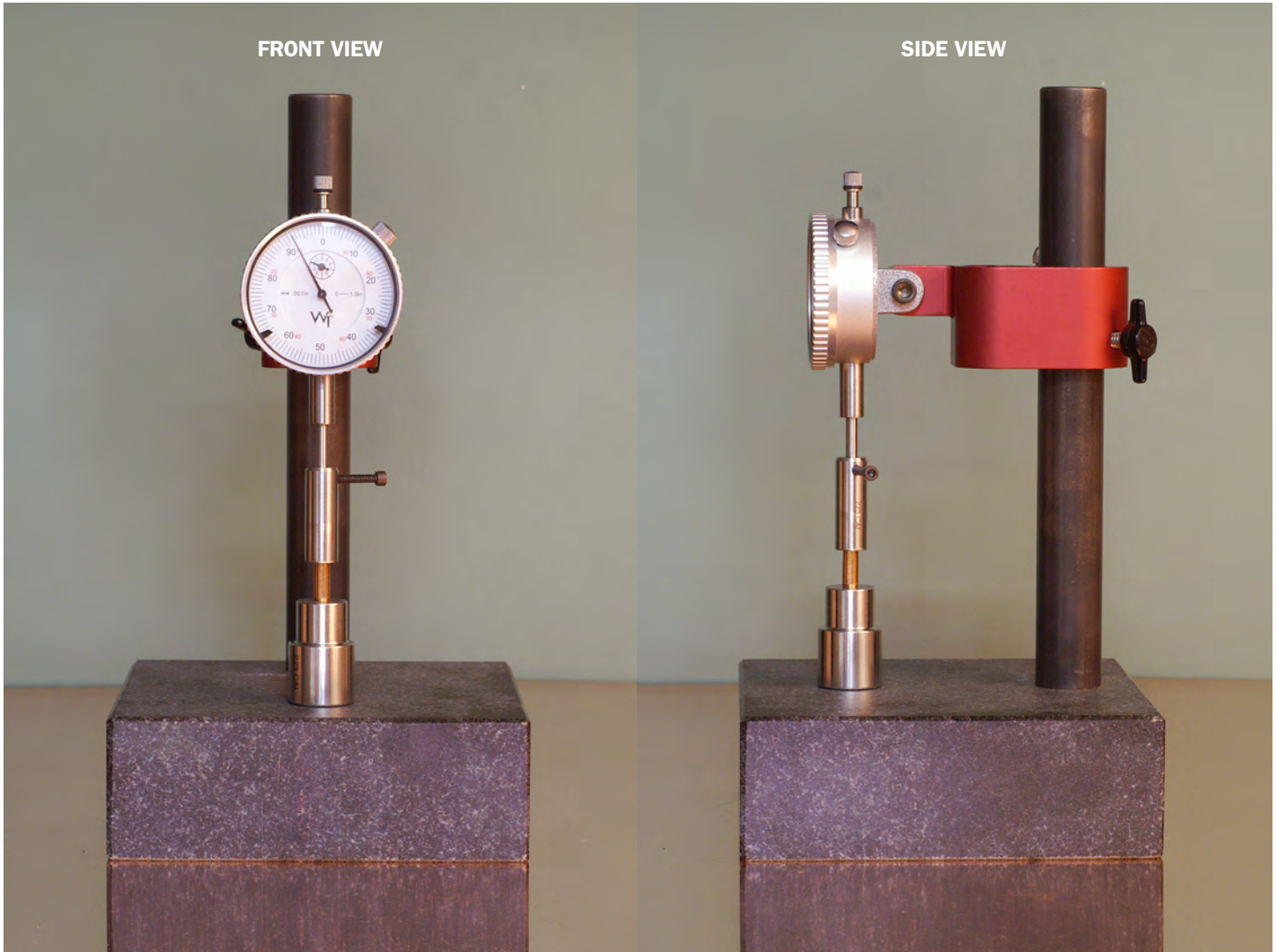
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### TOOL USAGE

The BSC design allows for the tip of the bullet to be up or down in the lower bushing when measured. This is strictly a matter of individual preference -- either way allows for equal efficiency and accuracy. Whichever orientation you choose, however, continue measuring the same -- all nose-up or all nose-down for that group of bullets.

The BSC can also be used with loaded ammunition to check a round's frontal bearing surface to base of the case measurement. This measurement allows you to segregate the overall lengths of the loaded rounds (take care to be certain that your primer is fully seated below the rim of the case so it will not interfere with the accuracy of the measurement reading). On the next page there are a few tips to help you get the most from this tool.

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#### TIPS

To get repeatable accurate results, the base sleeve should be perfectly centered under the dial indicator's stem-mounted sleeve. When setting up the BSC, keep the allen head screw which attaches the dial indicator to the red mounting finger somewhat loose until you put a bullet into the bottom bushing. Let the dial indicator stem with the top bushing attached then slide onto the protruding end of the bullet. Keeping light pressure from your index finger on top of the stem (pushing downward on the bullet), tighten the allen head to set the dial indicator in the proper position. This ensures top accuracy and squareness of the BSC instrument.

After the BSC instrument is correctly set up, it takes a few minutes to become familiar with the fit and feel and pressure of the bullet into the base bushing. When you are getting consistent readings from repeated attempts at measuring one bullet you'll be on your way. There should be slight pressure against the bullet when taking a measurement reading to ensure that the bullet is fully and properly seated and, therefore, providing an accurate reading. Many report that a gentle "bumping" technique returns highly accurate readings. Raising the indicator-mounted bushing about one tenth of an inch and then letting it drop onto the bullet works well for most. Others prefer applying pressure using the 3/4-inch allen-head screw using the index finger.

#### **MEASURING THE BEARING SURFACE**

1. **Place bullet in the lower bushing.**
2. **Lower upper bushing onto lower bushing.**
3. **Note dial indicator number or set the dial to "0" under the indicator hand** (make sure to loosen locking screw on indicator face)
4. **Using the 3/4 inch allen screw and the first joint of your index finger, lift the upper bushing off of the measured bullet, slide out the lower bushing, and replace with new bullet to be measured.**

**Remember, you aren't looking for good bullets, you're trying to segregate various bearing surface lengths. This unit is a comparator, it does not give you an actual dimension of the bullet ogive but a bullet-to-bullet comparison.**

**We recommend sorting bullets to groups within 0.003 inches variation.**