



Rifle accuracy is contingent upon many factors. One of the most important is the condition of the barrel. For optimum accuracy, the bore diameter should be uniform and the barrel should be straight. Irregularities in either straightness or bore diameter can have a negative effect upon accuracy. Brownells Rifle Bore Straightness Gauges provide the gunsmith with precision instruments to properly check for straightness and bore uniformity.



### WARNING



Never attempt to disassemble or reassemble a firearm unless you are absolutely certain that it is empty and unloaded. Visually inspect the chamber, the magazine and firing mechanism to be absolutely certain that no ammunition remains in the firearm. Disassembly and reassembly should follow the manufacturer's instructions. If such instructions are not immediately available, contact the manufacturer to see if they are available. If they are not available at all, then you should consult other reference sources such as reference books or persons with sufficient knowledge. If such alternative sources are not available and you have a need to disassemble or reassemble the firearm, you should proceed basing your procedures on common sense and experience with similarly constructed firearms.

With regard to the use of these tools, the advice of Brownells Incorporated is general. If there is any question as to a specific application it would be best to seek out specific advice from other sources and not solely rely on the general advice and warnings given.

There are six gauges in the .30 caliber set. The diameters of these Gauges range from .2990" to .3015" in increments of .0005". There are also six gauges in the .223 set ranging in diameter from .2175" to .220" in increments of .0005". Carefully inspect each gauge before using to make sure there are no scratches or dings on the Gauge that would alter the diameter or restrict its passage through the bore. The Gauges should be cleaned with a soft, cotton cloth to remove any dust, dirt or carbon. This should be followed by a light coating of gun oil. Also, check the threaded hole in the end of each Gauge to make sure it is clear of obstructions. This hole is threaded 8-32 tpi and is compatible with most cleaning rods. If the cleaning rod that you intend to use has an 8-32 male threaded end, (most models of the Dewey Coated Rods) the Gauge can be attached directly to the rod. If the rod has a female threaded end (Dewey Service Rifle, Dewey Stainless, Hoppes, Rig and Outers rods) the 8-32 tpi male threaded adapter supplied with the Gauges must be used.

### HOW TO USE

Make certain the firearm you are working on is unloaded. Check the chamber as well as the magazine to make sure no live ammunition is present. Thoroughly clean the bore and remove all traces of carbon or bullet jacket fouling. These substances, if left in the bore, can constrict the bore to the point that accurate measurement with the Gauges is impossible. This is especially critical with the .223 gauges. After cleaning the bore, lightly lubricate a cleaning patch with a good grade of gun oil and run the patch through the bore. This will protect the bore from rust and facilitate the passage of the Gauges through the barrel.

Attach the appropriate Gauge to a suitable cleaning rod and carefully insert the Gauge into the barrel. The Gauge can be inserted from either the muzzle or breech depending upon the design of the rifle. If you are not sure of the exact bore diameter, start with the smallest diameter Gauge and work

# BROWNELLS® RIFLE BORE STRAIGHTNESS GAUGE KITS

READ & FOLLOW THESE  
**INSTRUCTIONS**

## BROWNELLS

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your way up. If there are bends or constricted areas in the barrel, the Gauge will either be unable to move forward or you will be able to feel a noticeable drag or resistance to the movement of the Gauge.

**CAUTION: NEVER ATTEMPT TO FORCE THE GAUGE THROUGH THE BARREL! DO NOT** attempt to use the Gauge as a tool to iron out dents or other defects in the bore. This is a measuring tool only! Use very light pressure to insert or move the Gauge through the bore.

When you are finished using the Gauges, wipe them down with a soft cotton cloth, apply a bit of preservative oil, and return them to the storage case. Do not allow them to be dropped or misused in any way. Given appropriate care, these Gauges will last for many years. After using these Gauges, be sure to clean the bore and chamber of any remaining oil before the rifle is fired.

Reassemble the firearm according to the manufacturer's instructions. Check for proper functioning using **ACTION PROVING DUMMIES**. Make sure **ALL SAFETY MECHANISMS** are fully functional as designed and approved by the manufacturer. If these tests prove satisfactory, test-fire the firearm with live ammunition in a **SAFE** and **APPROPRIATE** manner. **IMPORTANT!** Start the live ammunition tests by first loading an **ACTION PROVING DUMMY**, then a live round, into the magazine. Only after several tests have been conducted in this manner should additional rounds be placed in the magazine and fired.