THE GOLFWORKS®

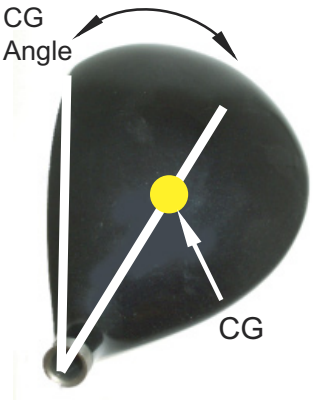
Instructions For:

Golf Mechanix Shaft Rotation Dial Indicator

Code: **GM1016**

Shaft Rotational dial

The Shaft Rotational Dial is a handy gauge that can be used for a variety of measurements including identifying the CG angles of clubheads. It is designed to mount to the butt of an ungripped shaft. This is easily accomplished by placing the butt end of the shaft into the threaded clamping device in the center of the dial. Rotate the black cap clock-wise to tighten the dial to the end of the shaft. Once this is in place the clubmaker can use the gauge for the chosen measurement.



The Center of Gravity (CG) angle is an indicator of how toe-ward and far back the CG is located behind the centerline of the shaft. It is an uncommon measurement that provides a great deal of insight to the performance of a clubhead. There is a direct correlation between the CG angle and the moment of inertia (MOI), there are many parallels between the two measurements which can indicate how forgiving (or unforgiving) a clubhead may be. Irons with less offset and woods with more face progression tend to have a lower CG angle than offset irons and woods with less face progression. The higher the CG angle the more stable the head usually is on off-center impacts, especially those occuring more towards the toe (which is where most golfers tend to mis-hit their clubs).

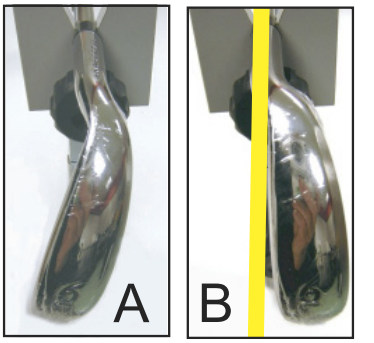
Follow these steps to measure the CG angle of a golf club.

1) The grip must be removed if the club is shafted, or a shaft must be inserted into the hosel if you are measuring an un-shafted club. In either case a grip cannot be on the shaft.

2) Attach the Shaft Rotational Dial to the butt end of the shaft.

3) The club must be laying across supports or a flat surface enabling both the head and butt portion of the shaft to rotate freely. In the illustration to the right a Ferrule Turning Arm is used to support the shaft with head and dial.

4) Position the clubface toe down with the leading edge of the face parallel to the shaft axis (see "A"). At the same time zero out the Rotational Dial with the number "0" aligned with the indicator marker (at the 12:00 position as seen above in the right hand corner). Let go of the clubhead. It's CG will force the two to twist off-center and come to rest in a natural position (see "B"). The difference between "0" and the number the gauge has settled at, is the clubhead's CG angle.



Many clubmakers will create a database of CG angles of various clubheads so they have a record of which heads they work with incorporate more forgiving traits than others.

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