

Matching Golf Clubs by MOI « Wishon Golf

Matching Golf Clubs by Moment of Inertia – a Replacement for Swingweight

Now that TWGT has made it possible for clubmakers to offer matching of clubs to their Moment of Inertia (MOI) as an alternative to swingweight matching, we have received a lot of questions about what MOI matching is and how it can offer clubmakers a better way to build clubs that truly are matched to each other and identical in swing feel. As of 2011, more than 500 custom clubmakers now offer their golfers the shot consistency improvement benefits of MOI matching.

What is MOI Matching?

The MOI of any object is a measurement of its resistance to being put in motion around a defined axis of rotation. Related to golf clubs, if each club in a set requires a different amount of force to swing the club (swinging the club to rotate around our body), the golfer cannot be as consistent swinging each different club in the set. In most simple form, MOI matching scientifically makes each club require the same amount of effort to swing. This is what makes MOI matched clubs offer better shotmaking consistency than swingweight matched clubs. Swingweight matching does not make each club the same in terms of the amount of force required by the golfer to swing each club and hit the shot. MOI matching does. However, because golfers can be quite different in their strength, tempo and swing mechanics, the right MOI must be identified and custom fit for each golfer to allow the concept to properly work.

Is MOI Matching a new high-tech clubmaking concept?

Not at all. Back in the 1920s when swingweight was developed, its originators were aware of the principles of MOI matching and tried to make swingweight matching of clubs simulate MOI Matching. They failed because the principle of the swingweight scale they developed could not truly accomplish the task of measuring the MOI of a golf club. Over the decades since the development of swingweight, engineers familiar with the principles of MOI have been in agreement that MOI matching would truly make all clubs within a set swing with exactly the same feel, while swingweight matching could not.

Has MOI Matching ever been done previously in golf clubs?

In the late 1990s, Tommy Armour Golf Company introduced their EQL (Equal Length) model clubs to the market. By making all of the woods the same length and same total weight as the 5-wood, and all of the irons the same length/total weight as the 6-iron, the company did achieve a true MOI match for all the clubs within each segment of the set. This concept failed for two reasons; first, because the one MOI measurement to which all the EQL woods and irons were

built did not fit all golfers, and second, because the concept of all woods and all irons being the same length was much too radical for golfers to accept. This is rapidly changing today with the wide acceptance of Single Length irons, many thanks to DeChambeau.

Does MOI Matching change the fitting process?

No. MOI Matching is simply a replacement for swingweight matching in the fitting process. Clubmakers will fit golfers for every one of the other key fitting specifications based on the same fitting procedures that they have developed and with which they are experienced. Once all of the fitting specifications are determined by the clubmaker, then MOI Matching is brought in to guide the clubmaker in how the clubs will be assembled with regard to final headweight, and in some cases, the final length adjustments.

What will a golfer notice when switching from swingweighted to MOI matched clubs?

We have yet to hear from a clubmaker using the MOI matching system that a golfer for whom MOI matching was performed did not notice a difference in the swing feel of all of the clubs in the set, and a minor to significant increase in the percentage of solid, on-center hits with their clubs. If the golfer “waggles” each MOI matched club, providing they are sensitive to the weight feel of each club, they will detect a progressively increasing headweight feel as the clubs get shorter in the set. But as soon as the clubs are swung full, the golfers all report that they can close their eyes, switch clubs in the set, and not really detect any difference in the total swing feel of the clubs from each other. **This is especially true of the Sterling Single Length clubs.**

If I take a set of MOI matched clubs and measure each club on a swingweight scale, what will I see?

Depending on the MOI each club is made to possess, the swingweight of the clubs in an MOI matched set will very slightly increase from the longest club in the set to the shortest. Most typical is to see the swingweight increase by 0.5 swingweight points per club down through the set. This is very definitely one of the main reasons golfers like the swing feel of their MOI Matched clubs and do experience an improvement in shot consistency.