

Shaft Fitting

Shaft Fitting is one the most confusing aspects of fitting to many clubmakers. If you take the time to read the information on this page, the selection process for a suitable shaft to match each golfer's swing, performance and feel requirements will not be difficult. Remember, the primary function of the shaft is to control the total weight of the club and to modify or enhance the launch angle of the shot. What is critical in accurate shaft fitting is for all clubmakers to take the time to analyze a few significant shaft fitting **movements** in the golfer's swing and compare these swing moves to the references listed in each shaft data table as well as in the Shaft Fitting Table.

STEP 1

Measure the golfer's **swing speed** with the driver (wood shaft fitting) and 5-iron (iron shaft fitting).

STEP 2

Note the golfer's typical swing with the driver or 5-iron for the *speed* and *force* of the **back-to-downswing transition**. It is an important point in the determination of the swing speed rating of a suitable shaft as well as the length, total weight and swing weight of the club. Try to note as a general observation whether the golfer's transition move is:

Smooth (#1)

The golfer either has a distinct "pause" between the end of the backswing and beginning of the downswing, or makes a transition move that does not appear to put very much initial bending on the shaft.

Average (#2)

An average transition move will not have a distinct pause between the end of the backswing and beginning of the downswing. On the other hand, it will not look as if the golfer really couldn't wait to "pour on the coal" to start the club down.

Forceful (#3)

The forceful transition will exert a visible bend on the shaft as the club begins down and will give the clubmaker the distinct impression that the golfer is trying to "hit" the ball hard.

STEP 3

Note the golfer's typical swing for the **overall swing tempo**. This is another critical swing characteristic that is essential in making decisions about the golfer's swing speed rating of a suitable shaft as well as the length, total weight and swing weight of the club. Try to note as a general observation whether the golfer's swing tempo is:

Smooth (#1)

A smooth tempo swing will appear to be that of a "swinger", who swings the club rhythmically and with either no sense of, or a very subtle sense of accelerating the club to impact. Swing tempo timing of over 1.2 seconds.

Average (#2)

An average swing tempo will display a sense that the golfer is definitely trying to accelerate the club to impact, with some sense of control, but without a real sense of aggression in the downswing. Swing tempo timing of 0.9 to 1.2 seconds.

Fast (#3)

A fast swing tempo should definitely convey a sense of aggression in the downswing and that the golfer is really trying to accelerate the club and "hit" the ball.

STEP 4

Note the golfer's typical swing with the driver or 5-iron for their **release move** – the point in the downswing when they unhinge the wrist-cock. This is another critical swing characteristic when making decisions about the bend profile of the shaft and whether a flight control type of shaft will or will not display its trajectory design when the golfer hits shots. Try to note as a general observation whether the golfer's release of the wrist-cock is:

Early (#1)

In an early release, the golfer almost immediately begins to unhinge the wrist-cock right when the club starts down from the transition. An early release is characterized by the clubhead immediately moving away from the golfer at the beginning of the downswing, or with the club extended straight out from the arms before the arms reach waist high on the downswing.

Midway (#2)

A "midway" release is when the golfer holds a major portion of the wrist-cock intact at the start of the downswing, but begins to unhinge the wrists just before the arms reach waist high on the downswing.

Late (#3)

A golfer with a late release is definitely able to retain the angle between the shaft and the arms until the arms are at or below the waist on the downswing.

STEP 5

Compile the number rankings of the golfer's Transition, Tempo and Release and note as follows:

Transition	Tempo	Release	How Prevalent	Swing Speed Rating Decision	Shaft Weight	Bend Profile Options
1	1	1	D, E, C	* Golfer's swing speed is at the UPPER end of the range	65g or under	Butt Soft/Tip Soft
1	1	2	D, E, C	* Golfer's swing speed is at the UPPER end of the range	65g or under	Butt Soft/Tip Soft or Medium
1	1	3	A, B, C	* Golfer's swing speed is at the MIDDLE to UPPER end of the range	65g or under	Butt Soft/Tip Medium or Firm
1	2	1	D, E, C	* Golfer's swing speed is at the MIDDLE to UPPER end of the range	55g to 75g	Butt Soft/Tip Soft
1	2	2	A, E, C	* Golfer's swing speed is at the MIDDLE to UPPER end of the range	55g to 75g	Butt Soft/Tip Soft or Medium
1	2	3	A, B, C	* Golfer's swing speed is at the MIDDLE to UPPER end of the range	55g to 75g	Butt Soft/Tip Medium or Firm
1	3	1	X	* Golfer's swing speed is at the MIDDLE of the range	65g to 115g	Butt Soft/Tip Soft
1	3	2	X	* Golfer's swing speed is at the MIDDLE to UPPER end of the range	65g to 115g	Butt Soft/Tip Soft or Medium
1	3	3	X	* Golfer's swing speed is at the MIDDLE of the range	65g to 115g	Butt Soft/Tip Medium or Firm
2	1	1	A, B, C	* Golfer's swing speed is at the MIDDLE to UPPER end of the range	55g to 85g	Butt Soft/Tip Soft
2	1	2	A, B, C	* Golfer's swing speed is at the MIDDLE to UPPER end of the range	55g to 85g	Butt Soft or Medium/Tip Soft or Medium
2	1	3	A, B, C	* Golfer's swing speed is at the MIDDLE of the range	55g to 85g	Butt Soft or Medium/Tip Medium or Firm
2	2	1	D,E,F	* Golfer's swing speed is at the MIDDLE to UPPER end of the range	55g to 85g	Butt Soft or Medium/Tip Soft or Medium
2	2	2	D,E,F	* Golfer's swing speed is at the MIDDLE of the range	55g to 125g	Butt Soft or Medium/Tip Soft or Medium
2	2	3	B,C	* Golfer's swing speed is at the MIDDLE to LOWER end of the range	55g to 125g	Butt Soft or Medium/Tip Medium or Firm
2	3	1	B,C	* Golfer's swing speed is at the MIDDLE to LOWER end of the range	65g to 115g	Butt Medium or Firm/Tip Medium or Soft
2	3	2	B,C	* Golfer's swing speed is at the LOWER end of the range	65g to 125g	Butt Medium or Firm/Tip Medium
2	3	3	B,C	* Golfer's swing speed is at the LOWER end of the range	65g to 125g	Butt Medium or Firm/Tip Medium or Firm
3	1	1	X	* Golfer's swing speed is at the MIDDLE of the range	65g to 125g	Butt Medium or Firm/Tip Soft or Medium
3	1	2	X	* Golfer's swing speed is at the MIDDLE of the range	65g to 125g	Butt Medium or Firm/Tip Medium or Firm
3	1	3	X	* Golfer's swing speed is at the MIDDLE of the range	65g to 125g	Butt Medium or Firm/Tip Medium or Firm
3	2	1	C	* Golfer's swing speed is at the MIDDLE to LOWER end of the range	65g to 125g	Butt Medium or Firm/Tip Soft or Medium
3	2	2	C	* Golfer's swing speed is at the MIDDLE to LOWER end of the range	65g to 125g	Butt Medium or Firm/Tip Medium or Firm
3	2	3	C	* Golfer's swing speed is at the LOWER end of the range	65g to 125g	Butt Firm/Tip Medium or Firm
3	3	1	B,C	* Golfer's swing speed is at the LOWER end of the range	65g to 125g	Butt Firm/Tip Soft or Medium
3	3	2	C	* Golfer's swing speed is at the LOWER end of the range	65g to 125g	Butt Firm/Tip Medium or Firm
3	3	3	C	* Golfer's swing speed is at the LOWER end of the range	65g to 125g	Butt Firm/Tip Firm

Legend Transition: 1-smooth; 2-avg; 3-quick Tempo: 1-smooth; 2-avg; 3-fast Release: 1-early; 2-midway; 3-late

How Prevalent: X-rare; A-occasionally in ladies; B-occasionally in seniors; C-occasionally in regular men; D-frequent in ladies; E-frequent in seniors; F-frequent in regular men

Note: Under Shaft Weight Recommendation Ranges of 65g-115g or 55g-115g, a higher swingweight, or higher MOI is recommended in the assembly of the club for Tempos of #2, 3 and/or Transitions of #2, 3.

ZT Series High Flight



Within this design there are two very distinctly different shafts, the high and mid/low flight. Unlike the InterFLEX, in which the high and mid/low versions have the same butt stiffness, the ZT high flight has a softer butt stiffness than the mid/low. That means the ZT high is for the golfer with

smooth to slightly quick transition from the end of the backswing to start of downswing, a smooth to slightly quick tempo, with an early to mid downswing release of the wrist cock.

The ZT M/L is intended for the golfer who is moderately quick to very quick on the transition, has a reasonably fast to very fast swing tempo, and has a release that is mid downswing to later on the downswing.

InterFLEX High & Mid/Low Flight



Because the InterFLEX high and mid/low versions are intentionally designed to have the same butt stiffness, the selection of the two versions really is predicated more by a desire for trajectory change, and the feel of the shaft coming into impact. This means that in addition to the desire for a higher or lower ball flight, the swing best matched with the IF is one that is smooth to medium quick on the transition, smooth to medium quick on the tempo – both versions will match well to either an early to a late release, but keep in mind that if the golfer has a VERY strong transition and a very aggressive swing move on the downswing tempo-wise, IF will not be the best choice.

Series 5-SL Graphite



The Series 5-SL is designed to be more of the better player, better swing move shaft. Thus the butt stiffness is firmer than the InterFLEX or the ZT M/L to match better to the golfer with a strong to aggressive transition between the end of the backswing and start of the downswing. It is also a shaft designed for the golfer with a later release of the wrist cock on the downswing and not at all for the golfer with an early release. Series 5-SL needs a swing with better fundamentals of a good full shoulder turn, an athletic move on the transition where the power is applied to start the downswing using the shoulders/hips, and is tending toward the more aggressive.

C.O.P. Center of Percussion Graphite



The most unique model in the TWGT shaft line are the all-new C.O.P. Center of Percussion R and S flex shafts for woods. Further research into the elements of matching clubs by Moment of Inertia revealed that if the Center of Percussion of the assembled

club is able to be closer to the clubhead, the solidness of feel of the overall club would be improved. To achieve this in assembled woods, the C.O.P. shaft is designed with a much lower balance point than what had been created in any other wood shafts. The C.O.P.'s bend profile is best matched to golfers with a moderate to stronger transition who also have an average to faster swing tempo and a midway to late release of the wrist-cock.

Series 7-SUL-55 and Series 7-FL-45 Graphite



The Series 7 graphite wood shafts offer two distinctly different designs for different golfer types who wish to achieve the lightest total weight possible in their assembled driver and fairway woods. Series 7-SUL-55 is a 55g shaft created in R and S flexes for golfers with average to better than average swing fundamentals. It is a good match for players with a smooth to slightly fast transition, but definitely not for golfers with a very forceful start to the downswing. The Series 7-FL-45 is an incredibly light 45g shaft designed in A and AA flexes for golfers who are average to below average in physical strength with slower swing speeds, and desire the lightest possible total weight in their woods to try to add a bit more to their swing speed.

Series 5 Steel



Without question one of the most popular TWGT shafts has been the lightweight Series 5 Steel. Designed to follow different trimming and installation guidelines for the different flexes within the design, the Series 5 Steel shafts have proven themselves as a superb playing and feeling shaft to thousands upon thousands of golfers since its introduction. Key to the performance and feel is the Series 5's lightweight (under 110 grams when cut and installed) combined with its slightly lower balance point for better feel. TWGT has developed different trimming and installation guidelines for the different flexes so that the performance of the Series 5 is better matched to the different swing speeds.