# Swing Patameters Guide

## 1. Club Data

### 1.1 Club Speed

The linear speed of the geometric center of the club head before impact with the ball.

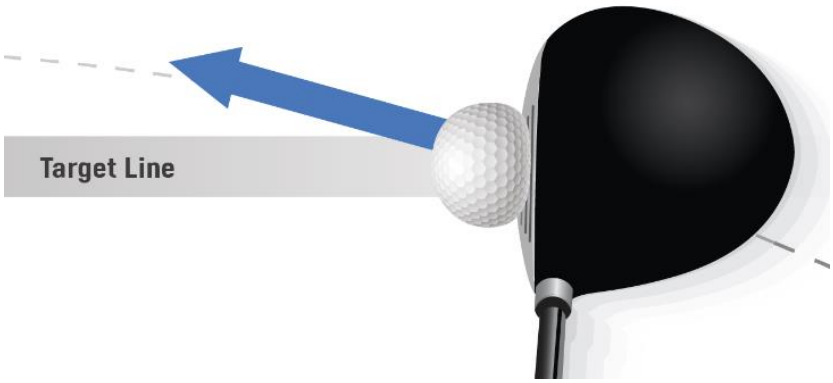

### 1.2 Attack Angle

The angle at which the geometric center of the club head moves upward or downward at the moment of maximum compression of the ball.

## 1.3 Dynamic Loft

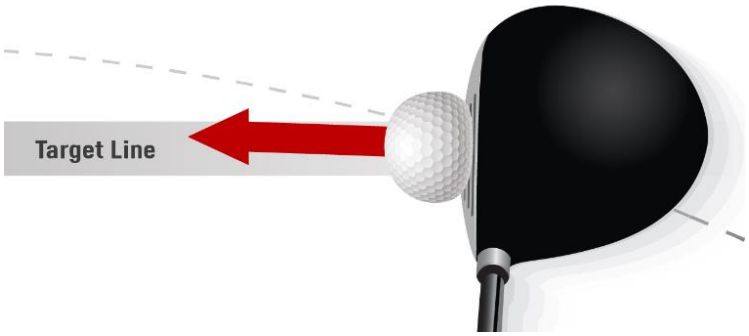
The vertical angle of the club face at the center of contact between the club face and the ball at the moment when the club face applies maximum compression to the ball.


## 1.4 Club Path




The angle of the club head's geometric center when it moves in-to-out or out-to-in at the moment of maximum compression on the ball.

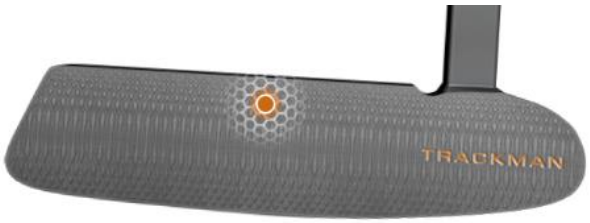
## 1.5 Face Angle




There are two types of club face pointing angles: one is the angle relative to the target line, and the other is the angle relative to the path of the club head.

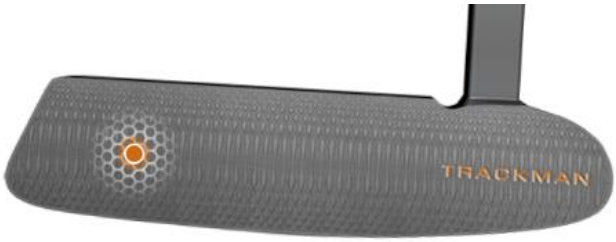
## 1.6 Impact Y

The vertical location of impact relative to the center of the clubface.




## 1.7 Impact X

The horizontal location of impact relative to the center of the clubface.




## 1.8 Smash Factor

Measured ball speed divided by club head speed.

# 2. Ball Data

## 2.1 Ball Speed

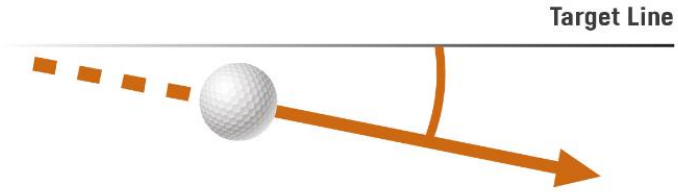
The speed of the ball as it leaves the clubface.

## 2.2 Launch Angle

he vertical angle of the ball relative to the horizontal plane at the moment of take-off.


## 2.3 Launch Direction

The instantaneous angle of the ball's launch direction relative to the target line in the horizontal plane, measured as the ball leaves the clubface.




## 2.4 BackSpin

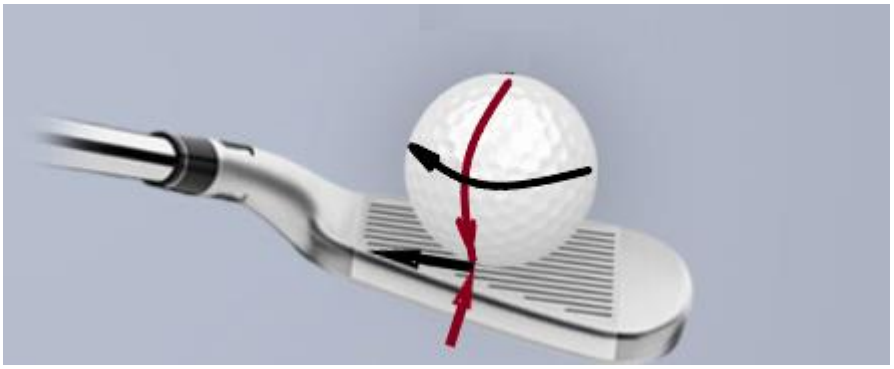
Backspin is the force generated by the downward relative motion between the club face and the ball in the vertical plane, which causes the ball to obtain a rotational component in the vertical plane.

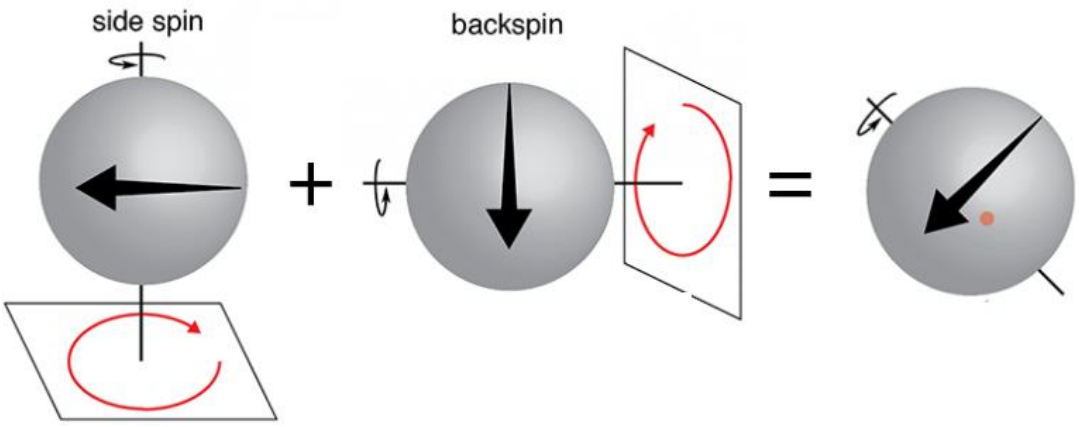
## 2.5 SideSpin

Side spin is the force generated by the relative motion (left or right) between the club face and the ball in the horizontal plane, which causes the ball to obtain a rotation component in the horizontal plane.

## 2.6 Total Spin

When the clubface hits the ball, the relative motion between the clubface and the ball generates a force that causes the ball to spin. As analyzed above, this spin is the vector sum of backspin and sidespin, so it is called total spin.





## 2.7 Spin Axis

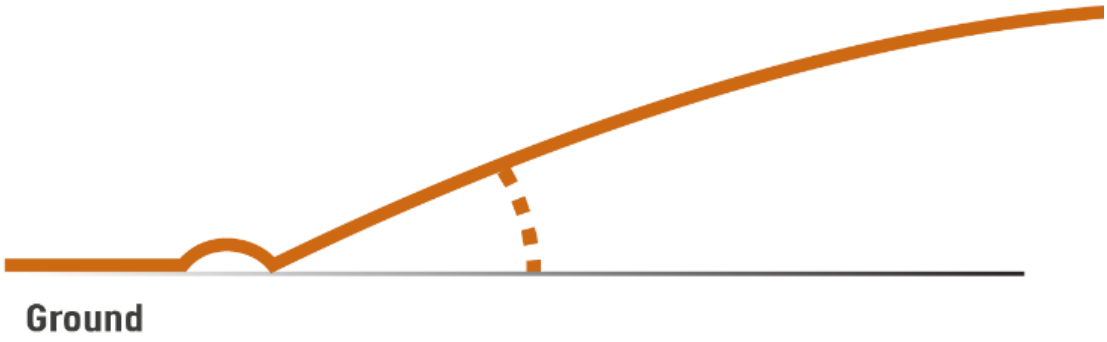
The angle of the imaginary axis of the ball's rotation relative to the horizontal plane at the moment the ball takes off.

## 2.8 Flight Height

The maximum height of a ball relative to a horizontal plane at the same height as the launch point.

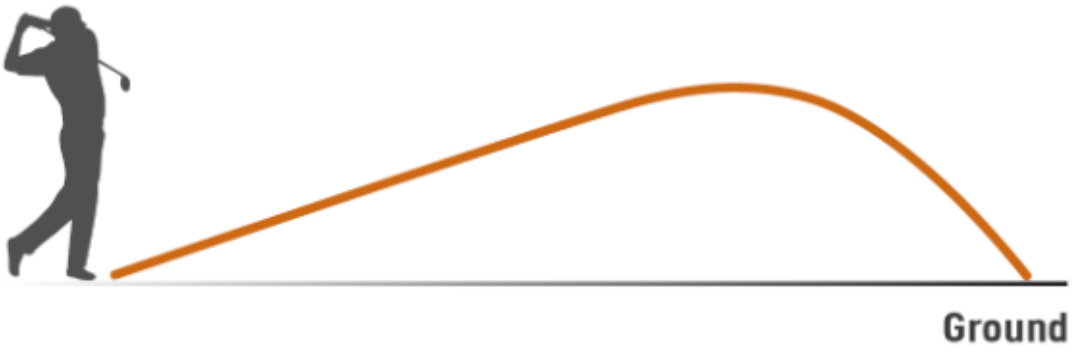

## 2.9 Landing Angle

The angle of the ball when it lands relative to the horizontal plane. Note that the landing point should be the point at the same horizontal height as the launch point.

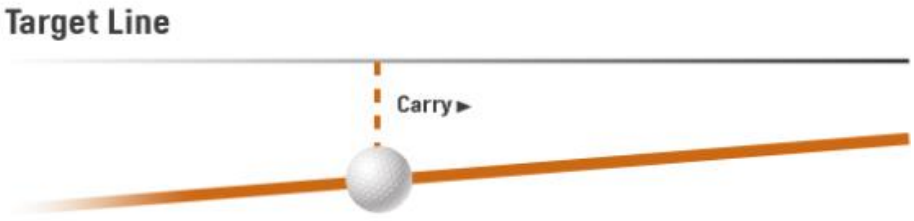



## 2.10 Carry

The straight-line distance between the ball's launch point and the point it passes through at the same height (which is often the point of impact).




## 2.11 Carry Side

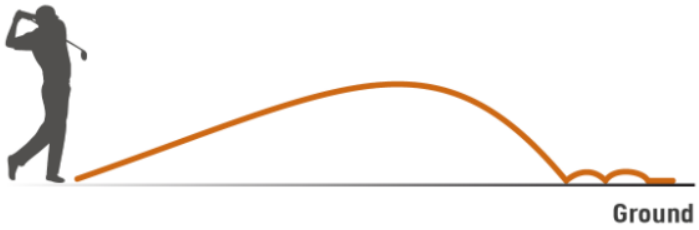



The vertical distance from the target line at the impact point (the point on the trajectory that has the same altitude as the launch point, often the impact

point).

## 2.12 Total distance

The straight-line distance from the point where the golf ball was launched to the calculated stopping position.




## 2.13 Flight Time

The time the ball flies, in seconds, is when it flies to the same altitude as the launch point.