



no&chi golf™

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Dispense tecniche

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DYNAMIC IMPACT POINT OF THE BALL

Among the various technical issues and physical properties of the system-putter-ball-player, one of them has a considerable importance for the outcome of stroke: the point of impact of the ball on the face of the putter.

We know that the ideal point is defined by the Anglo-Saxon term "sweet-spot", and it is associated with the point that is indicated by a mark on the face of the putter.

The first thing to say is that the sweet-spot is not necessarily in the geometric center of the putter face, and often is found a few millimeters toward the heel.

The sweet-spot is defined in various ways, however, it can be said as the "balance point of the face of the putter where if hit is not felt twist of the heel or toe of the putter." It is the balance point on this side and beyond which, due to the impact with the ball, the putter face undergoes a slight diversion angle of shooting and for that transfers the maximum energy to the ball.

In addition to the sweet-spot is another important aspect of the impact point and precisely cross stitch.

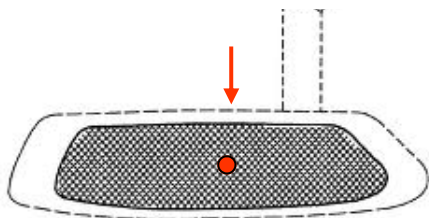


Figure 1

Given a putter face with the 27 mm high, as is commonly the majority are, and we take it for granted that the sweet-spot cross is in the center, then to 13.5 mm from the sole. (Figure 1).

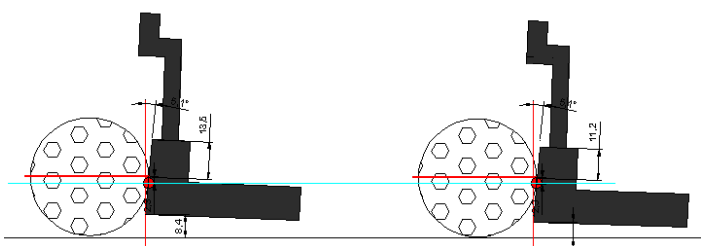
The figure 2 below shows the position of the point of impact at the equator of the ball as a function of elevation of the putter from the ground. With the putter lying on the ground the impact point is located at 21.6 mm from the sole, so well over half, half of which represents the point of impact if the putter is raised to 8,4 mm. Any elevation we will place the putter head from the ground, with 3 degrees of loft the ball will always hit 1.2 mm below the equator of the ball.

Figure 2



If we imagine to make a stroke following the indications of Dave Pelz then we will have a dynamic loft of the putter face greater, so the point of impact will be necessarily situated below the equator of the ball. (Figure 3)

Figure 3



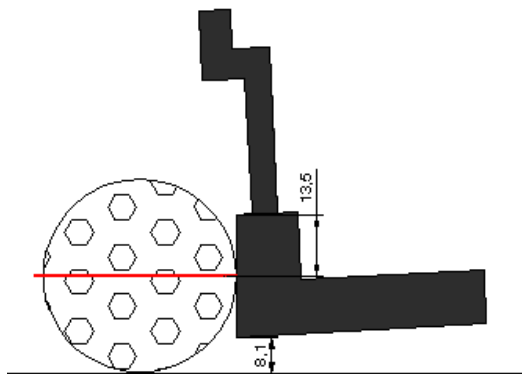
Dynamic impact point of the ball

The last two images of the figure just proposed makes clear that whatever the elevation of the putter from the ground, the point of contact between the ball and the putter face does not change and will be of 2.3 mm below the equator of the ball.

Needless to say, a shot thus led will prefer a "launch" the initial of the ball being applied a force $F \rightarrow$ not parallel to the ground, but with an angle of 5.1° .

To be able to hit the ball equator in perfect center of the face of the putter will be necessary to bring the loft of the handle at 0° and with an elevation of the putter head of 8.1 mm, as shown in Figure 4, below.

Figura 4



From this brief description it is possible to conclude that: **the only way to hit the ball exactly at the equator and at the longitudinal center of the putter face is getting the impact of a dynamic loft pariah 0° elevation of the head with a putter 8.1 mm.**

With this, and what follows, I do not want to determine which is the best or ideal shot to be taken, but only what is happening in the different impact conditions.

If the force is applied horizontally to the plane on which rests the golf ball, the sliding friction will be proportional only to the weight of the ball and the quality of the green, but if the force is impressed obliquely, from the top to down, the static component of the ball is in addition to the vertical component, so that the friction force will be more intense

As said before, being the static friction that promotes rolling, a shot made with a loft nega-

tive, then oblique, will generate advance rolling the ball than a shot taken horizontally.

Everything is true and correct, however, it is repeated, being the bearing surface of the ball, the green, deformable, a part of the energy is dissipated and subtracted to the rotary and translatory motion.

Must then make mention also the figure of the point of impact of the ball on the face of the putter. Theoretically, the spherical surface has a single point of impact is much smaller than the small sphere. The golf ball, the diameter of which is equal to 42.67 cm remember, is provided with dimples that make rough the surface, for which the size of the point of impact will increase or decrease due to the perimeter profile of the dimples.

Performance of experimental measurements on a ball can be observed that the contact point varies in function of the profile and the size of the dimples, and the test was developed as described over. On the face of the putter was place a rectangle of carbon paper semi-rigid so as to transfer the ink on the ball and reproduce the footprint of the profile of the impact point.

Dave Pelz has already carried out a similar experiment dealing, however, the impression left by the ball on the face of the putter to express graphically the point of impact in relation to the level, more handicap, the game of the subject. Our work is dedicated to another, that is, as mentioned, the profile of the impression left on the ball in relation to different types of swing and impact points and circular dimples and honeycomb.

We propose some drawings related to the impact point of the face of the putt on the ball.

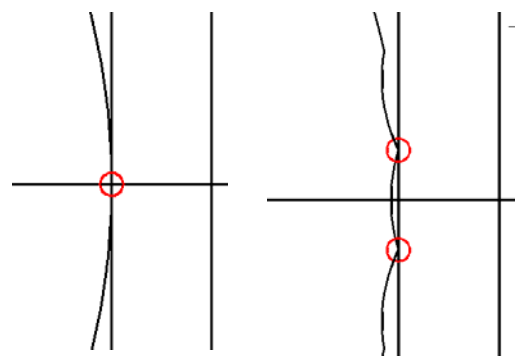


Fig 5 impact punctiform on a sphere

Figure 6 impact at 0° of loft on the cusp of circular dimples

Dinamic impact point of the ball

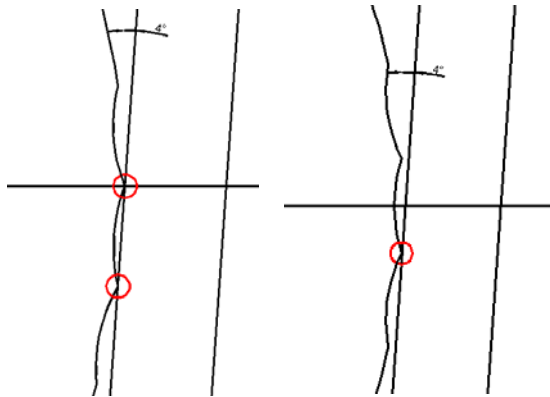


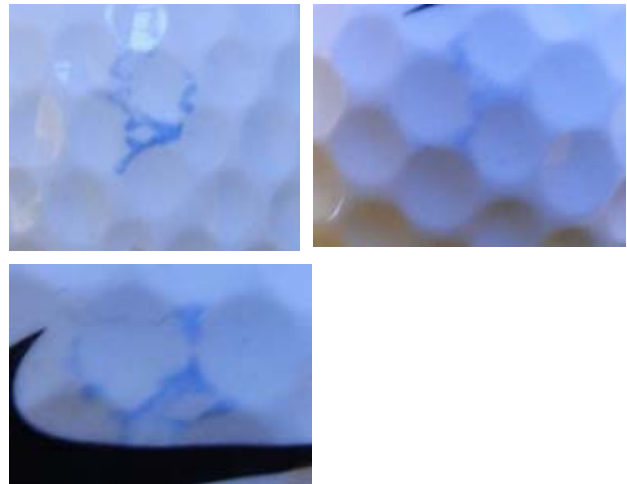
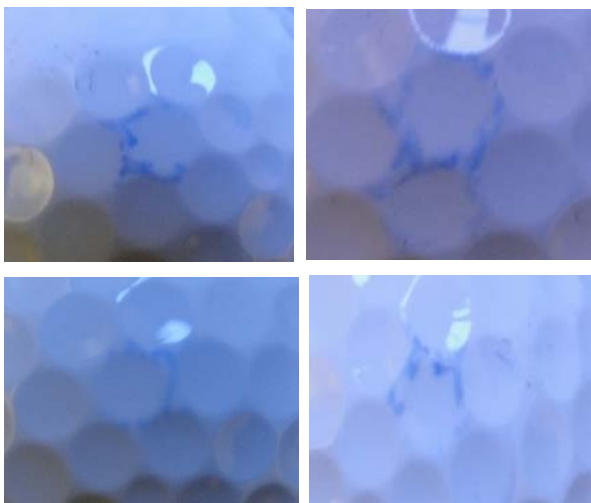
Figure 7 Impact at 4 ° of loft on the cusp of circular dimples

Figure 8 impact at 4 ° of loft on the cusp of a circular dimple

From these few figures, one can draw the conclusion, that probably anyone would come just for intuitive way, that the angle of impact of the putter face is completely irrelevant to the point of contact on the ball.

Based on the images below proposals, made precisely using a semi-rigid carbon paper, you can draw the conclusion that the figure of the point of impact assumes a profile in relation to the portion of the ball exposed to the face of the putter, as was inferred figures above , and in rare cases plays a larger part in the cusp due to the slight compression of the surface and contact time that motivates and justifies the experiment of Lindsay which will be discussed in a later technical pamphlet.

Dimples circular and concave



Dimples flat

