

A Golfers Guide Newsletter

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Golf Ball Dimples and Optimal Flight

Heath Slocum won his 4th career PGA Tour event last weekend at the McGladrey Classic. The 36 year old has quietly put together an impressive career with over 13.8 million dollars in earnings!

He is one of 3 golfers who played high school golf together in tiny Milton, Florida (the others being Boo Weekly and Bubba Watson). Combined, they have 6 PGA victories.

Heath is small in stature at 5'8"/150 lbs and not one of the longest drivers on tour ranked 156 out of 190 (279 yards average).

He relies on precision and flight control; i.e. - **golf ball trajectory and distance control**. So not surprisingly, Heath is ranked 6th in driving accuracy (fairways hit) and 20th in greens hit. That's one great way to get the job done.



With 4 rounds in the 60's, Heath controlled his ball trajectory and spin beautifully all 4 days of the tournament. The **dimples** on his Titleist Pro V1x were working to his great advantage as reflected in his scores of 66, 66, 66, and 68.

As a golf ball engineer, I field scores of questions from golfers all over the world. I get a lot of inquires about dimples (in fact another one tonight).

I believe that since dimples are the only **functional ball component** that is visible to a golfer, they cause the most curiosity. If golf balls were clear, the questions would probably shift more to the interior components!

So what's the story with the dimples on a golf ball?

Are all those funky dimple patterns about function, or is it all "**just about marketing**"? Let's take a look:

Ever since 150 years ago when golfers found that the then modern gutta percha balls flied longer and straighter when their smooth surfaces were roughened up and nicked, the fascination with dimples began.

Today, we know that dimples serve to **reduce the aerodynamic drag** acting on the surface of the golf ball, ultimately resulting in longer distance. Combined with the backspin imparted by the golf club, today's ball flight characteristics are nothing short of spectacular!

Over the years, the patterns have changed and evolved into some very dynamic looking designs; **multi sized dimples on the same ball, dimples in dimples, and deep and shallow dimples to name a few.**

These changes have been aided by all the improvements in the ball flight/trajectory and distance measuring technology.

One of the biggest advances was **multi sized dimples** on the same ball. Hence, smaller dimples could be "crammed in" between the larger dimples.

Maximum dimple coverage is desired on golf balls because it increases flight stability and gives the engineers a greater ability to refine finished ball flight characteristics.



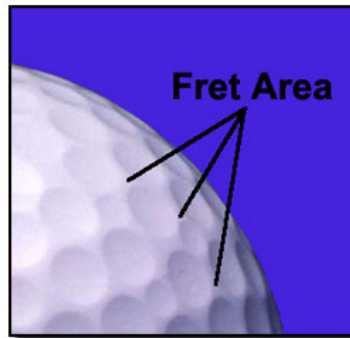
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Your Golfing
Guide:

Tom Fielding
AAA rated
PGA Golf
Professional

But there is a trade off with maximum coverage as the "Fret" area, the ball surface between the dimples, becomes very thin. If it is too thin, the frets will shear at impact and the ball will scuff. Take a look at the Fret area below:



When you bounce a ball off a cart path and the ball incurs damage, **this fret area is the area that gets sheared.**

This used to be a big problem with some of the softer "balata" covered golf balls which were phased out about 15 years ago. One good bounce off a cart path and a balata ball could be permanently out of commission!

Fortunately, fantastic cover material technology of the modern balls has reduced this type of damage.

So why all the different dimple patterns and is it just marketing?

Sure, there's marketing, but the marketing comes after the performance.

In many respects, dimple technology mirrors the design and selection of the tires for a race car.

Race car designers build the chassis and suspension, add a custom engine, and top it off with an aerodynamic body.

Then they select the appropriate tires that will grab the road and maximize the performance of all the other high tech parts of the car. Different tire designs will produce different results:



With a golf ball, the core is the engine. The mantle layers (if present) add performance. Together with the cover, you have a golf ball "without the tires" until you add the dimples.

With dimples, golf ball designers can tweak the final performance of the golf ball. They will find the right dimple pattern that results in the optimal trajectory and distance, for a specific ball construction.

For instance, let's say a new ball design is almost finished and the product has great **initial velocity**, nice spin characteristics, and a soft cover for great touch around the greens.

However, the ball "attacks" the ground too steeply at the end of a driver flight, so there is little roll and shorter overall distance.

No problem, the aerodynamics engineer can refine the pattern, depth, and/or sizes of the dimples to flatten out that ground angle of attack so that golf ball can **bound down the fairway** a bit more for optimal driver distance.

In the end, you have that high performance golf ball sitting on the tee just waiting for the green flag to start the race.

And just like in a race car, the driver gets things going!

Enjoy the upcoming Golf Season,

Product Reviews

Recycled Titleist ProV1 + ProV1X golf balls. Premium quality!

Titleist Pro V1 and Titleist Pro V1x used golf balls are fine quality recycled golf balls. Not cheap golf balls but quality lost golf balls that are in stock now. deliver the finest Pro V1 used golf balls that you demand.

The Titleist Pro V1 2010 golf ball features Tour-validated technology and performance with a higher-coverage 392 dimple design and exclusive A.I.M. (Alignment Integrated Sidestamp). The Pro V1 is a three piece golf ball designed for golfers with swing speeds from 98-110 mph. With a newly reformulated core, it has a softer feel than the Pro V1x. It will also have more spin and a higher trajectory than that of the Pro V1x.

- € Newly reformulated larger core provides soft feel while contributing to longer distance
- € Redesigned thinner, Ionomeric casing layer contributes to improved Drop-and-Stop performance
- € A new, high performance urethane elastomer formula offers improved cover durability
- € Tour-proven 392 multi-dimple design with Staggered Wave parting line for consistent ball flight



One Size Fits All Golf Gloves

Traditional Packaging

- 100% Soft Cabretta palm and back
- Uniquely positioned Lycra for maximum expandability
- Ball marker
- One Size Fits All
- Both Men's & Ladies for right handed golfers in stock



For further information please direct your enquiries by email to

agolfersguide@gmail.com

Golf Improvement Program NEWS!!

HSBC FALL SERIES

WESTIN WEEKEND II (OCT 23/24)

THE WESTIN
TOKYO

Following a very memorable Westin Weekend Event in May this is the second event sponsored by The Westin Tokyo in the HSBC Golf Series and will be held in partnership with President Country Club Karuizawa, which is located in President Resort Karuizawa, just 50 minutes away from Haruna no Mori Country Club. This will be a 36-hole tournament format play over two days.

In addition to the many fantastic prizes that will be on offer, the Grand Prize on offer will be a One Night Suite Room Stay in The Westin Tokyo with breakfast, and Free Use for the day of the Westin's Porsche Panamera S.

Participants will have the option of staying overnight in the President Resort Karuizawa after the first round with a complimentary transfer to Haruna no Mori Country Club the following morning should they wish.

On Day 2 at Haruna no Mori CC a Westin Superfood Signature Dish will be included on the Menu, and the Award Party Ceremony will feature a Buffet prepared by Westin chefs based on the Westin Superfood concept.

Mizuno Golf School Teaching Professional and friend of the ACCJ Golf Subcommittee Tom Fielding, will also be present to provide instruction to all participants on both days at President Country Club Karuizawa and Haruna no Mori CC. Tom is an Australian PGA professional, ranked amongst the top 50 teaching professional in Australia.

Do sign up before it is too late and support your committee!!

For all the details and registration see below.

<http://www.japangolfers.com/hsbc/westin-weekend-ii.html>

REGULAR LESSON SCHEDULE: Weekends (Sat/Sun) Private lesson program:

At Anegasaki CC (about 10mins from the Aqualine in Chiba).

The lesson package combines lesson in the morning + self play in the afternoon comprising at least 5 holes of play.
Lesson day- Saturdays & Sunday (booking essential)

- Fee Structure- 18,900¥ per person range balls (90 balls) included. If required extra balls can be purchased at the range on the day.
- Lesson time- one hour (up to 2 persons); two hours (3 or more persons)
- Self play hitting off from around 2.30pm, groups will be formed to maximize the amount of time on the course.
- Booking procedures- Initially through me on 080 5015 5562 / email: tom.fielding@agolfersguide.com