



Visit Sports Trader's website for more product knowledge: [www.sportstrader.co.za](http://www.sportstrader.co.za)

# Recommending the right squash or badminton racket

**R**ecommending a racket to a squash or badminton player is not always an easy task as each individual has his own style of play and level of experience. There are, however, a number of features that could greatly enhance – or detract from – a player's playing ability or experience. Interestingly enough, many of the racket qualities that affects a players' squash game affects a badminton players' game as well.

Finding the right combination of weight, balance, shape and stiffness is key to recommending the right racket, whether for squash or badminton. Below are some of the key features to look out for.

## Material

Modern technology has allowed considerably lighter materials, such as carbon fibre and various composites, to be used to achieve speed and strength, without sacrificing weight or balance. The material used will to a large extent influence the price of the racket.

- Many entry level rackets are made of aluminium or steel. Because beginners are more likely to hit their rackets against a wall, aluminium rackets will be more robust than graphite – and are also less expensive to replace when they do break.
- Higher-end rackets are made of graphite or carbon, which can be mixed with materials like fibreglass, titanium mesh, nanoprene, ceramics, boron, kevlar etc. The composition of the materials in the shaft and frame will influence the stiffness and power or feel of the racket.
- "There are also different resin flow processes – some are hot and others are cold. Depending on the expected level of performance, the manufacturer will pay more for consistent hot resin flow," says Steve Gallienne of Super-Brands, distributor of Dunlop and Slazenger rackets.

The above materials and manufacturing processes can increase control, power, anti-torque, weight distribution, shock absorption, durability etc. Companies are continually experimenting with these types of materials to

## Our cut-out-and-keep series to assist retailers with product knowledge

Compiled with the help of Steve Gallienne of Super-Brands, distributor of Dunlop and Slazenger rackets, John Abrahams of Shuttle Sports, distributor of Yonex badminton, Andrew Wentzel of WET Sports Importers, distributor of RoxPro, Frik van Rensburg of Kloppers in Bloemfontein and Ronel Louw of Baseline Runners and the websites [www.scot-tishsport.co.uk](http://www.scot-tishsport.co.uk) and [www.prospeed.com](http://www.prospeed.com)



create better products with different materials, which will provide high strength and high repulsion.

## Weight

It is often difficult to compare the weight of one racket to the next as weight specs are often inconsistent – the bare frame, the unstrung frame or the strung weight is quoted from one brand to the next. The weight and balance of a racket will be affected once the racket is strung and a replacement grip is

added.

- In general a lighter racket (and a racket with a head light balance) requires the player to add their own strength to put power into a shot, because the lighter racket generates less momentum.
- A heavier racket (and head heavy balance) adds momentum to the shot and therefore generates more power. A compromise is made when choosing a heavy racket for power as a lighter racket is more manoeuvrable, allowing the player to really feel the ball. A good level of technique and skill, however, is required for a light racket.
- "Experienced players can play with lighter frames as they are able to utilize this to get a faster head speed and better manoeuvrability. In this way they get more control and touch with a lightweight frame. Social players, however, need more weight to generate more power," explains Ronel Louw of Baseline Runners.
- Hard hitters, of any experience level, would want a heavier frame (which will compromise on manoeuvrability) and touch players require a lighter frame (which will not generate as much power). Some players would prefer a balanced racket that has just enough weight in the head to deliver powerful shots and is manoeuvrable enough to provide better control, it is therefore often a fine balancing act in finding the right racket for the player.
- Experts advise a racket made from heavier materials, such as aluminium or composite, for a beginner player who has not developed their own style of play yet. The heavier material, such as aluminium, will provide power but may cause unnecessary vibration. According to [prospeed.com](http://prospeed.com) a heavier weight badminton racket would transmit less shock and less vibration when sending off a shuttle.

## Balance

- The balance point of a racket (measured in millimetres) affects the whole feel and play of the racket. It is measured from the base of the handle to the point on the shaft where the racket stays in bal- **Top54**



## Recommending a racket cont from p53

ance on a finger.

- A racket with a high balance point (further away from the handle and thus a higher number) will be heavier towards the racket head (head heavy) and a racket with a balance point closer to the handle (lower balance point number) will feel head light.
- In the same way that weight would affect the shots played, a head light balance would make the racket more manoeuvrable and a head heavy racket would give a player more power. "A well balanced racket feels light and nimble and normally helps players with self-confidence as it provides both control and power," says Frik van Rensburg of Kloppers.
- According to scottishsport.co.uk small strips of lead tape can be used to adjust the balance of the frame. In the same way that adding an extra grip will effectively make the racket feel more head heavy, adding bumper tape to the head will make the racket play slightly more head heavy.
- It is important to advise customers that the balance of a racket can be adjusted after purchase, but the stiffness/flexibility of a racket not.

### Flexibility vs. stiffness

- In theory, the more flexible the racket, the easier it is to control and manoeuvre as it allows for more margin of error when hitting the ball. Experts thus advise start-up players to opt for a more flexible frame.
- A stiffer racket, however, helps with shot making and to generate power, if it can be controlled by a strong player. A stiff shaft allows significant power to be generated, and when combined with a lighter racket, it allows for excellent feel and manoeuvrability. "The problem with a stiffer frame is that it requires a fit person, with strong forearms and wrist action to handle the racket," says Gallienne.
- Some experienced players, however, prefer a mid-flex shaft, just as some beginners and amateur players have the strength to yield powerful smashes with a stiff shaft. The choice between a flexible and stiff shaft does come down to the individual player.
- "The performance of the shaft is essential in all badminton rackets because it affects power speed and control," says John Abrahams of Shuttle Sport, distributors of Yonex badminton rackets. A thinner shaft will be more repulsive, but it reduces resilience against bending. Stiffening the shaft improves resilience, but can make the shaft fragile.
- "The number one priority regarding stiffness and flexibility [in badminton rackets] is to have as little torque as possible in the racket head," adds Abrahams. This means that when the shuttle strikes the racket the sideways movement of the head is minimal.
- Some websites, such as prospeed.com, have reported that frame shock and frame vibra-

tion is sometimes experienced with very stiff frames. Frame shock is the unnecessary force felt at the moment of impact when a stroke is delivered and frame vibration is the vibrated feeling when the shuttle speeds away from the strings.

- Flexibility of a racket could be determined by factors like the number of strings in the string bed. "Certain frames add more strings and therefore compensate on the flexibility of the racket. For example a 500cm<sup>2</sup> frame with a 16x19 stringing pattern will be harder to play (with less flexibility) than a 500cm<sup>2</sup> 14x18 stringing pattern. The fewer strings there are, the more they will be able to provide a trampoline effect, which in turn would generate more power," explains Gallienne.

### Head size and racket shape

- Larger head sizes (500cm<sup>2</sup> and larger) are more forgiving on shots that haven't come right out of the middle of the racket as it boasts the benefit of having an enlarged sweet spot. It therefore makes it easier to play a powerful shot with a larger head and many experts advise a start-up player choose the bigger sized head. A larger head will, however, reduce the control a player has during the game.
- Whilst a smaller racket head has a smaller sweet spot it could be described as a better quality sweet spot as it offers the best control combined with the best power – in the hands of the right player. It is, however, much trickier to play powerful shots on a racket with a small head size.
- Tear-drop shaped squash rackets benefit from a longer string-length from the top of the racket to the throat. This means that the power generated is increased.
- When it comes to badminton rackets there are isometric (square), wide-bodied and conventional oval shaped frames. The isometric racket has a larger sweet spot and transmits less shock and more vibration due to the extended length of its strings. "The isometric shape provides a larger effective hitting area than an ordinary racket as it equalizes the length of the main and cross strings in the string bed, enlarging the sweet spot, providing more consistent accuracy even on off centre hits," says Abrahams.
- But the fact that an isometric badminton racket provides a better sweet spot does not mean that all players should be advised to go isometric. "An important feature to keep in mind is that the aerodynamic contouring of the top of [an oval] frame minimises air resistance as air flows faster across the curved surface during a swing, accelerating head speed and transferring more power into hits," says Abrahams.

### Throat

- A closed throat squash racket will have a

decreased sweet spot positioned further away from the hand, higher on the racket head. Even though the sweet spot is smaller it will help with control, says Louw. An open throat squash racket has a larger string bed, which is more forgiving on off-centre shots as the racket will have a larger sweet spot.

- "Removing the bridge at the throat of a squash racket lengthens the allowance of the main strings, allowing you to put less strings, in number, across the face of the frame and therefore providing a larger, less stiff and more powerful string bed," explains Gallienne.
- Badminton rackets are generally closed throat, but open-throat rackets are not uncommon either.
- "Weak throat pieces could affect the longevity of your racket. A reinforced throat piece is more popular with power hitters," says Andrew Wentzel of WET Sports Importers, distributors of RoxPro squash rackets.

### String bed

If the frame of a racket could be compared to the body of a car, the string bed would be the engine of a racket. And just like car engines all string beds are not created equally:

Type of strings

- Natural gut has traditionally been seen as the strings that provide the best feel, but these days multi-filament strings (aka synthetic gut) mimic the effect of a more expensive natural string. Monofilament strings are very tough and are usually advised for players who often break their strings. But there is less feel in these. Monofilament is often used in combination with synthetic gut strung across the racket.
- "Synthetic helps with power and touch, but does not have very good durability. Monofilament does not help with touch of feel, not even power, but its durability and spin on the ball is very good," says van Rensburg.

### String tension

- The string tension makes a tremendous difference to the way that a racket plays, particularly if the tension preference is either at the high or low end of the typical spectrum.
- The rule of thumb is that the higher the tension the more control it provides (as a player can better feel the ball) and the lower the tension the more power it provides, but to some degree control is lost, as the trampoline effect is higher.
- The strings loosen up in use, and each time the ball strikes the strings they abrade and weaken. Experts advise to restring a racket every couple of months to maintain good tension for striking the ball.
- Rackets that use a fan stringing pattern deliver more power. Because the string is double the length, threaded back on itself, it stretches more than a single length string would and as a result delivers more power. These rackets need to be strung at a higher tension than rackets strung with **Top56**



## Recommending a racket cont from p54

straight stringing patterns, to give a similar feel.

### Grommet holes

- Larger grommet holes allow strings to have more movement. They help with a bigger sweet spot and more power, but sacrifice on feel.
- “The smaller grommets give a better feel but can cost you strings, because the small grommet can cut the string on miss hits close to the frame and grommet,” says van Rensburg.
- Enlarged string holes across the hitting zone generates increased string bed movement at the moment of impact, providing better ball propulsion
- “Certain materials for grommets can be inserted at specific points on the frame to

dampen vibration, or in the case where the strings are allowed more flexibility, then more power can be generated,” says Galienne.

- By eliminating restrictive grommets that limit string response and re-engineering technology that enables the strings to respond better – even out to the edge of the frame – allow players to hit better shots, more consistently.

### Grip sizes

- The preferred grip is easy to build up or replace and experts advise to select the racket first and thereafter look for the grip that is best suited. There are round shapes, square shapes and different thicknesses of grip that can be selected.
- Thick replacement grips should be used as

the first layer of grip, whereas a thinner grip can be used on top of another grip. Over grips would be able to go over replacement and thin grips. Adding extra grip can affect the balance of the racket, as adding extra weight to the handle will make the racket feel head light.

- Generally, attacking players prefer bigger grips as they need to hold the racket more tightly to generate power. “Players who like to rally and make use of deception usually prefer smaller grip so that the racket is easier to turn in their hands. Square grips help with gripping the racket more in the fingers and helps with both power and touch,” says van Rensburg.
- Pay attention to the size of the grip in the individual’s hand. “If the grip is too small, the wrist will be too tight, which will hamper movement. If the grip is too large it will affect the player’s control of the shuttlecock or squash ball,” says Abrahams.

# News from the racket brands

## Dunlop

The new I-Armor eyewear range from Dunlop, distributed by Super-Brands, is the only squash eyewear with official approval from the World Squash Federation. The body ruled in 1997 that it would be compulsory for all players in the World Junior Squash Championships to wear eye protection from January 1999. Since then many SA schools, clubs and tournaments have made it compulsory for all junior players to wear protective eyewear when playing. Protective eyewear is also compulsory for senior doubles players.

Accidents resulting in eye injuries can occur at all levels of play. For example, when then-US #1 Will Carlin was hit in the eye by a careless shot, his retina was detached and his career was put on hold as he never recovered full vision.

The new I-Armor has an ergonomic profile that adds extra stability (and protection). The contour shape of the lens allows the player good peripheral vision.

Dunlop will also be introducing a complete new game improver series of frames for 2012, offering exciting new cosmetics and performance characteristics in the Rage Series. The Blackstorm series will also be supported with the Blackstorm carbon frame, bridging the gap between performance graphite frames and premium graphite frames for the serious performer.

The Biomimetic technology Dunlop introduced last year (racket technology inspired by examples from nature that deliver optimal performance), has been hugely successful. Dunlop is this season introduc-

ing the 130gm New Evolution and 130gm Pro GT-X rackets for those players wanting to go to the next level of their game.

Biomimetic has been proven to work well, with many of the top international players selecting a frame to suit their style to play from this range. Biomimetic frames are different to other premium graphite frames because they offer advanced structural engineering, unique to Dunlop.

Inspired by nature, Dunlop has taken the honeycomb (super strong and light crash cells) HM6 Carbon used in Dunlop frames, Aeroskin which is textured like sharkskin to create smooth airflow around the frame, less drag and better aerodynamics and finishing the grips with gecko tac, a surface treatment technology which provides a superior level of grip in any condition. The “Biomimetic Dunlop frames” offer reduced racket vibration for ultimate energy return and feel, increased racket speed and power, more grip, giving greater control, feel and precision.

## Wilson

This season Wilson, distributed in SA by The Golf Racket, will continue their main BLX range, but they have introduced new colourways. A few new weights will be arriving at different times during the year.

BLX is the new Wilson racket technology engineered with basalt fibers for unbelievable feel.

There are cosmetic changes to the BLX140 Triad, BLX120, BLX145 as well as the Tour BLX.

They have a new mid-range offering in the new K145, which arrived in February

and the K145 will replace the N130.

The Pro comp will also be replacing the NPower as a fused racket.

All the bottom-end rackets will also have new colourways including the Tour JNR squash racket. The Golf Racket distributes Wilson rackets.

## Yonex

Shuttle Sports will be introducing several new items to the market-leading Yonex badminton range they distribute to the SA market.

Their new Nanoray 700 RP/FX badminton racket takes the Nanospeed series to another level with its aero frame. The aero frame is thinner towards the top to ensure better aerodynamics and thicker towards the bottom for better stiffness and repulsion power. The frame is made of high-modulus (HM) graphite fullerene (a form of carbon with a large molecule). The X-Fullerene shaft is made of an advanced resin, that binds carbon particles to make the racket lighter and stiffer. It is available in 3U3, 4, 5/4U4, 5 weight/grip sizes in a shine orange.

The Yonex Nanoray 500 has a new grommet pattern and includes X-Fullerene, which increases stiffness by 6% and repulsion power by 4%. It has a solid feel core and a built-in T-joint. This racket has a medium grip with a weight/grip size of 4U4, 5. It comes in shine blue.

The Nanoray 80 features a HM graphite shaft, carbon nanotube and nanomesh technologies, resulting in a stiff flex. The racket has an aero-box frame and a control support cap. The weight/grip size of the