



Product knowledge:

What puts the bounce in a tennis ball?

One of the most popular commodities in modern sport is... not a Maria Sharapova-photo or -autograph, but the 300 million tennis balls manufactured (and used) globally every year. Different sizes of tennis balls are available for play on different court surfaces and at high altitudes.

Type of ball

Three types: The International Tennis Federation (ITF), the governing body of the game, specifies three types of tennis balls for regulation adult play, designated in the official rules as type 1, type 2 and type 3. The type indicates the recommended playing surface for that particular ball.

Until 1989, the ITF allowed only one type of tennis ball in competitions, the type 2. That year, the organisation introduced a ball designed specifically for play at high altitudes. In 2002, the ITF introduced the type 1 and type 3 balls.

Altitude: An additional ball, referred to as the high-altitude ball, is specifically for play at altitudes greater than 4 000 feet above sea level. This ball is the same size and weight as the standard type 2 ball, but is pressurised and has different rebound specifications.

Youth: The ITF also specifies three types of balls for regulation youth play. The official rule book identifies these types as stage 1, stage 2 and stage 3. In 2010, the ITF introduced new regulations that specify different sizes of balls for youth play.

Adult ball specs

- Type 1, type 2 and high-altitude balls are the same size. They must measure 2.575-2.700 inches in diameter.
- Type 1 balls are slightly harder than type 2 balls and are for play on slower court surfaces, such as clay.
- Type 3 balls, for use on faster court surfaces such as grass and artificial turf, are slightly larger and must measure 2.750-2.875 inches in diameter.
- The balls must weigh between 56.7-58.5 grams. The ball diameter in millimeter, instead of inches, would be between 63.5-66.7mm

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

Words: FANIE HEYNS. Compiled with the help of Steve Gallienne of Super-Brands, distributor of Slazenger and Dunlop balls; Brett Summers of The Golf Racket, distributor of Wilson; Brett Burnill and Roberto Vaglietti of Leisure Holdings, distributor of Prince; as well as comprehensive tennis websites like www.itftennis.com; en.wikipedia.org/wiki/Tennis_ball; www.open-tennis.com/davis-cup/20-things-you-never-knew-about-tennis-balls/ and www.livestrong.com



Youth ball specs

Tennis balls approved for youth and beginner play move slower and bounce lower than standard tennis balls. The position of the ITF is that introduction of these balls will enable beginner players to learn the game and develop skills faster. They are called play and stay balls.

- Stage 1 balls are green and must measure 2.48-2.70 inches in diameter. They are 25% slower than the standard ball
- Stage 2 balls are orange and must measure 2.36-2.70 inches in diameter. They are 50% slower than the standard ball
- Stage 3 balls are red and must measure 2.76-

3.15 inches in diameter.

By using these slower balls the starter players have more time and more control to make the game more fun for them at the introductory stage.

The ITF Intro to Tennis Task Force recommends the red, orange and green progression for starter players. This progression focuses on a range of slower balls and court sizes to introduce the game effectively to both adults and children.

The ITF recommends that, except for exceptional players, all players aged 10 and younger should use a slower red, orange or green ball in training and competition.

Practice balls

Pressure-less balls, also called practice balls, are solid-core balls made from foam or rubber. They do not lose their bounce as quickly as pressurised balls, and they therefore last much longer.

The felt covering wears off with use, which is when the balls need to be replaced. The cost of pressure-less balls is slightly higher than that of pressurised ones, but the higher cost is offset by the longer period of usage before replacement is required.

Pressure-less balls are a better choice for use in tennis-ball machines, particularly for users who do not practice every day.

Pressurized balls

Pressurised balls are hollow-core balls filled with pressurised gas and packaged in a pressurised container. This type of ball rapidly becomes depressurised after removal from its packaging.

Tennis balls go flat or lose their bounce after about 2-4 weeks. The elevation of your location, the quality of the tennis ball and frequency of play affect the degradation of the ball.

High altitude and sea level balls

High altitude balls, during manufacture, are pressurised less so that, when opened at altitude, the balls are not too bouncy, as would be the case with normal tennis balls at altitude. They are also manufactured to have approximately a 6% greater diameter.

This greater cross-sectional area, **To p60**



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when traveling through thinner air (at altitude), should produce roughly similar flight characteristics as regular balls at sea level.

They should last approximately the same time, but some experts suggest that the sea level-ball is slightly more durable, possibly because of the effect of dryer weather at altitude on the ball.

Quality of balls

As a general rule, characteristics of a great tennis ball are durability, consistency in flight and bound and pressure retention.

If your customer requires a top quality ball, you should recommend a ball approved by the ITF, which submit the balls to stringent tests while manufacturing it – especially a ball that is used at the Grand Slam-events, where strict criteria are introduced.

The Slazenger Wimbledon ball has been in use by the All England Tennis Club for more than hundred years, while the Wilson-ball is used at the US Open and the Australian Open. Babolat became the official ball supplier at the French Open this year.

In SA, there are four brands that are approved by the SA Tennis Association (SATA). They are Prince, Dunlop, Slazenger and Wilson. These are the only four ball brands that may be used in SA for tournaments, leagues,

championships or any event that are SATA sanctioned. These four brands can then negotiate with tournament organisers or federations to become their official supplier.

To last, or not to last, my dear Watson

It is impossible to determine how long a ball will last. It depends on the surface of the court, the strings being used, and also how hard and ferocious the ball is being attacked by players.

- Generally, during a Grand Slam-event, the ball is changed every nine games, which would last between 30-40 minutes. But the quality of those players are professionals of world-class standard.
- A can of three tennis balls will last a full match at amateur league or tournament level.
- The rules of tennis say that a ball must bounce to a height between 53-58 inches when dropped from a height of 100 inches.
- The crude version of this is to drop the ball from the top of your forehead, and if it bounces at least to your belly button, it's good, assuming it still has a decent coat of felt.
- Experienced players can often just give a ball a good squeeze and judge its fitness by its firmness.

Tennis ball imports

The Rand value of lawn tennis ball imports into SA over the past five years shows that China (including Hong Kong), the Phillipines and Thailand are the main suppliers. The statistics are supplied by DTI. It does not specify the quality of balls (e.g. for playing with dogs or tournament play).

Region	2006	2007	2008	2009	2010
China	2 544 896	3 455 031	3 851 979	4 053 800	8 240 854
Philippines	4 591 554	6 503 992	6 318 797	6 993 879	4 018 775
Thailand	1 979 639	2 616 890	1 312 439	2 669 054	3 039 283
Hong Kong	65 537	44 007	29 910	413	1 013 070
Indonesia	52 877	37 612	96 368	78 684	764 423
Pakistan	35 658	81 909	464 431	379 219	406 906
Singapore	-	-	4 119	-	904 926
India	128 614	159 311	11 803	30 565	171 286
Taiwan	198 408	89 099	25 052	59 166	50 584
United States	39 571	112 377	22 982	31 525	25 157
United Kingdom	18 415	7 811	363	1 455	17 108
UAE	16 425	18 044	3 182	-	2 004
France	200	3 369	-	1 814	6 586
Netherlands	1 145	-	-	63	2 017
Germany	28	1 422	38 022	16 377	49
Vietnam	-	-	-	-	272
DRC	-	-	-	-	200
Austria	-	90	-	-	95
Australia	170 115	643 897	-	708	-
Italy	-	5 441	148 843	60	-
Belgium	-	31	85 615	35 475	-
Japan	16 647	-	-	4 281	-
Sweden	-	-	3 733	7 133	-
Canada	-	5 243	-	-	-
Rep Korea	-	-	-	5 167	-
Switzerland	844	-	-	-	-
World	R 9 860 573	R 13 786 796	R 12 417 638	R 14 368 988	R 18 663 595



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