

ADVANTAGES AND DISADVANTAGES OF DIFFERENT TYPES OF TENNIS COURTS

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Abstract

The paper reviews different types of tennis courts and how those can influence the playing style of the game. In the first section of the text, the author classifies and describes the differences between tennis courts. The most important difference is made by the surface; there are four types of surfaces, so there are four types of courts. Also, differences are made by the dimensions or by the space where the court is placed (indoor or outdoor). This text reviews each type.

Additionally, the text explores how each type influence the playing style of the game according to the equipment players are using. The author focuses on direct observation of matches played on each and every type of courts.

The paper seek to answer the question: Which are advantages and disadvantages of playing tennis on different types of courts? The author finds out that the most used type is the hart court, especially in U.S.A., even if the grass court is the fastest type of courts.

It is hoped this study will inform people that are not athletes about differences between tennis courts in case of playing this sport as a hobby.

Keywords: tennis courts, surfaces, player, equipment.

Introduction

A court is an area drawn out on the ground that is used for playing sports, according to Cambridge Dictionary. A tennis court is a compact, solid, rectangular surface with a low net stretched across the center. The same surface is used to play doubles or singles matches. There are a lot of surfaces that can be used to create a tennis court, each with different characteristics which influence the game.



Fig.1. Tennis Court diagram

International Tennis Federation (ITF) which is the governing body of the game of tennis and its duties and responsibilities include protecting the integrity of the game, ITF Rules of Tennis (2019), which include defining and regulating the dimensions of a tennis court, so all of the news concerning dimensions, permanent fixtures, balls or score are written down in the annual "Rules of Tennis" document. According to "Rules of Tennis" published in 2019, the court is a rectangle, 23.77m long and 8,23m wide (for singles matches); for doubles matches, the court should be 10,97m wide.

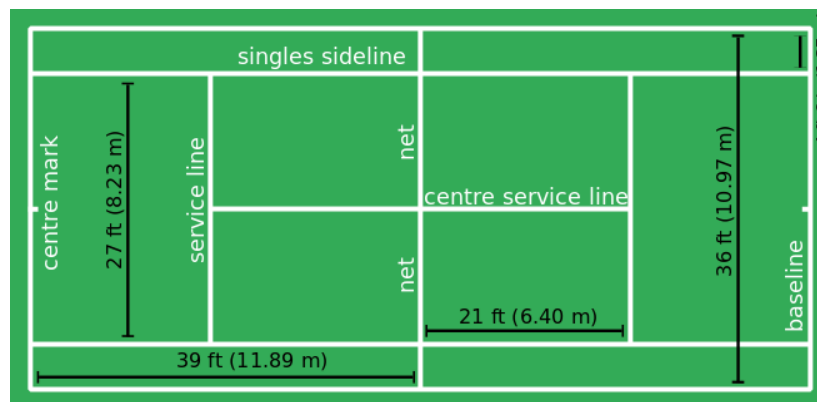


Fig. 2. Tennis court dimensions

The service line is 6.40m from the net, which is 1.07m high at the posts and 0.91m high in the center; it is, also, 0.91m outside the doubles court on each side or, for a singles net, 0.91m outside the singles court on each side. Additional clear space around the court is needed in order for players to reach overrun balls for a total of 18m wide and 37m long, ITF Rules of Tennis (2019).

There are allowed smaller courts with slower red, orange and green balls for children. The reason is simple: it gives children more time and control in serving. The ITF has mandated that official competition for children under 10 years should be played on “Orange” courts 18m long by 6.4m wide. For children under 8, the competition should be played on “Red” courts. The net is always 0.8 m high in the center.

The most important difference between the courts is made by the surfaces. We identify four main types of courts depending on the materials used for the court surface: clay courts, hard courts, grass courts and carpet courts. The International Tennis Federation has also a list of different surfaces and it classifies surfaces into one of five pace settings, as we will show next:

- Category 1: slow
- Category 2: medium-slow
- Category 3: medium
- Category 4: medium-fast
- Category 5: fast

Clay courts

Clay courts are made of crushed shale, stone or brick. This type of court slows down the ball and produce a high bounce in comparison to grass or hard courts, that is why the clay court takes away many of the advantages of big serves, which makes it hard for serve-based players to dominate on the surface. It is know that clay courts are cheaper to construct, but it takes more money to maintain. Clay courts need to be rolled to preserve flatness. The clay's water content must be balanced; green clay courts generally require the courts to be sloped to allow water run-off. Clay courts are more popular in Europe and Latin America

The French Open is the only Grand Slam tournament that is played on this type of court and that happen since 1981. US Open, also, used clay court, but for two years, from 1975 to 1977. One of the champions that played on this type of court is Simona Halep. We could observe that she used special shoes with sole made of rubber.



Fig. 3. Clay court

Grass courts

This type of court is the fastest type in common use. Bounces depend on how healthy the grass is, how recently it has been mowed, and the wear and tear of recent play. The serve plays a more important role than on other surfaces. Grass courts tend to support serve-and-volley tennis players. Also, grass courts are more traditional than the others types. It is known that this kind of court costs a lot of money to maintain. Grass courts are very popular in U.K., but there are a lot of private grass courts in the U.S.A.

Wimbledon, the oldest tennis tournament, is played on grass court. One of the most famous champions who played on this type of court is Serena Williams. We observed that she used special shoes that have ribbed sole.



Fig. 4. Grass court

Hard courts

Hard courts are made of uniform rigid material, often covered with an acrylic surface layer. This surface is rare now. These courts tend to play medium-fast to fast because there is little energy absorption by the court, like in grass courts, Judy Murray (2019). Flat balls are favored on hard courts because of the extremely quick play style. This type of court is known for the low cost of construction and maintenance, but for the last one there are a lot of methods which are commonly used to keep these facilities in top condition. Those methods include brushing and washing with a chemical solution. Also, there are a lot of treatments that is must to be applied for reducing the friction.

US Open and Australian Open currently use hard courts, but according to the most important tournaments it seems to be the predominant surface type used on the professional tour, 10-S Tennis Supply (2019). Mike Bryan is one of the winners of US Open. In his game, we could observe that he used special shoes with a high sole, cushioning in the heel and maybe, he added an additional sole on the inside of the shoes.



Fig. 5. Hard court

Carpet courts

The International Tennis Federation defines carpet courts as a "textile surface of woven or non-woven nylon, or a polymeric or rubber material, typically supplied in rolls or sheets" and as a removable surface, ITF Rules of Tennis (2019). This is the second fastest type of court, after the grass court. The maintenance is pretty easy and costs are not that high compared to grass courts. This type of court is used especially for indoor courts.

Carpet courts are only used nowadays in Women's Tennis Association tournament in Quebec City. In 2009, Association of Tennis Professionals disallowed the using of carpet courts to reduce injuries. Victoria Fyodorovna Azarenka is one of the champions that played on this type of court. In her game, we saw that she used shoes that have a low sole and cushioning in the heel.



Fig. 6. Carpet court

Conclusion

1. Type Advantages

1.1. *Clay*

- high bounce
- big serves

1.2. *Grass*

- fast
- physically forgiving

1.3. *Hard*

- greater consistency of bounce

1.4. *Carpet*

- low bounce

2. Type Disadvantages

2.1. *Clay*

- heavily support baseline players

2.2. *Grass*

- bounces depend on how healthy the grass is
- support serve-and-volley tennis players

2.3. *Hard*

- friction

2.4. *Carpet*

- high risk of injuries

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