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Team boot soles explained

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

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Choosing suitable gear is crucial for any athlete who wants to perform at his best, and prevent injuries. Identifying the right boots for the sport, terrain and position of the player is no different. Playing in uncomfortable and unsuitable boots can lead to under-performance and injuries, amongst other things.

Players in the different positions in a soccer or rugby team will also have different requirements for their boots. Rugby backs and hockey players often buy soccer boots to play in – but there are very good reasons to recommend that they rather choose a boot specifically designed for the sport, conditions of play, or position.

It is important for retailers to be able to recommend certain stud configurations based on the use of the boot.

Soccer soles

The first question a retailer will ask a soccer boot buyer is whether he will be playing on firm ground (FG), soft ground (SG), hard ground (HG) or artificial ground or turf (AG) as this will determine the type of stud and the configuration he will need.

Firm ground refers to a natural grass field, which is not too hard, and not too soft. This type of surface provides good traction, but it is not muddy or slippery. Boots with fairly shallow moulded conical studs or blades that provide traction, but do not dig too deep, are usually worn. If the studs dig in too deep, the foot can get stuck, and the player can get a hamstring strain or other injury when he pushes off fast, or if he falls when another player bumps against him.

Soft ground boots are suitable for play on a soft, natural, playing surface, that could be a little wet or muddy. The studs usually have a lot of depth so that they can dig in and prevent slipping, and are often replaceable. SG studs are usually longer, made of metal and can be screw-in. Fewer studs are used on SG – the traditional SG soccer boot has four big metal studs in the forefoot and two big studs in the heel.

There are new variations on the market, with the traditional configuration combined with extra plastic studs or blades for a little more traction. SG studs are not recommended for FG, even if the metal studs are replaced with plastic, because each screw-in area is a pressure point that will be uncomfortable on FG.

Hard ground (HG) or multi-ground (MG) stud configurations are suitable for hard sun-baked grassless surfaces, or hard, artificial turf. They usually have many short studs that are evenly distributed across the entire outsole.

Artificial grass (AG) provides good traction because it is usually very abrasive and FG or SG studs can therefore dig in too deep and grip too hard, not allowing the player mobility. This can cause injuries. It is not recommended to use any boot other than a specific AG stud configuration on artificial grass. The AG studs are small rubber blades or studs with a special design that will not grip too much on artificial grass.

Soccer or hockey boots worn on artificial fields usually have many small, rubber blades or rubber studs. These soles are highly durable for use on the abrasive surface and the small studs offer a good grip on the surface, ensuring more speed and agility. AG boots sometimes have hundreds of small blades, instead of round moulded studs.

Indoor boots are also worn on dry artificial surfaces. It will traditionally have a gum rubber flat outsole with many small zigzag grooves. This type of sole, also called *flats*, is made of a single moulded gum rubber with the grooves providing a better grip. The soles are light and allow the player good side-to-side movement.

Rugby soles

The main concern for rugby authorities is whether a stud or blade will cause injury to another player.

- The IRB Laws of the Game specify in Law 4(3) that *studs of players' boots must conform to the IRB Specification set out in IRB Regulation 12. Moulded rubber multi-studded soles are acceptable provided they have no sharp edges or ridges.*
- Law 4(4) further specifies that *a player must not wear any item that is sharp or abrasive* and a *player must not wear a single stud at the toe of the boot*.
- IRB Regulation 12 further stipulates that studs must be made of a material that will not deteriorate due to abrasion, impact, or wear that can cause a hazard - nylon is therefore not recommended because it can cause burring.
- The stud or cleat may not be longer than 21 mm, and the minimum width must be 10mm. Although the IRB does not ban the use of blades, it will be uncommon to find a 10mm wide blade that will be legal on a rugby boot.
- All edges of a cleat must be smooth.

Studs for rugby positions

- Screw-in studs are preferred by rugby forwards. Players in these positions need more power and stability, which the screw-in studs provide. This allows for more grip needed when contesting the scrums. In some cases moulded studs with metal tips are also recommended for the same positions.
- Six studs are recommended for rugby players playing in back positions. Four studs are traditionally placed on the forefoot and two studs right at the back under the heel.
- Eight studs are suitable for players playing in front positions, usually with six placed in the forefoot and two studs on the heel of the boot. Rugby forwards are big players that need a lot of traction, grip and stability for scrumming.
- Shorter moulded studs are preferred for the backs. These allow for the speed and agility needed in the back positions. Players in the back positions are most likely to be making more runs in the attack and stability and better grip is also needed.

Stud numbers and patterns

The more studs used, the more balance is provided, especially for players in the positions that do not require much running and attacking. More studs provide better grip because they cover a larger area of the playing surface

Multiple studs work better on dry, hard fields, because they don't give good traction in wet, muddy conditions. These can be found in different materials, including screw-in metal, screw-in plastic and moulded.

Boots with fewer studs, like 6 or 8 studs, are more suitable for running and speed. Fewer studs provide less grip on the surface, compared to boots with more studs. An attacking player or a wing is best suited to playing **To p40**

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in six studs because is it all about speed, lightweight and touch. Eight studs provide more traction.

The configuration plays an important role in determining the number of studs a player in a specific position should use, depending on the particular surface conditions. The consequences of playing in boots with the wrong stud pattern can lead to injury and the player not enjoying the game.

Forefoot placement: Studs placed in the forefoot provides better traction. The studs placed under the tip of the toe are specifically designed for immediate penetration of the surface.

Midfoot placement: The studs placed in the middle of the forefoot hardly dig into the ground when the player is running. They provide extra traction when the studs on the sides of the forefoot penetrate the ground at the beginning of the player's run, allowing faster acceleration.

Backfoot placement: The studs placed in the back of the sole provide balance, keep the feet stable on the ground and support the heel.

For defenders, a boot sole providing benefits like consistency, traction and touch, amongst others, is ideal. Due to a lot of activities on the left or right back it is essential for the players to wear a boot with a sole that ensures consistent performance. Screw-in studs are ideal for defenders and the number of studs vary.

Moulded studs

Moulded studs are permanently attached to the boot's sole and cannot be replaced or removed. Moulded studs are made of different materials, including rubber and plastic.

- A boot is most likely to feature 10-20, or 12-16 round moulded studs, depending on the brand as each will have a different pattern.
- They also come in different shapes, including rounded and bladed. However, blades are also available as screw-in studs.
- Moulded studs minimise the risk of blisters, because a larger number of studs are usually used, which distributes the weight more equally across a player's foot.
- They are suitable for a hard and dry pitch.
- They are low maintenance and last longer than detachable studs that need to be replaced more often.
- With moulded studs a player will need to buy a new pair of boots when they are worn out, damaged, or broken. With screw-in studs, only the studs need to be replaced.
- Moulded studs cannot grip well or provide good traction on surfaces with long grass. This gets worse in wet and muddy conditions. Unlike detachable studs, moulded studs do not allow a player the flexibility of changing studs to suit different surfaces.

Screw-in/detachable studs:

Screw-in studs, also known as detachable studs, are changeable and can be removed and replaced with a stud type that best suits particular field condition or position.

- Longer screw-in studs are advisable in muddy and wet pitch conditions, as they minimise the chances of a player slipping. They will also prevent the boot becoming bogged down in the mud, which might affect performance.
- The most common number of screw-in studs most likely to be found in a boot is seven – two studs are placed on the heel, four are placed around the ball of the foot and one stud is placed in the far front under the toes.
- Some boots will have more than ten studs. However, just like with moulded studs, the pattern will differ from one brand to another.
- Detachable studs are available in different sizes and lengths and can therefore be sold to comply with a sport's rules and requirements. Longer detachable studs are more likely found in rugby than soccer boots.
- They are versatile, as they allow a player to change studs to suit the playing surface. They therefore allow a player to have a better grip and traction as studs can be replaced to meet particular condition of the pitch.
- A player suffering from blisters on hard ground can replace longer screw-in studs with shorter ones, designed for such playing conditions.
- Screw-in studs are not recommended for young players with growing feet. It would be better for a young player to buy a new pair of moulded stud boots than having to change and remove screw-in studs until he is older.

Blades

The shape of a blade is completely different from the traditional rounded studs. Blades are flexible as they are mostly moulded in one piece, but they can also be replaced, just like screw-in studs. The depth of blades will vary from brand to brand.

- Blades are more suitable for use on soft fields.
- They are designed for speed, with the result that attackers in a soccer team, or rugby backs, might select blades rather than studs.
- The number of blades featured in the boot's outsole is normally less than the number of moulded studs featured in a boot. There are usually 8-15 of the narrow blades in a soccer boot, whereas moulded studs usually exceed that number.
- Blades are designed to provide grip while providing better turning ability at the same time.
- Blades are designed for speed. They penetrate and exit the surface quicker than the rounded studs enabling a player to run faster than one using rounded studs.
- Blades are especially suited for strikers in soccer, as they allow fast acceleration, for example, when wanting to beat a defender.
- Some designs allow for the blades to be changeable to adapt to the conditions of the field or surface.
- Blades do not provide the same amount of stability as the traditional rounded studs.
- On wet and muddy surface conditions they tend to be slippery, especially the plastic blades.
- Blades are viewed by some soccer players as dangerous. There was the incident in the English Premier League involving Manchester United's Wayne Rooney, who was cut so badly by a blade during a tackle that he was out of action for some time. This resulted in calls by some professionals for the blades to be banned.