SPORT PARQUET
Our sport parquet products are designed for both professional and amateur indoor sports activities. They are applicable for gym halls used for trainings and competitions in team sports (primarily ball games), gymnastics, dancing and fitness. Functionality, safety, easy installation and durability were the key aspects during the engineering of these products.

Grabo sport parquet systems

The simplest professional solution

Grabo Sport Parquet

Grabo sport systems

Sports flooring system specially developed for professional competition. For all kind of sport activities, particularly for indoor team ball games.

Sports flooring system for use in multi-sports arenas, mainly for competition but also for leisure sport activities and wheelchair sports.

Sports flooring system engineered for amateur indoor sports. Recommended for trainings, competitions as well as leisure sports.

Flooring system for elementary schools and kindergartens. Suitable for physical education, games and training.

Ideal solution for fitness centers, dance halls and wheelchair sports gyms.
Basic criteria for choosing a sport parquet product

**Uniform properties**
A good sports flooring provides equal conditions for athletes in every point of the sports ground.

**Gloss/brightness**
It is important that the glossy of the flooring should not be interfering for the athletes and/or for the TV broadcasting of the sporting event.

**Dimensional stability**
A significant criterion of the wooden sports floors is their reduced sensitivity to varying moisture content.

**Vertical deformation**
This is actually the braking distance the body travels after touching the ground. When too small, the ground contact goes with an impact on the body. When too large, the sporting activity causes unnecessary muscle strain.

**Force reduction**
Shows (in percent) how much of the energy imparted to the surface by the athlete at the time of ground contact is absorbed by the flooring system. Along with the level of force reduction, the speed of the shock absorption is equally important, as the protecting mechanisms of the human body cannot be activated till after 0.03 sec upon ground contact.

**Ball bounce**
One of major functions of the sports flooring is to facilitate higher sports performance. The ball bounce describes behavior of the examined flooring, in percent, as compared to the concrete surface.

**Friction factor**
An excessively high or a too low flooring friction is potentially dangerous for athlete’s health and can affect the sports performance in an adverse way. Therefore the friction factor must be kept within the optimal limits defined by the related standard.

**Wear resistance**
A good sports floor retains its surface properties for a long time.

**Lifetime**
Throughout their life the sports flooring systems are subject to the so-called fatigue loading. Resistance to fatigue stress is an indication of the product’s expected lifetime.

**Reversibility**
The sports flooring should retain its initial resilience throughout its lifetime.
Advantages of Grabo sport parquet systems

Uniform profile properties
The construction of the Grabo sport parquet systems ensures equal conditions for high sports performance to all athletes in every point of the sports ground.

Optimal grip
Due to the special sport varnish and surface texture, the friction coefficient meets the requirements stipulated by EN 13036-4. This helps to reduce “slip and trip” and adhesion-caused accidents and facilitate quick direction change.

Safe ground contact
The combination of flexible and resilient elements within the balanced flooring system ensures an optimal braking distance, without excessive vertical deformation causing unnecessary muscular strain.

Genuine joint and muscle protection
The ShockPad Elite shock-absorbing underlay significantly reduces the load on the athlete's joints and cartilages. The system reaches the maximum of its shock absorption capacity within less than 0.03 seconds, which means that it performs its protective function when the athlete’s body really needs it.

Competitive appearance
Careful selection of the parquet board and finishing gloss contributes to the attractive appearance of the sporting facility and a positive overall atmosphere of the sporting event.

Long lifetime
High-cycle (1 mln cycles) life testing of the system has proved its exceptional durability.

Long-term flexibility
Due to the unique 3 layer shock-absorbing foam and special flexible adhesive, these flooring systems retain their functional quality and protective capacity for a long period of time.

Wear resistance
The 9 layer special sport varnish is extremely wear resistant and retains its surface properties for a long time.

Good dimensional stability
Basic materials used in these systems and their specific design account for improved dimensional stability as compared to the solid wood sports parquets.

Easy installation
Due to the shock-absorbing underlay supplied as prefabricated boards, these highly functional flooring systems can be installed easily.

FIBA certified
Our sport parquet systems meet to international sports requirements and fulfill the expectations of all relevant sport standards.

Excellent sport properties
The Grabo sport flooring systems resume their original shape immediately after the loading has ceased, thus contributing to higher sports performance.
StrongAir Elite+

Ideal wood floor system for high level competitions. Outstanding durable, recommended for places where mainly professionals do sporting activities.

StrongAir+ sport parquet
- Excellent dimensional stability due to specifically designed profile.
- 5.2 mm hardwood top layer: a long-term solution.
- 9 layer wear-resistant sport varnish ensuring optimal grip.

ShockPad Elite: boarded shock-absorbing sub floor
Provides consistent sports performance at all points of the sports court. This sub floor can be easily, quickly and cost-effectively installed.

Vaporex: damp proof membrane
- Protects the system from the effects of moisture.
- Provides uniform performance in every point of the sports ground.
- Optimal strength and resilience in spite of small weight.
- Exceptionally durable, three-layer foam that works well for both small and large impacts.

StrongAir Elite+

Property | Standard | Result
---|---|---
Description | Thickness EN 429 47 mm | Weight - 16 kg/m²
Classification | area elastic A3 | Reaction to fire EN 13501 Cfl-s1
Sport properties | Friction EN 13036-4 80-110 | Shock absorption EN 14808 51 %
| Vertical deformation EN 14809 2.5 mm | Ball rebound EN 12235 99 %
| Specular gloss EN 2813 < 30 % | Resistance to rolling load EN 1569 ≥ 1500 N
| Abrasion resistance (CS10 wheel) EN ISO 5470-1 < 80 mg/1000 cycles |
| Formaldehyd emission EN 717-1,717-2 E1 | Pentachlorphenol EN 12673 no

Appearance
- Oak
- Unique
- Ash
- Natural
The StrongAir Elite sport parquet system has been engineered for multisport purposes. It is especially suitable for workouts and competitions in team ball games (such as basketball, handball, volleyball, futsal etc.) as well as for gymnastics, combat sports, dancing, fitness and wheel-chair sports.

Components of the StrongAir Elite module are damp proof membrane (Vaporex), boarded shock-absorbing underlay (ShockPad Elite) and sports parquet (StrongAir).

**Engineered for long-term use**

The profile of our flooring systems contains no weak spots over the entire floor surface, which ensures equal conditions for high performance to all athletes in every point of the sports ground. Durability through 22 mm thick StrongAir sports parquet with plywood bottom layer.

**Improved dimensional stability and resilience**

Basic materials used in these systems and their specific design account for improved dimensional stability as compared to the solid wood sports parquets.

**UV cross-linked sport varnish**

The wear resistant varnish designed specifically for this purpose is applied to the surface in 9 layers under perfectly dust-free conditions. The result is a durable, easily cleaned surface that enables rapid direction changes and protects the athlete from uncontrollable slipping.
SpringAir Elite+

We developed this sport parquet system for elementary and middle school gyms as well as for fitness halls where it is exposed to intensive use through most of the day. Recommended for team ball sports, squash, aerobic and cardio fitness. Suitable for competitions, training and free time sports.

Components of the SpringAir Elite+ module are damp proof membrane (Vaporex), boarded shock-absorbing underlay (ShockPad Elite) and sports parquet (SpringAir+).

5.2 mm hardwood top layer

The top layer of our parquet products is made of hardwood that is optimal for sporting purposes and offers long-term, durable solutions due to its robustness and excellent constructional stability. The 5.2 mm thickness allows multiple renovation of such flooring.

Improved dimensional stability and resilience

Basic materials used in these systems and their specific design account for improved dimensional stability as compared to the solid wood sports parquets.

UV cross-linked sport varnish

The wear resistant varnish designed specifically for this purpose is applied to the surface in 9 layers under perfectly dust-free conditions. The result is a durable, easily cleaned surface that enables rapid direction changes and protects the athlete from uncontrollable slipping.

Easy-to-install professional shock-absorbing underlay

Due to its boarded design, installation of the underlay is as simple as the ABC. Basic materials used in the manufacturing process ensure exceptional durability and efficiency of the product. Structure of the product allows to drastically reduce the loss of material during installation.

<table>
<thead>
<tr>
<th>Property Standard</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness</td>
<td>5.2 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>15 kg/m²</td>
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<tr>
<td>Classification</td>
<td>area-elastic A3</td>
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<tr>
<td>Reaction to fire</td>
<td>B1 D0 S1</td>
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<tr>
<td>Friction</td>
<td>80-110</td>
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<tr>
<td>Shock absorption</td>
<td>53 %</td>
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<tr>
<td>Vertical deformation</td>
<td>3.0 mm</td>
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<tr>
<td>Ball rebound</td>
<td>96 %</td>
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<tr>
<td>Specular gloss</td>
<td>&lt; 30 %</td>
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<tr>
<td>Resistance to rolling load</td>
<td>≥ 1500 N</td>
</tr>
<tr>
<td>Abrasion resistance (CS10)</td>
<td>&lt; 80 mg/1000 cycles</td>
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<tr>
<td>Formaldehyde emission</td>
<td>≤ 0,01 mg/l air</td>
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<tr>
<td>Pentachlorphenol</td>
<td>E1</td>
</tr>
<tr>
<td>Appearance</td>
<td>Oak unique, Ash rustic</td>
</tr>
</tbody>
</table>

Vaporex damp proof membrane
ShockPad Elite boarded shockabsorbing underlay
SpringAir+ sport parquet

Grabo
Sport Parquet

The simplest professional solution
SpringAir Elite

Indoor sport system with optimal shock absorption and vertical deformation. Recommended for schools and dance halls, where the protective functions (such as optimal slip resistance, efficient joint protection) of the flooring system are the most important properties. Components of the SpringAir Elite module are damp proof membrane (Vaporex), boarded shock-absorbing underlay (ShockPad Elite) and sports parquet (SpringAir).

Genuine joint and muscle protection
The low specific weight combined with normal area deformation enables the system to reach maximum shock absorption within 30 milliseconds upon ground contact, which means genuine protection of athlete’s joints and cartilages, as it is triggered before the human body can activate its own protective mechanisms.

5.2 mm hardwood top layer
The top layer of our parquet products is made of hardwood that is optimal for sporting purposes and offers long-term, durable solutions due to its robustness and excellent dimensional stability. The 5.2 mm thickness allows multiple renovation of such flooring.

UV cross-linked sport varnish
The wear resistant varnish designed specifically for this purpose is applied to the surface in 9 layers under perfectly dust-free conditions. The result is a durable, easily cleaned surface that enables rapid direction changes and protects the athlete from uncontrollable slipping.

Easy-to-install professional shock-absorbing underlay
Due to its boarded design, installation of the underlay is as simple as the ABC. Basic materials used in the manufacturing process ensure exceptional durability and efficiency of the product. Structure of the product allows to drastically reduce the loss of material during installation.
Components of the JumpAir Elite module are damp proof membrane (Vaporex), boarded shock-absorbing underlay (ShockPad Elite) and sports parquet (JumpAir).

Properties:
- Area elastic sports flooring (Category A4 as per EN 14904).
- Efficient joint and cartilage protection.
- Wear resistant surface with optimal grip.
- Uniform performance in every point of the sports ground.
- Excellent dimensional stability.
- Easy installation.

The JumpAir Elite sport parquet system has been engineered for kindergartens and elementary schools. It is equally suitable for holding PE classes, games and trainings.
Components of the JumpAir Basic module are damp proof membrane with an integrated foam layer (Vaporex40) and the sports parquet (JumpAir).

Properties:
- Simple construction.
- Special sport varnish ensuring excellent wear resistance and optimal grip.
- Uniform performance in every point of the sports ground.
- Fast installation.

JumpAir Basic
JumpAir Basic is applicable primarily in, cardio training centers fitness and dancing halls. It can also be installed in gyms, studios, or in sports rooms of homes, childcare and educational institutions.
The three major elements of the Grabo sport parquet system, the parquet (3) and the boarded shock-absorbing underlay (2) are supplied separately stacked on pallets, while the damp proof membrane (1) in rolls.

**Delivery, storage and installation**

The simplest professional solution

Do not pile more than two bundles of parquet boards on top of one another. Batches of underlay components should not be piled for transportation. After the product has arrived at the place of installation, cut off the straps holding the batches together. Components of the flooring module should be stored indoors at a constant temperature between +5 and +40°C and at 40–60% relative humidity. Store the boards at the intended place of their installation for approximately one week before application.

The sport parquet components should be protected from the sub-floor moisture. We recommend the use of Grabo Vaporex damp proof membrane as moisture barrier instead of traditional polyethylene film. Due to its specially engineered surface Grabo Vaporex provides appropriate ventilation. By the walls the edges of the membrane should be folded up for 10 cm in order to facilitate escape of the moisture from the sub-floor. Prior to any installation the moisture content of the sub-floor should be measured. While the measured moisture content stays within 1.8–5.0 CM%, or else in the case the surface area intended for parquet floor installation exceeds 800 m², the use of Grabo Vaporex damp proof membrane is recommended. Flooring installation cannot commence at moisture content above 5 CM%.

Detailed installation guide is included in the product description which is inserted in the packaging of the sport parquet.
Grabo Vaporex should be laid with the pattern side facing down and adjusted edge-to-edge; the edges then should be closed with an at least 5 cm wide vapor-tight tape.

ShockPad
The shock-absorbing underlay should be laid across the hall along its shorter side. The boards should be stitched together.

Parquet
The parquet boards should be laid along the longer axis of the hall and glued to the underlay with a flexible adhesive. The boards should be interlocked by applying a waterproof tongue and groove glue.

Game line painting
Use Grabo Color two-component type paint to draw the game lines in order to mark different parts of the hall and make it playable.

Grabo Vaporex
Vaporex is a fiberglass reinforced waterproofing underlayment that creates a vapor barrier between the subfloor and the flooring materials, assuring good moisture control. Supplied in rolls, it is easy to install; the fiberglass reinforcement ensures its excellent dimensional stability. The use of Vaporex helps to increase the durability of the flooring and reduce the installation time.

Grabo ProtectSport
This is a temporary shielding to apply for non-sporting events. It helps to protect the valuable sports flooring from accidental damage or contamination. Easy to roll and unroll. Colored and transparent options are available.

Grabo Color
This is a two-component polyurethane paint for drawing the game lines to mark and distinguish between various parts of the sports ground. Available in yellow, blue, red, white and black colors. Application rate for game lining: 1 liter paint is enough to draw a 5 cm wide, 100 m long line in two coats.

Accessories