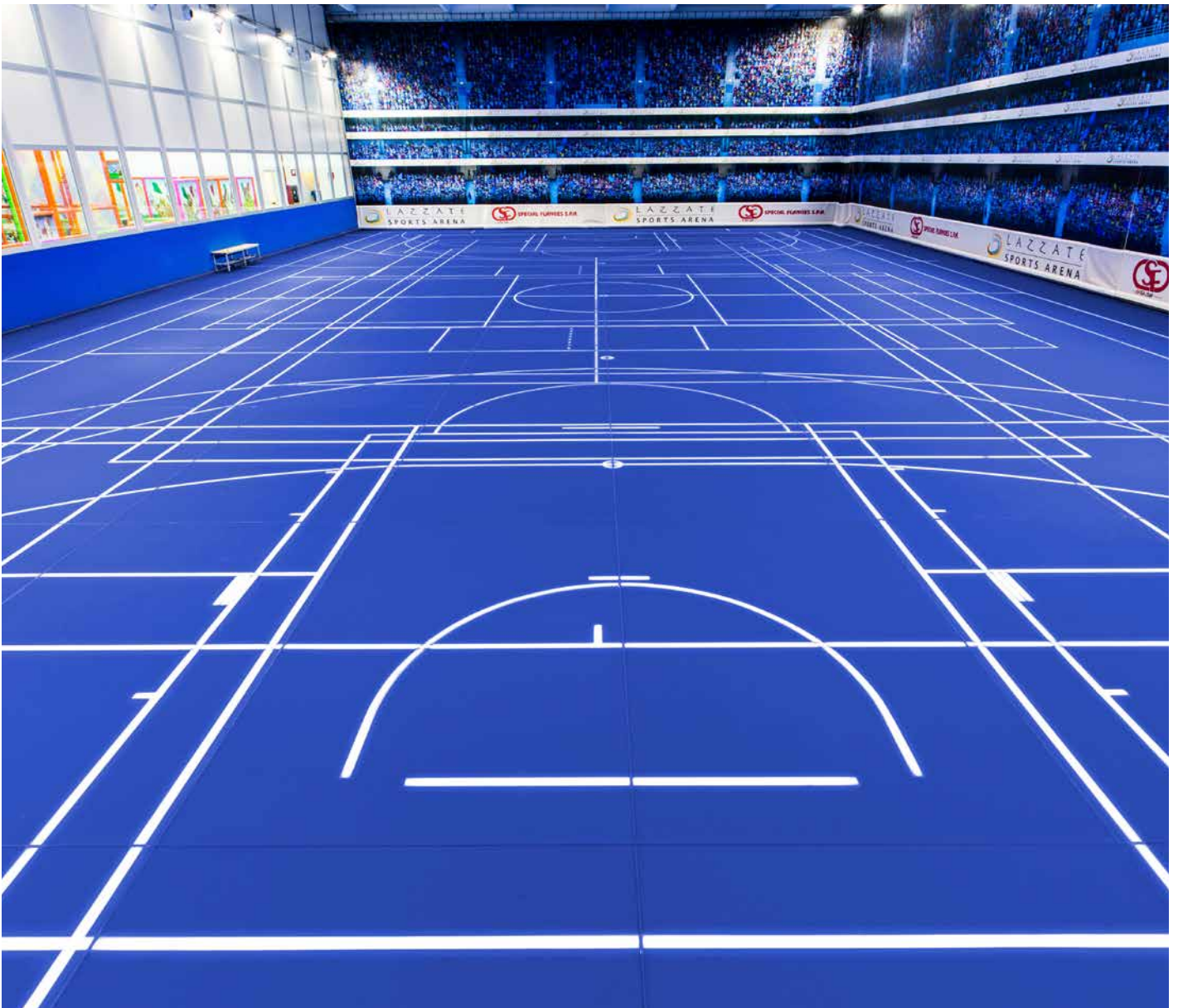


DYNAMIK

Frequently Asked Questions

ASB GlassFloor



Construction Requirements & Process

What are the typical site conditions required for the installation of a Glass Floor?

A dry level slab is ideal with a tolerance of +/- 10mm over 5m and a void of 80mm, unless underfloor heating is to be incorporated in the void in which case a void of 130mm is required. The system will be levelled by the use of height adjustable pedestals to give a final floor surface with a tolerance of no more than +/- 3mm over 5m. A liquid DPM should be applied to the concrete slab prior to the installation of the Glass Floor. Whilst installing the Glass Floor the area should be water tight and ideally the relative humidity levels in the atmosphere should be maintained between 35% and 65% and the temperature between 12 – 26°C. Permanent lighting is preferred but otherwise task lighting can be used.

What is the typical structural build up of the Glass Floor?

The substructure consists of a grid of aluminum double swing beams laid over height adjustable pedestals, this structure also incorporates the LED line marking channels. The glass panels consist of two layers of 5mm laminated safety glass bonded together with an extremely strong binding resin – Polyvinyl Butyral - PVB. Typically, each glass panel is 3m x 2m and has a weight of approximately 30 kg/m². The aluminum and glass components of the Glass Floor will not display any signs of fatigue over their 70year lifetime. The panels are installed on the substructure on polyamide bearers to give equal elasticity and shock absorption across the whole surface of the floor. Joints between the glass panels are filled with a silicone sealant.

LED Line Marking and Electrical Requirements

What are the typical electrical requirements for the LED line markings? Currently a 3 phase AC connection with 400 Volt output is required. A control box will be required in a secure area for the LED lighting, typically 1,200mm width by 2,000mm height by 400mm depth to house the controls for an 800m² floor, but this will vary depending on the complexity of the line marking. This will also house the LED drivers which are not installed below the floor.

What colour lines are available?

The LED lines which are incorporated into specially engineered light channels are available in mono-colour or as multi-colour LED's. However, we would always recommend white LED's since these are typically brighter than colour LED's and if they do fail replacements are consistent – with colour LED's it is possible that over time similar colour matches will not be available.

How long will the LED lines last?

LED's will typically last 100,000 hours which in practical terms means that if the floor has a life of 70 years any individual lines can be on for an average of 4 hours per day over the 70 years.

What is the cost of using LED lines in terms of power consumption?

One LED requires 0.07 Watts and 1m of LED channel requires 9.2 Watts. Looking at typical line marking for full size courts and based on a cost of 15p/kWh the cost of running the following line marking per hour is shown below:

Basketball	£0.31
Netball	£0.23
Badminton	£0.15
Volleyball	£0.12

How is the line marking operated?

Currently we recommend operating the lines with a Siemens touch screen control panel. One controller is supplied with the floor but additional controllers can be purchased if desired. These should be retained or mounted in a safe place.

How do we replace defective LED's?

LED's can be replaced by removing a glass panel and replacing the defective 5cm strip.

Under Floor Heating

Is it possible to install underfloor heating?

Underfloor heating is totally compatible with the Glass Floor and can either be installed in the screed or below the surface of the glass in pre-formed slots in solid insulation or clipped to solid insulation. If there is a need to access the heating pipes this can be achieved by lifting the required glass panels. The relevant information is as follows:

- +The thermal resistance of the GlassFloor is $0,022\text{m}^2\text{K/W}$
- +The heat transfer coefficient is $5,8\text{ W/qmK}$
- +The thermal conductivity coefficient is $\Lambda = 0,8\text{ W/mK}$



Loadings & Surface Protection

Is the floor compatible with bleacher seating?

The Glass Floor is one of the best sports floors to use with bleacher seating since it is reinforced underneath the supporting points of the bleachers plus the surface of the glass is so resistant, that you will never see any rolling marks from the wheels of the bleacher seating units. We would need to have a plan of the bleacher seating in order that these can be placed at the appropriate points. Additional supports will be placed 4mm underneath the glass, this ensures that during normal use the performance of the floor is not affected but with heavier loadings these supports come into play.

Do we need to protect the floor when we hold an exhibition or non-sporting activity?

Special etching on the upper surface of the panels prevents light reflection and pyrographed ceramic dots provide the required slip resistance. The ceramic dots are not subject to abrasion and do not lose their effectiveness over time. You don't have to protect the floor when you want to walk on it with street shoes as the matt surface with the ceramic dots does not get damaged. Small scratches will not be visible on the etched surface.

What is the loading capacity?

For an area-elastic sports floor the European Norm - 14904 requires a maximum weight of 500 kg/m^2 or a point load of 1N/mm^2 . The Glass Floor is much stronger and without additional support will take a loading of 750kg/m^2 . If high level maintenance is required with the use of mobile access equipment we would recommend that a felt be laid on the glass and then 18mm plywood in order to distribute the load.

Maintenance & Guarantee

How is the Glass Floor maintained?

The floor can be cleaned with any standard cleaning agent. Unlike timber or synthetic floor surfaces, more aggressive cleaners to remove the sticky wax from Handball for example, or to remove spilled paint, are not a problem for the glass surface.

Is it possible to clean the floor with cleaning machines?

The floor can be cleaned with a scrubber dryer with the appropriate cleaning pad.

What happens if a glass panel breaks?

The glass panels are made from tempered safety glass; this safety glass can be damaged by the impact of a specially hardened steel tips, for example the emergency hammer on buses and trains, or an extremely high impact on a very small area. When this happens usually only one of the glass sheets within the panel breaks and the surface will remain usable until it can be replaced.

Spare panels are usually supplied with the Glass Floor and further panels can be supplied.

In order to replace a panel the silicone seal will need to be cut and removed and the defective panel lifted by four people with suction lifters. A replacement panel can then be inserted and a new silicone seal applied.

What is the guarantee period of the floor?

The standard warranty is 10 years on the Glass Floor and 2 years on the electronic components.

Sport Performance

Does the floor meet norms and specifications?

The Glass Floor meets all requirements of the EN 14904 for a Class A4 area-elastic sports floors. This is a globally recognized standard for indoor sports. The Glass Floor received FIBA certification in 2017.

Can the floor be used for roller hockey or wheelchair sports?

Yes, the glass surface is perfectly suitable for any kind of roller hockey or wheelchair use. Hockey is also fine as the ball or the stick do not damage the floor surface.

Does the surface cause skin burn when the athletes fall and/or dive?

No. The elevated ceramic dots provide ideal grip but a smooth feeling when in contact, without causing abrasion or friction burn to the skin.

Can the athletes get hurt by the joints between the panels?

The joints are closed with silicone, so there is no risk of injury.

Custom Branding & Revenue Generating Opportunities

What colours are available?

Every floor is customised and every glass panel has a special UV resistant coating. Any colour or bespoke branding can be applied in any pattern.

How can we place company or team logos on the floor? Can they be changed later?

Every glass panel has a coloured foil coating on the underside of the glass panel. We can print the logo on the foil via a digital printing process. These can be changed by exchanging the foil on the glass panels.

Is it possible to use the Floor for International sport?

Yes. It was our intention to provide a sports floor for different types of International level tournaments by providing the ability to display only the required line marking for one sport at a time. You will of course need to ensure your Sports venue meets any other requirements.

 **ASB GlassFloor**
Exclusive UK Distributor

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Product specifications may be subject to change without notice, please contact DYNAMIK for the latest product information

 Sports Flooring

 Acoustic Walling

 Track & Gym

 Maintenance & Protection

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