Information Sheet

Sports Flooring Loadings
Athen & Komfort Elite Floor Systems

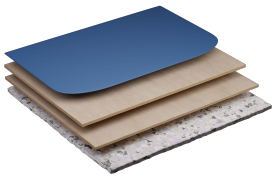
Introduction

Sports floors are now often required to take loadings in excess of those imposed by athletes or portable sports equipment. Typically these include trampolines, portable basketball goals, bleacher seating and mobile access equipment.

Construction of Our Athen & Komfort Elite Floor Systems

Our Athen & Komfort Elite Area Elastic Floor systems are built using a continuous elastic layer with means the sports floor system is fully supported at all points.

If maximum loadings are required our Komfort Elite Pro system can be installed with a 10mm elastic layer as opposed to the usual 15mm and with an all plywood construction, giving a much greater elasticity to the floor and thus enhancing its durability.



Bleacher Seating

Bleacher seating units impose high loadings on a floor and work well with our systems. Our preference would always be the Komfort Elite Pro system for the highest weight loading.

The system only needs to be strengthened in the area where the units are parked to avoid compression of the elastic layer otherwise the systems become more difficult to move. The seating can then be moved over the floor if required with suitable hover trucks if totally moveable or pulled out over the floor if it is fixed to a wall.

Although the floor will compress when pulled out under the weight of the seating units it will return to its normal position once the load is removed. In some cases we may strengthen the area under the wheel runs if the bleacher seating units are particularly heavy. Careful choice of seating units is essential to ensure that a good number of high quality wheels are used to distribute the point loading in order to avoid damage to the surface of the floor system. We can assist you in making an informed choice and can review loading calculations supplied by your chosen seating manufacturer.

Heavy Sports Equipment

Heavy sports equipment such as portable basketball goals give rise to high loadings. They are not common but when they are required you need to ensure you have the right sports floor system. Since they are typically used on a FIBA Level 1 floor which must be wood we would recommend that they are only used with our Komfort Elite Pro system which is an all plywood system with a 10mm elastic layer.

We recommend that any equipment using wheels on the floor should incorporate high quality rubber wheels as opposed to nylon wheels since the latter often incorporate a sharp ridge that can cause surface damage to the floor, including unsightly indentations.

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Mobile Access Equipment

Mobile access equipment is often used in order to carry out high level repairs such as painting, roof repairs or the replacement of light bulbs. These are very heavy and in order to accommodate the load it is essential that two layers of 9mm plywood is laid over the whole floor with a stagger so no joints overlap.

For the avoidance of doubt two layers of 9mm plywood must be laid down over a clean floor and the mobile access equipment moved into its operating position by being manoeuvred over the plywood – it should never be manoeuvred straight over an unprotected surface.

Often damage is caused to the surface by the floor not being clean and dirt being pressed into the floor surface by the forces imposed by turning wheels. As noted above nylon wheels should be avoided.

If asked we would recommend the following equipment; Nifty 120, Nifty 120T, Genie 1530, Genie 1532 or Genie 1930.

Maximum Distributed Loadings

The table opposite illustrates the maximum distributed loadings, we would recommend for the respective systems. A minimum of two layers of 9mm plywood must be laid over a clean floor when mobile access equipment is being used to accommodate the rolling load and to avoid damage to the surface finish.

*Although a floor without plywood protection can take a distributed load of 500kg/m² it can only take a rolling load of 150kg. Accordingly plywood protection should be incorporated when rolling any heavy sports equipment or mobile access equipment over the floor.

	Without plywood protection*	With two layers of 9mm plywood protection
Athen with a solid finish	500 kg /m²	750 kg /m²
Komfort Elite (except Pro)	500 kg /m²	750 kg /m²
Komfort Elite (Pro only)	750 kg /m²	1,250 kg /m²

Maximum Point Loadings

For small areas (typically up to 1,500mm^2 - approximately 40x40mm) the point load must be considered. The point load should never exceed 150g /mm^2. This is relevant for example when tables and chairs are used on a sports floor.

Maximum Point Loadings Calculation

Below is a point loadings example calculation using a person seated on a chair. The example only uses two feet of the chair to allow for any rocking or leaning and presumes that each foot has a protective cap.

1	Weight of chair (including person)	100kg
2	Surface area of chair's foot - 20mm x 20mm (x2 feet)	800mm²
Point Load (1 ÷ 2)		**125g/mm²**

Conclusion

The above highlights a number of points to be considered with regard to loadings on a sports floor. Please do observe these to ensure your sports floor maintains its performance.