Information Sheet

Flexi-Beam Plus

A3/A4 Area Elastic Sports Floor Systems vs P3 Point Elastic Flooring

Introduction

This document highlights the benefits of installing the DYNAMIK Flexi-Beam Plus sprung area elastic sports floor system compared to a P3 point elastic foam backed surface.

Typical Construction and Performance Characteristics of Sports Floor Systems

The DYNAMIK Flexi-Beam Plus A3/A4 area elastic sports floor system is based on factory assembled elastic beams which support a counter floor and solid load distribution panel. This provides a stable base for the non-foam backed (solid) sports linoleum playing surface (other non-foam backed surfaces are available).

The system is particularly suitable for new build projects or where a level slab does not exist since it can be packed and levelled off the structural slab thus eliminating the need for a levelling screed. The Flexi-Beam Plus system is also ideal where underfloor heating is to be incorporated within the floor void.

P3 point elastic sports flooring is typically a factory produced vinyl or synthetic playing surface which combines an integral foam backing similar to a foam backed carpet. This foam backing achieves low levels of shock absorption but despite this, feels soft, which can be ideal for facilities that do not require high sports performance such as pre-schools or facilities that intend not to use heavy equipment, tables and chairs or incorporate non-sporting activities such as exams or social events.

P3 flooring products are designed to be laid onto a level slab or screed (+/- 3mm over 3m straight edge).

The table below confirms the performance characteristics that each type of sports floor must meet to comply with EN14904 which is the recognized standard for indoor sports flooring.

	A4	A3	P3
Shock Absorption (%)	55 < 75	40 < 55	> 45
Vertical Deformation (mm)	2.3 < 5.0	1.8 < 3.5	< 3.5

With superior shock absorption and higher vertical deformation, A3 or A4 sprung sports systems not only offer high sports performance but also superior protection and comfort compared to a P3 floor. The Flexi-Beam system can meet Class A3 or A4 performance criteria.

Principal Benefits of Sprung Area Elastic Systems over Point Elastic Surfaces

Multi-sport – Multi-use - Sprung systems finished in a solid playing surface, such as sport linoleum, can be used in both sport and non-sport environments. This is important as a typical sports hall needs to combine sports usage as well as community use or social functions whereby the floor must cope with spillages, indentation caused by tables and chairs, stiletto heels or non-sporting footwear.

Surface Protection – It is essential if using our P3 foam-backed vinyl or timber surface that Giant Carpet Tile protection be used to avoid indentation, tearing or puncturing of the surface. There is no requirement for protection with a sprung system finished with a solid synthetic playing surface.

High Loadings – Sprung area elastic systems can accept high loadings that arise when maintenance equipment or seating systems are used. The load distribution panels within the Flexi-Beam Plus system distribute and accept the high loadings perfectly.

Wheelchair Use - P3 soft foam-backed floors are generally not recommended or liked by wheelchair users as they provide a surface with a high rolling resistance and poor maneuverability which in turn can cause muscular strains and fatigue issues if the small front wheels sink into the foam backing. A3/A4 sprung systems finished with a solid surface provide an ideal surface for wheelchair use–low rolling resistance and ideal maneuverability as well as high indentation resistance and durability.

25 Year Warranty – Flexi-Beam Plus finished with a solid playing surface comes with a 25 year warranty as opposed to 10 years typically given for a P3 foam backed surface.

Floating Floor - The Flexi-Beam Plus system is a floating floor and hence bridges any movement joints within the floor slab.

Low Life Cycle Costs - Finished with a solid playing surface means the system will have a life in excess of 35 years as opposed to 15 years for a typical point elastic vinyl.
Income Generation – If your facility serves as an income generator then the amount of revenue received is directly linked to the performance of the floor. Clubs are becoming more selective as to where they play and have a wider choice. It is therefore worth ensuring you choose a high performance floor to maximise your opportunities.

Pricing Information

The table below illustrates our pricing for both A3/A4 and P3 options. The illustration is based on a 600m² sports hall and allows for the Flexi-Beam system to be packed and levelled with a void of up to 75 mm whereas the P3 system will require a level slab. The illustration should be read in conjunction with the notes below.

Costs £ / m²	**A3 or A4 Flexi-Beam System Finished In Sport Linoleum**	**P3 Point Elastic Vinyl**
75mm Bonded Screed To Achieve A Tolerance Of +/- 3mm over 3m straight edge[1]	Not Required	14.00
Epoxy DPM[2]	-	8.00
Visqueen DPM[2]	5.00	-
Latex Layer	Not Required	4.00
Floor System	62.00	49.00
Wood Skirting & Threshold strips[3]	5.00	1.00
Additional Floor Protection costs	Not Required	14.00
Total Cost /m²	**72.00**	**90.00**
Typical Cost For A Standard 600m² Hall	**43,200.00**	**54,000.00**
Cost with Reduction For Power Floated Slab Instead of 75mm Bonded Screed (£8 / m²)	49.65	59.50

Notes:
1. Sport England recommend that a sports floor is laid to +/-3mm over a 3m straight edge, which provides a flatter and more even surface than an SR1 finish.
2. A point elastic system will require an epoxy DPM and our DYNAMIK Flexi-Beam system a visqueen DPM.
3. An area elastic system which incorporates timber in its construction requires an expansion gap around its perimeter which is covered by a hardwood sports skirting and threshold strips at doorways. A point elastic system will be finished with a painted MDF skirting.
4. Excluded above are the line markings which would be common to both systems.

Feedback and Market Opinion

DYNAMIK regularly receive feedback from end-user clients, specifiers and consultants who have stated that in their opinion a Sprung Area Elastic Sports System - finished in a solid synthetic playing surface is much more suitable for use in school facilities when compared to a P3 point elastic surface or a sprung timber finish. It is clear that sprung systems finished in a solid surface provide high indentation resistance and low maintenance/life cycle costs - ideal for school usage.

If you require a Multi-Sport, Multi-Use floor and have a requirement for the floor system to be packed and levelled off the structural slab then for longevity, durability and cost effectiveness the DYNAMIK Flexi-Beam system finished in a solid playing surface would be our recommendation.
Alternatively, if you have a level slab or screed we would recommend our Komfort Plus system.

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