

# Understanding Raised Floor Systems for the Specifier

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## **Current Specifications**

Current Specifications fall into two main categories: those of the UK standard which is compliant with MOB PF2 PS and those that are not. MOB PF2 PS is the adopted standard for UK installations. European standards are normally determined by the German DIN standard. The main differences between the MOB PF2 PS and the DIN standard being that for loading values the DIN standard adopts a safety factor of 2 and the UK standard adopts a safety factor of 3. The other main difference between the UK and DIN standards is that the DIN standard requires a more vigorous fire rating in the manufacture of the materials. All UK pedestals will also have 100 mm x 100 mm base, whereas the European standard normally calls for a smaller size. All UK panels will be totally encased in steel. Under the MOB PF2 PS panels must be designed to last 25 years and the understructure 50 years.

The majority of raised flooring manufactured comes in a standard 600 mm x 600 mm floor panel size.

The MOB PF2 PS calls for three grades of floor. Their relative loads are listed below:

<b>Grade</b>	<b>Concentrated Load over 25mm sq</b>	<b>Concentrated Load over 300mm sq</b>	<b>Uniformly distributed Load</b>
<b>LIGHT</b>	1.50 kN	2.70 kN	6.7 kN/m <sup>2</sup>
<b>MEDIUM</b>	3.00 kN	4.5 kN	8.0 kN/m <sup>2</sup>
<b>HEAVY</b>	4.50 kN	N/A	12.0 kN m <sup>2</sup>
<b>EXTRA HEAVY</b>	4.50 kN	N/A	12.0 kN m <sup>2</sup>
	In addition, this grade is required to sustain a total load of 11 kN applied equally on four points, each point 25mm sq on a 200 mm x 200 mm square configuration anywhere on the system.		

The systems shall sustain three times the particular static loadings for 5 minutes without collapse with the exception of the 11 kN four point static load required for the EXTRA HEAVY GRADE which shall be 2 times for 5 minutes without collapse. The system shall be capable of withstanding this load at any of the positions which has been subjected to the particular static load test.

Your first decision when specifying should be the GRADE of flooring you require. **IT IS WISE TO INSIST ON FULLY COMPLIANT MOB PF2 PS PRODUCTS.**

### ***Finished Floor Heights (FFH) or VOID***

The next decision you need to make is the height of the raised floor above your existing slab or sub-floor. This can be expressed as a FINISHED FLOOR HEIGHT or as a clear VOID space. In the event you specify clear void space the thickness of the panel will be added to this figure to give the FFH.

Please note that when floor systems go above 450 mm it is recommended that stringers are installed. Stringers are a lateral support between pedestal heads and their use will result in an increase in the cost. However, I have seen many installations up to 800 mm with no stringers where the manufacturer has not installed them, as he has left them as an either/or item in his quote and has omitted to tell the client that his system is then not MOB PF2 PS compliant at that height without stringers. This is a common problem - as a personal recommendation one should insist on stringers above 450mm.

### ***Floorcoverings***

There are many coverings that can be chosen for factory application to Raised Floor Panels, some examples are given below. The most common type of floor panel is a bare finished panel; standard practice is to then finish with 500 mm x 500 mm carpet tiles laid off grid on a tackifier adhesive.

<b>Vinyls</b>	This is the most common finish after bare panels. Anti-static vinyl's are used in Comms/Computer environments where static may affect delicate circuitry.
<b>Carpet</b>	Carpet can be factory bonded to a 600 mm x 600 mm panel.
<b>Marble or Stone</b>	Several types of Marble and Stone are suitable for bonding to raised floor panels.

<b>High Pressure Laminates</b>	High Pressure Laminates or HPL's are a type of formica product which is extremely durable and has many anti-static qualities which make it suitable for Comms/Computer room environments.
<b>Wood</b>	Finished Wood Planks or Strip can be bonded to a raised floor panel.
<b>Rubber</b>	Several types of Rubber are suitable for bonding to raised floor panels and this can lead to a colourful office environment.
This is by no means the definitive list of coverings but gives some idea of what can be applied to a panel. However, it is worthwhile noting that the floor panel's life is normally reduced to the life of the floor covering that has been factory bonded to it.	

### ***Installation Environment***

The proper installation environment is essential if a good installation is to be achieved. A good document to specify is the K41 specification in which you can insert your required Panel GRADE, Finished Floor Height and Floor Finish. This Document is examined in depth in the link [K41.DOC](#)

### ***Non Compliant Systems***

There are a number of non-compliant systems on the market and these can produce significant cost savings over a fully compliant system. They can provide a good alternative solution to traditional timber and joist construction. These normally consist of a high density particleboard panel installed on a pedestal of steel or block, for longevity it is wise to choose one which has steel adjustable understructure as maintenance can be high on concrete block installations.

The views expressed herein are those of The Access Flooring Company and are intended as a guide only and no liability will be accepted for reliance on these views in isolation or without full knowledge of requirements or specific conditions that prevail for the particular Project.

## **Raised Access Floor System Selector**

**1 What is the application for which your floor will be used ?**

<b>General Office Areas</b>
You will normally require a bare finished panel for covering in carpet tiles
You will need to select from a Gravity Lay System or a Screw-fixed Panel System or CORNERLOCK

<b>Computer rooms</b>
You will normally require a factory finished panel with electrostatic properties
You will need to select a floor covering

**2 What is the Loading that will imposed on the floor when in operation ?**

Grade (figures in Kn)	Light	Medium	Heavy
Point Load 25mm Square	1.5	3	4.5
Point Load 300mm Square	2.7	4.5	N/A
Uniform Distributed Load	6.7	8	12

**3 What is the Height of the Floor above the sub floor ?**

Under 70mm	Under 600mm	Over 600mm
You will need to refer to our technical department for an indepth analysis	You should be able to install the floor on normal support PEDESTALS	You will require lateral supports in addition to the pedestals known as STRINGERS