

# Permaflor BG

**BSEN**  
 Specification

## Fully steel encased

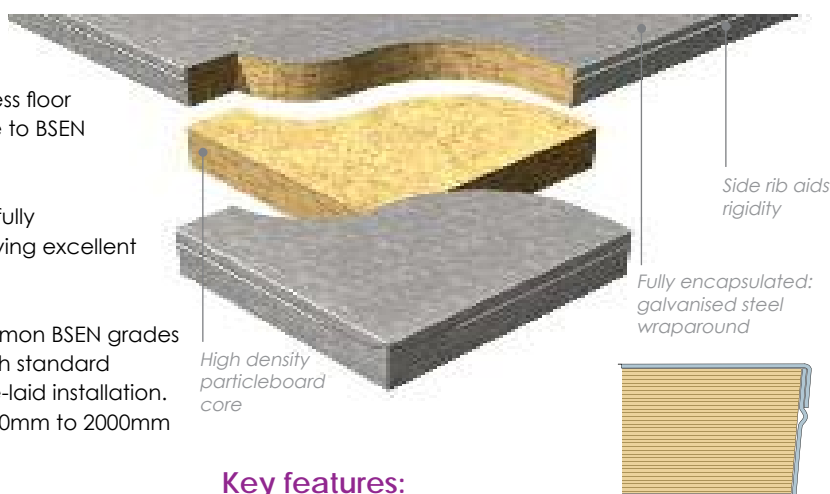
### Description

The Permaflor BG range of raised access floor panels are manufactured by Bathgate to BSEN standard specifications.

The high-density particleboard core is fully encapsulated with galvanised steel giving excellent strength and rigidity.

The BG range offers the two most common BSEN grades of panel - 3/A/3/2 and 5/A/3/2 - in both standard and low-profile configurations for loose-laid installation. This allows optional void heights from 60mm to 2000mm to suit specific applications.

A range of accessories is available together with a choice of standard or bespoke surface finishes. Permaflor is a complete raised access flooring solution which together with Bathgate's OnePoint managed installation service offers a turn key solution which includes experienced design advice, installation and total project management.



### Key features:

- Rigid construction
- Robust design
- Fully tested to BSEN 12825
- Passed accelerated wear test
- Finished floor heights to 2000mm
- Class 'O' spread of flame
- Easily installed
- Excellent dimensional stability
- Protective edge shims
- Excellent electrical continuity

PRODUCT PERFORMANCE

Product	Panel classification	Panel Size	Maximum ultimate load	Working load	Panel thickness	Panel weight (per m <sup>2</sup> )
BG 3	3/A/3/2	600mm x 600mm	> 8kN	< 3kN	31mm	32 Kg
BG 3L	3/A/3/2	600mm x 600mm	> 8kN	< 3kN	26mm	31 Kg
BG 5	5/A/3/2	600mm x 600mm	> 8kN	< 3kN	31mm	33 Kg

L = Low profile  
 All panels gravity-laid

Panel classifications conform to BSEN 12825: 2001  
 Deflection under working load < 2.5mm; Safety factor x3

KEY PRODUCT INFORMATION

Construction	High density particleboard core. Galvanised steel encapsulation: top and bottom sheets folded and mechanically bonded with edges ribbed for added rigidity
Certification	All panels tested to requirements of BSEN 12825:2001
Loading safety margin	Tested to withstand excess point loading factor of 3x working load
Acoustic performance	Typical panel performance 38.5dB (airborne sound) and 68 - 74dB (impact sound) Performance will improve depending on surface finish applied
Electrical	Forms electrically continuous floor that should be earthed in accordance with IEE regulations. Earthing studs can be pre-fitted to pedestals. Electrostatically conductive gasket may be fitted to pedestal head.
Fire resistance	Class 'O' spread of flame
Warranty	Single point manufacturer warranty: 25 years
Key dimensional tolerances	Length: ± 0.4mm; Square: 600x600 ± 0.5mm; Thickness ± 0.5mm

Installation	Typical suitability	Typical floor height (cable only)	Typical floor height (cable and HVAC)
Light office use	BG 3 / BG 3L	70 - 300mm	150 - 450mm
General office use	BG 3 / BG 3L	70 - 300mm	150 - 450mm
Call centres	BG 3, BG 5	150 - 600mm	300 - 1200mm
Communications room	BG 3	150 - 300mm	300 - 450mm
Banking and finance	BG 3	150 - 300mm	300 - 600mm
Plant and equipment	BG 5	-	300 - 600mm
Sports halls, gymnasiums	BG 5	150 - 300mm	150 - 450mm
Retail	BG 3 / BG 3L	70 - 150mm	150 - 600mm
Light industrial	BG 5	150 - 300mm	300 - 450mm
Hotels and leisure	BG 3 / BG 3L	70 - 150mm	150 - 450mm
Schools and colleges	BG3 / BG 3L	70 - 150mm	150 - 600mm

note: the above table gives typical examples, the specific requirements for any application will always depend on the expected use, loading and environmental factors during planned occupancy.

Please refer to our technical department for advice on any planned application.

## Installation

Pedestals - type S (voids 60 - 700mm)  
For standard floor heights: die-cast aluminium head with eight integral panel locators cast in; threaded steel column onto die-cast base with reinforcing webs pre-drilled for optional mechanical or adhesive fixing to substrate.

Electro-plated steel stud supplied cut to length as specified, with levelling nut giving 40mm vertical adjustment on-site. Earthing studs may be pre-fitted; optional PVC sleeve available; optional electro-conductive anti-vibration head gasket. Can be used with / without stringers.

## Stringers

Where additional lateral stability is required or where floor heights exceed 600mm, stringers may be attached to the pedestals. Stringers will improve lateral stability and rigidity but will not affect load bearing performance.

## Bridging beams

Where obstructions in the void or substrate prevent pedestal positioning at the corner of the panel, bridging beams can be used to support the panel by spanning the obstruction.

## Mechanical fixing to substrate

Where the subfloor contains latents and an adhesive bond is not able to resist the pedestal knockover test, then mechanical fixing should be used to stabilise the system.

Pedestal	Class	stud size	base size	void range
S1	All Grades	M20	114mm Ø	60-350mm
S2	All Grades	M16	90mm Ø	60-395mm

All pedestals may be adhesively fixed after levelling to lock in position.



## Install options: gravity laid

Floor panels may be simply positioned into place using the locating lugs on each pedestal, four pedestals per panel. Pedestals may be loose laid or affixed to the substrate. Lateral stability can be reinforced using stringers if required.

## Fixing details: perimeters

Over-sized panels for perimeters may be specified to avoid or minimise cutting on site. Panels should cut using a bandsaw to a minimum width of 150mm, with exposed edges smoothed and sealed using class 'O' self-adhesive aluminium foil tape. A 10mm expansion joint should be left between the panel and perimeter edge using a class 'O' closed cell foam tape adhered to the panel outer edge. Perimeter panels should be mechanically fixed to their pedestals for additional stability.

## Removing panels

Where access to the void is required or to remove floor sections, a suction lifter may be used on smooth-faced panels or spiked lifters for panels pre-fitted with a carpeted finish.

Where more than one panel is to be removed, these should only be lifted in single rows with a maximum of four panels to any unbroken row. Do not lift panels in groups or leave individual pedestals exposed.

## Accessories

- Full range of accessories available:
- Hinged-lid electrical floor boxes
- Cable ports
- Air plenum / air handling assemblies
- Handrails
- Ramps
- Steps
- Perimeter gaskets
- Class 'O' aluminium foil tape
- Pedestal earthing clamps



## Floor finishes

The standard BG panel has a galvanised steel finish that is suitable substrate for various loose laid floor finishes including carpet tiles, vinyls and other modular materials.

Where factory-bonded finishes are required, the Permaflor BE range should be specified – please see separate datasheet. These can be supplied in a range of bespoke finishes including carpet, vinyls, laminates, timber, ceramics or natural stone. Further information can be obtained from our technical department.

## Bespoke sizes

Where appropriate for refurbishment projects, bespoke panel sizes can be manufactured that confirm to the BSEN specification. This may be considered particularly appropriate when upgrading or extending an existing Imperial sized floor panels, or where utilisation of the existing grid is the most cost effective solution.

## Protecting the floor

Following installation, if it is likely the floor will be used by other trades prior to handover the following guidelines should be observed to prevent damage:

- Floors should not be used for a period of 48 hours following application of adhesives
- Floors should not be used to store materials or be subjected to static or dynamic loadings that exceed their design performance
- Floor surfaces should be protected using hardboard / plywood sheets (with taped joints) or anti-slip moulded plastic sheeting, dependent on expected traffic and loadings.

## **BSEN specification: BSEN 12825:2001**

The standard specification for raised access flooring in the UK, NBS K41, includes a series of clauses for the specifier to create a raised floor specification in compliance with the relevant standards.

It provides reference to either of the two performance specifications that currently prevail in the UK - the long-established (but no longer updated) PSA MOB PF2 PS/SPU and the more recent European Standard BS EN12825:2001.

The PSA is still generally accepted as the more comprehensive and thorough, and for this reason is the most widely used for private sector projects. For some new works in the public sector there may be a statutory requirement to use the BS EN specification. There are fundamental differences between the two specifications: The PSA is the more prescriptive, as it refers to measurable performance criteria verified by standard testing methods including dimensional tolerances and loadbearing.

It provides reference to four grades of flooring; indicates typical applications and is generally considered more user-friendly than the BSEN.

The decision on which of the two specifications to use - PSA or BSEN - rests with the specifier. Product suitability and selection for a specific application will then follow conformity to the respective specification.

The fully encapsulated products detailed in this datasheet have been tested to the requirements of the BSEN specification. Please also refer to the Permaflor BE (BSEN) Product Datasheet which details edge-banded floor panels.

For Permaflor products conforming to the PSA specification, please refer to the PSA datasheets Permaflor BG (fully encapsulated) and Permaflor BE (edge banded).

## **Technical support**

Our technical and design support team are able to offer experienced advice on all aspects of access flooring and product selection for both PSA or BSEN specifications. Floor plans and CAD drawings can be produced, as well as takeoffs and accurate quantity estimates for budgeting and ordering purposes.

We are also able to discuss and recommend the most cost-effective design or product solutions to meet clients' practical or performance objectives.

This service is available from initial design through to installation.



## **OnePoint**

OnePoint is Bathgate's managed installation service offering single point contact and responsibility from initial enquiry through to project completion. A project manager coordinates all aspects of your project from design support through to manufacture, delivery and installation.

## **Further information**

For additional product or technical information please visit our website at [www.bathgateflooring.co.uk](http://www.bathgateflooring.co.uk) or call 0870 600 2066