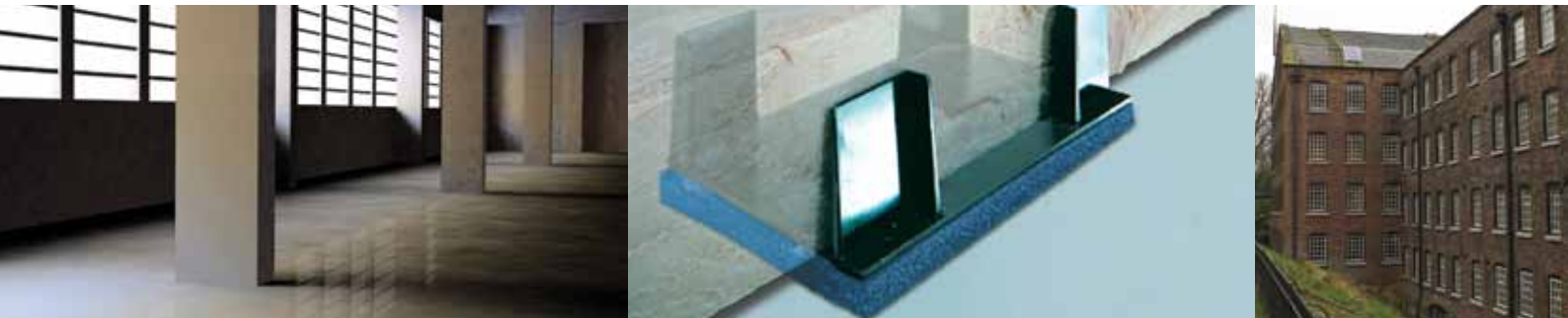


THE KNOWLEDGE TO PRODUCE SOLUTIONS



PROFLOOR LEVELLING SYSTEM

the simple solution to out of level subfloors



ACOUSTIC FLOOR & WALL SOLUTIONS
CONDENSATION CONTROL
GROUND GAS PROTECTION
THERMAL INSULATION
TIMBER CLADDING

SIMPLE EFFECTIVE SOLUTION

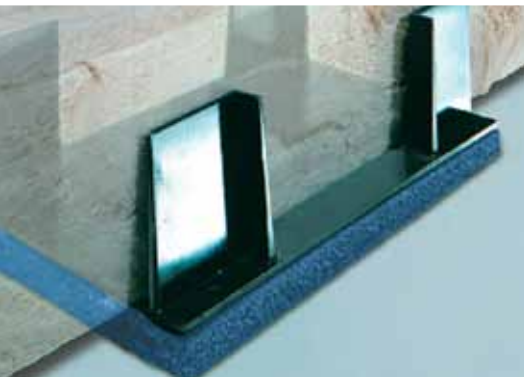
Development

The Profloor Levelling System was developed in order that a level finished floor could be laid on a cambered, stepped or uneven subfloor. The System will help meet the statutory impact and airborne sound requirements of the Building Regulations depending on the subfloor construction.

Why use Profloor Levelling Bases?

Profloor Levelling Bases provide impact sound insulation so can be used on party floors in flats and apartments with a concrete subfloor of not less than 300 kg/m², or for Robust Details floors which specify FFT2 as a floating floor treatment.

Packing pieces inserted in each Base allow the battens supporting the chipboard or flooring material to be adjusted for level. Thus the Profloor Levelling System can be laid on out of level and uneven subfloors.



Summary of benefits

- A level floor is achieved on an uneven subfloor which saves costly remedial work to the base floor.
- Complies with Building Regulations for impact sound depending on floor base.
- Robust Details FFT2 for E-FC-1, E-FC-2, E-FC-7, E-FS-1.
- Independent UKAS test results available.
- Subfloor cavity allows services to be run under the floor.
- Dry construction means no drying out delays.
- Warm floor surface appreciated by occupiers.
- Shock absorbing floor construction, more comfortable to walk on.
- Quick to install, speeds construction time.
- Low depth helps where floor to ceiling heights are limited.
- Light weight of floor saves mass in multi-storey construction.
- Packers do not require glue, so floor is quicker and easier to install.
- Various floor surfaces can be used, i.e., chipboard, plywood or hardwood.
- Easy assembly on site.
- Large height adjustment, 28mm packing adjustment with most bases.
- Support available from our national specification team.
- Tech desk support on 01250 872261.

PROJECT REFERENCES

COUNTRYSIDE PROPERTIES

London

Countryside Properties has completed this £19m estate regeneration scheme, which is part of the Southwark Estates Initiative, on behalf of Peabody.

As part of the refurbishment of the floors the A. Proctor Group supplied Profloor Levelling System. Profloor Levelling System was developed in order that a level, finished floor could be laid on a cambered, stepped or uneven sub-floor. Robust details constructions can still benefit from a levelling system that provides the final level and takes out any irregularities particularly in a mortar screed surface.

The project involved the phased replacement of four 1960's blocks with 154 mixed tenure new homes. For the 1st phase the A. Proctor Group supplied 16,500 levelling bases and 150 rolls of flanking strip and packers direct to site, with the remaining phases being delivered when required.



Beetham Tower

Birmingham

At 122 metres (400ft) high the Beetham Tower is the tallest building on the Birmingham City skyline and is the tallest residential building outside London. The first 18 storeys of the tower contains the Radisson SAS hotel with 211 bedrooms and suites; the final 21 floors are made up of apartments, duplexes and penthouses.

To surmount the problems of out of level sub-floors Ian Simpson Architects of London approved the use of Proctor Profloor Levelling System which was installed by Ruddy Joinery based in Flitwick Bedfordshire

M & L type Levelling Bases, 12 deep were used. As the floor to ceiling height was restricted in some places, L Bases, which are designed to be used with 21mm battens, were used to keep floor depths to a minimum. The cavity under the floor can be used to distribute services dependant upon the depth of batten and depth of Levelling Base selected.

The use of the Levelling System in multi story construction gives great benefits in handling of materials and hoisting them to the areas where they are to be installed. The boards and battens and boxes of Levelling Bases are easy to handle and to place in the areas where they are needed.

Structural costs can sometimes be reduced as the Levelling System is much lighter in weight than screed and the building need not be designed for the extra weight of screed. The drying out time necessary for screed is also eliminated



Coopers Road Estate, Southwark



Beetham Tower Birmingham

PRODUCT INFORMATION

The solution to difficult subfloors

One of the biggest problems facing Architects and Contractors is achieving a satisfactory level finished floor laid on a subfloor that is often less than perfect. Pre-cast concrete is usually pre-stressed with a camber that can be up to 25mm or more and differences between beams can give steps which means batten or deck systems cannot be used.

Using the Profloor Levelling System means that costly remedial work to the subfloor such as scabbling and making good are eliminated.

Limited floor depth

Another problem particularly on refurbishment contracts is the lack of available floor depth in some areas and the deep floor zone that needs to be made up in others.

The total floor depth of the Profloor Levelling System including an 18mm board finish can be as low as 51mm and as high as 203mm.

This means that using the minimum depth of floor can maximise floor to ceiling height which is particularly helpful in refurbishment contracts.

Sound insulation

The Profloor Levelling System complies with the requirements of the Building Regulations for impact sound insulation which specify a minimum mass for concrete floors of 300 kg/m².

Successful tests have been carried out by a UKAS accredited laboratory on lighter floors but a subfloor mass of 300 kg/m² is recommended.

Airborne sound insulation is met by the mass of the concrete subfloor and care should be taken to ensure that air passages through the structure are eliminated with good grouting of joints.

The use of an absorbent quilt between battens will also assist by reducing airborne sound in the cavity.

Robust Details

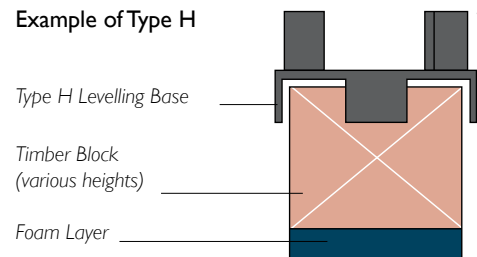
For use as an FFT2 on the following robust detail compliant floors:

- E-FC-1 Hollow-core slab
- E-FC-2 In-situ concrete slab
- E-FC-7 Beam and block floor
- E-FS-1 In-situ concrete on steel deck

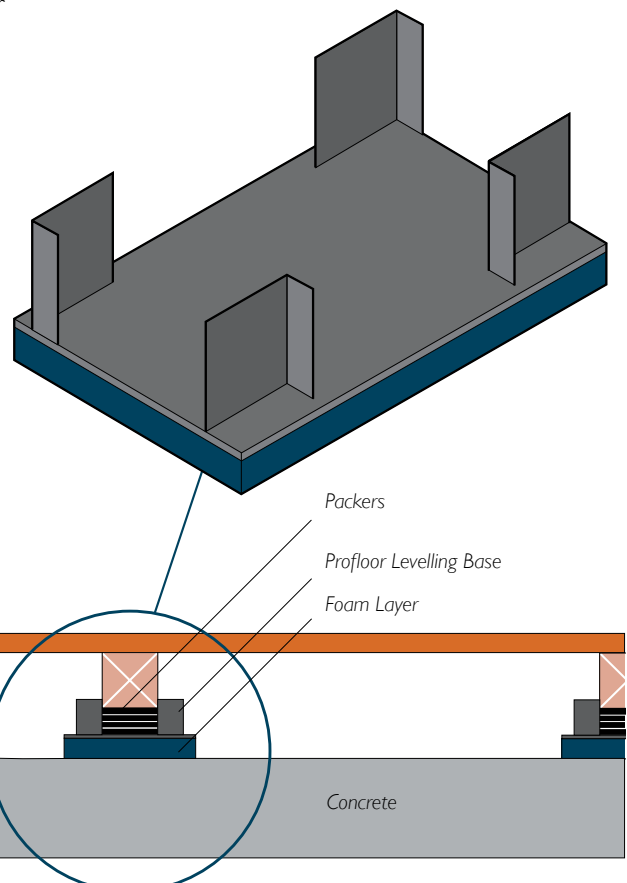
A minimum void of 50mm from the top of the concrete floor (or screed where applicable) to the underside of the flooring is required.

For advice on using the system on timber construction please contact the Techline.

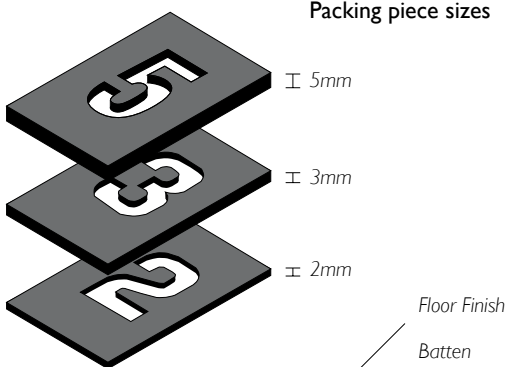
Example of Type H



Example of Type M



Packing piece sizes



PRODUCT INFORMATION

Components

Levelling Bases

Levelling Bases are manufactured from injection moulded High Grade Polymer, size 70 x 100mm in three types:

L and M with 10mm (uncompressed) foam bonded to the Base. Type H is for deeper floors with the 10mm foam bonded to softwood inserts of different thickness, attached to the Levelling Base.

Type L -requires 21mm thickness battens
-floor depth minimum 51mm up to 67mm

Type M -requires 33mm, 45mm thickness or deeper battens with packing
-floor depth minimum 63mm up to 91mm with 33mm battens with packing.
-floor depth minimum 75mm up to 103mm with 45mm battens with packing.

Type H -requires 45 mm thickness or deeper battens
-floor depth minimum 95 mm up to 203mm with packing.
(All floor depths include 18mm boarding supplied by others).

For spacing details see below.

Battens

Softwood, straight grained, 21, 33 or 45mm finished thickness x 45mm width. Moisture content should not exceed 14%. Preservative treatment can be specified but is not usually considered necessary.

Board Flooring

For domestic use, 18mm P5 T&G chipboard with batten spacing of 450mm is adequate. Boarding such as 22mm chipboard, plywood or hardwood strip can also be used with appropriate batten centres recommended by the manufacturers.

Floor Loading

Closer batten spacing will be necessary for areas with higher loading i.e. kitchens, bathrooms and communal spaces. In these areas, Profloor Levelling System should be installed with spacing closed to 300mm centres. When a concentrated floor loading is in excess of 1.5kN/m², (i.e. kitchens, bathrooms, cupboards containing water heaters etc.) additional battens may also be necessary. It is also recommended that hallways, both internal and common, be treated in the same manner as kitchens and bathrooms to accommodate the combination of high foot traffic and small floor areas.

For Non Residential Use

Please contact the Tecline (see overleaf) with details of intended use, loading requirements and type of boarding to be used.

Profloor Levelling Bases

Base type-depth (mm)	Batten depth (mm)	Total depth without board (mm)		Base spacing (mm)	Batten centres (mm)	Boarding thickness (mm)
		Low	High			
L - 12	21	33	49	300	300	18
					450	18
					600	22
M - 12	33	45	73	450	300	18
					450	18
					600	22
M - 12	45	57	85	600	300	18
					450	18
					600	22
H20 - 32	45	77	105	600	300	18
					450	18
					600	22
H40 - 52	45	97	125	600	300	18
					450	18
					600	22
H60 - 72	45	117	145	600	300	18
					450	18
					600	22
H80 - 92	45	137	165	600	300	18
					450	18
					600	22
H100 - 112	45	157	185	600	300	18
					450	18
					600	22

RELATED INFORMATION

Accessories

Profloor Adhesive

This is for gluing the tongue and groove joint of chipboard or plywood and for bonding the boarding to the battens - packers fitted into each Base do not require to be glued.

Flanking Strip

Profloor Flanking Strip 10m x 100mm x 5mm should be laid vertically around the walls of each room so as to protrude above finished floor level. When fitting the skirting board, the Profloor Flanking Strip is compressed by the bottom edge of the skirting and the surplus can then be trimmed with a sharp knife.

Fixings

The boards should be fixed in accordance with BS8201:2011, using annular ringed-shank nails or screws at 300mm intervals along the batten. Care must be taken not to penetrate any services crossing the line of battens. We would additionally recommend the use of adhesive to glue the boards to the battens.

The T & G joints of all boards should be glued using Profloor PVA Adhesive or similar.

Specification

How to specify Profloor Levelling System for residential use.

Profloor Levelling System consisting of Profloor Levelling Bases, packing pieces and battens to achieve a minimum floor depth of (.....) mm including the thickness of boarding. Batten centres for 18 mm P5 chipboard - 400, max 450mm. Batten centres for 22mm P5 chipboard - 600mm.

Levelling Base centres and all fixing to be strictly in accordance with the printed Profloor Levelling System User Guide and Laying Procedure.



RELATED INFORMATION

Site Conditions

1. Site Conditions

Installation to be strictly in accordance with the Profloor Levelling System User Guide.

2. Subfloor

The surface must be hard, dry, swept clean and suitable for a Levelling Base to lie flat.

3. Inherent Moisture

When installing on dry concrete party floors above ground, the system is laid direct to the concrete where moisture levels exceed those indicated in BS 8201 a Protech GM+ damp and vapour membrane should first be laid with lapped joints bonded with Probond pressure sensitive tape, turned up around the perimeter above the level of the finished floor.

4. Subfloor Levels

The Profloor Levelling System is designed to allow a level finished floor to be installed. Sufficient depth must be available to accommodate the Levelling System chosen when placed on the highest point of the area. Packing pieces are inserted in each Base to level the battens before the chipboard or other floor deck is laid.

5. Commencement

The flooring systems should be programmed to be laid as late as possible. All windows should be installed and glazed, wet trades completed and sufficient time allowed for thorough drying out.

6. Services

Care should be taken with the service layout to avoid multiple pipes and cables grouped together. Pipes running parallel with walls should be either tight against the wall or far enough away to allow a Levelling Base to fit between the pipe and the wall i.e. min. gap of 100mm.

7. Care of Materials

The Profloor Levelling components should not be delivered to site until dry storage is available, preferably in the areas where the floor is to be laid.

8. Technical Services

For Technical advice at either design or installation stage, please contact the A. Proctor Tecline. on 01250 872261



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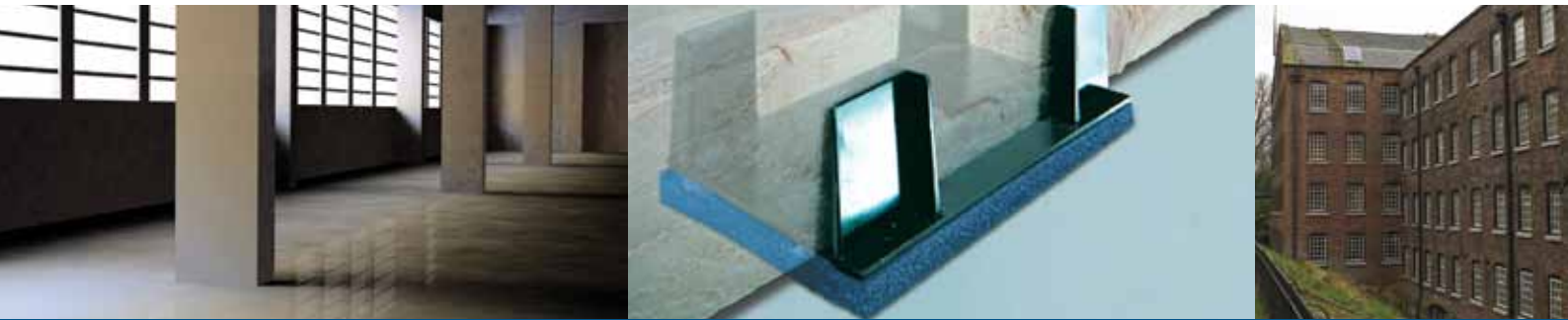
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AP56021 - 06/2012

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