

Acoustic Floor Levelling & Elevation Systems

New Build, Refurbishment and Conversion

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UK Production Facility



Automated Production



Extensive Stock Holding



Why CELLECTA?

CELLECTA is proud to be the UK's leading innovator and manufacturer of high performing and environmentally friendly acoustic floor and wall treatments, underfloor heating systems, and technical insulation boards.

For 30 years our products have been successfully installed in a myriad of residential, commercial, educational, healthcare, and industrial buildings.

CELLECTA's team of experienced technical consultants offer unrivalled customer support, supplying the very best advice on the most suitable products to satisfy current legislation. Our team can also offer RIBA Certified CPD's, arrange quick and efficient deliveries of our products and provide first class after sales service, including installation advice to ensure customer satisfaction.



FREE services offered by **CELLECTA**:

- ◊ Technical and installation advice
- ◊ Architectural drawings and NBS specs
- ◊ U-value and imposed load calculations
- ◊ Site surveys and take-off service
- ◊ Arrange acoustic testing
- ◊ Present RIBA certified CPDs

For on the go access to information, including installation videos & technical data, download the **CELLECTA.app** for smart phones and tablet devices.



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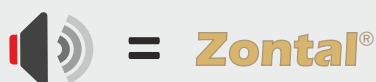


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Acoustic Cradle and Batten Levelling Systems

To satisfy the demand for a quick-to-install acoustic floor system, that both elevates and levels an uneven structural floor, **CELLECTA** offers two unique, Robust Detail compliant cradle and batten floor treatments: **Zontal**® for acoustic applications and **Gobi**® for acoustic applications with the added benefit of incorporating an underfloor heating system, that delivers outstanding heat response times at operating temperatures as low as 35°C.

Acoustic Applications



Cradle and batten acoustic levelling systems

Zontal® acoustic levelling systems are available with the option of two different floorboards to accommodate specific floor coverings:

- **P5** tongue and groove chipboard, suitable for carpeted and timber flooring applications.
- **HiDECK**® **Structural** tongue and groove, low deflection floorboard, specifically for applications with brittle floor finishes.



Zontal Z18-40

Proposed Floor Finish
Carpet
Carpet tiles
Engineered wood
Solid wood

	Z18-40	Z18-65	Z22-40	Z22-65
Floorboard	CELLECTA P5 (T&G chipboard flooring)			
Thickness (mm)	18	18	22	22
Batten height (mm)	40	65	40	65

Cover P5 floorboard with a fabricated underlay, such as with 6mm (min) plywood sheeting, secured with countersunk screws. Lay floor finish in accordance with the Contract Flooring Association's recommendations.

Ceramic tiles
Porcelain
Stone tiles
LVT
Vinyl

	Z25-40	Z25-65	Z28-40	Z28-65	Z30-40	Z30-65
Floorboard	HiDECK® Structural (High density, recycled gypsum, low deflection floorboard)					
Thickness (mm)	25	25	28	28	30	30
Batten height (mm)	40	65	40	65	40	65

Other batten heights available on request

Structural Loadings

To ensure the floor treatment is able to withstand the loading imposed, both during construction and following occupancy, the cradles and battens must be spaced out correctly. Table L.1 provides guidance on correct spacing for both 40mm or 65mm deep battens. Spacing requirements should be read in combination with any specific site specifications, along with installation instructions.



Notes.

Structural loadings carried out by Canham Consulting, April 2022. Report No. 21765.
For deeper battens, space out the same as 65mm.

Acoustic and UFH Applications



Cradle and batten acoustic levelling systems with integrated underfloor heating

Gobi® Robust Detail compliant acoustic levelling systems incorporate **RUBBERfon®** cradles, **HiDECK® Structural** heat conductive floorboards and **XFLO®** high compressive strength XPS insulation boards, to produce a floor with outstanding acoustic properties, rapid heating response times and energy efficiency at a low flow temperature. In addition, **Gobi®** systems can directly accept brittle floor finishes, such as ceramic tiles, providing aesthetic design flexibility.



Gobi G1-25-25

Proposed Floor Finish

Carpet
Carpet tiles
Engineered wood
Solid wood
Ceramic tiles
Porcelain
Stone tiles
LVT
Vinyl

20%
More
efficient

G1-25-25 **G1-25-30** **G1-28-25** **G1-28-30** **G1-30-25** **G1-30-30**

Heat diffuser	500 micron ULTRAplate 2i (Highly conductive profiled aluminium plate)				
Floorboard	HiDECK® Structural (High density, recycled gypsum, low deflection floorboard)				
Thickness (mm)	25	25	28	28	30
UFH insulation	XFLO® JB* (High strength, routed XPS board)				
Thickness (mm)	25	30	25	30	25

G2-25-25 **G2-25-30** **G2-28-25** **G2-28-30** **G2-30-25** **G2-30-30**

Heat diffuser	100 micron aluminium foil bonded to routed XFLO® board				
Floorboard	HiDECK® Structural (High density, recycled gypsum, low deflection floorboard)				
Thickness (mm)	25	25	28	28	30
UFH insulation	XFLO® JB FF* (Foil faced, high strength, routed XPS board)				
Thickness (mm)	25	30	25	30	25

Notes.
Please refer to page 27 for further guidance on floor finishes compatibility.
Other batten heights available on request.
*Routed to suit pipe installed.

A1: Self contained dwellings & student accommodation
UDL: 1.5kN/m²
Concentrated load: 2.0 kN

A3: Bedrooms in hotel & motels
UDL: 2.0kN/m²
Concentrated load: 2.0 kN

A6: Communal areas in blocks of flats
UDL 3.0kN/m²
Concentrated load 2.0 kN

Table L.1

Floorboard	Batten centres (max)	Cradle centres (max)	Batten centres (max)	Cradle centres (max)	Batten centres (max)	Cradle centres (max)
CELLECTA P518	450mm	Batten 40 - 600mm Batten 65 - 600mm	400mm	Batten 40 - 450mm Batten 65 - 600mm	350mm	Batten 40 - 450mm Batten 65 - 600mm
CELLECTA P522	600mm	Batten 40 - 600mm Batten 65 - 600mm	450mm	Batten 40 - 450mm Batten 65 - 600mm	450mm	Batten 40 - 450mm Batten 65 - 600mm
HiDECK® Structural 25	400mm	Batten 40 - 600mm Batten 65 - 600mm	400mm	Batten 40 - 450mm Batten 65 - 600mm	400mm	Batten 40 - 450mm Batten 65 - 600mm
HiDECK® Structural 28	400mm	Batten 40 - 600mm Batten 65 - 600mm	400mm	Batten 40 - 450mm Batten 65 - 600mm	400mm	Batten 40 - 450mm Batten 65 - 600mm
HiDECK® Structural 30	400mm	Batten 40 - 600mm Batten 65 - 600mm	400mm	Batten 40 - 450mm Batten 65 - 600mm	400mm	Batten 40 - 450mm Batten 65 - 600mm



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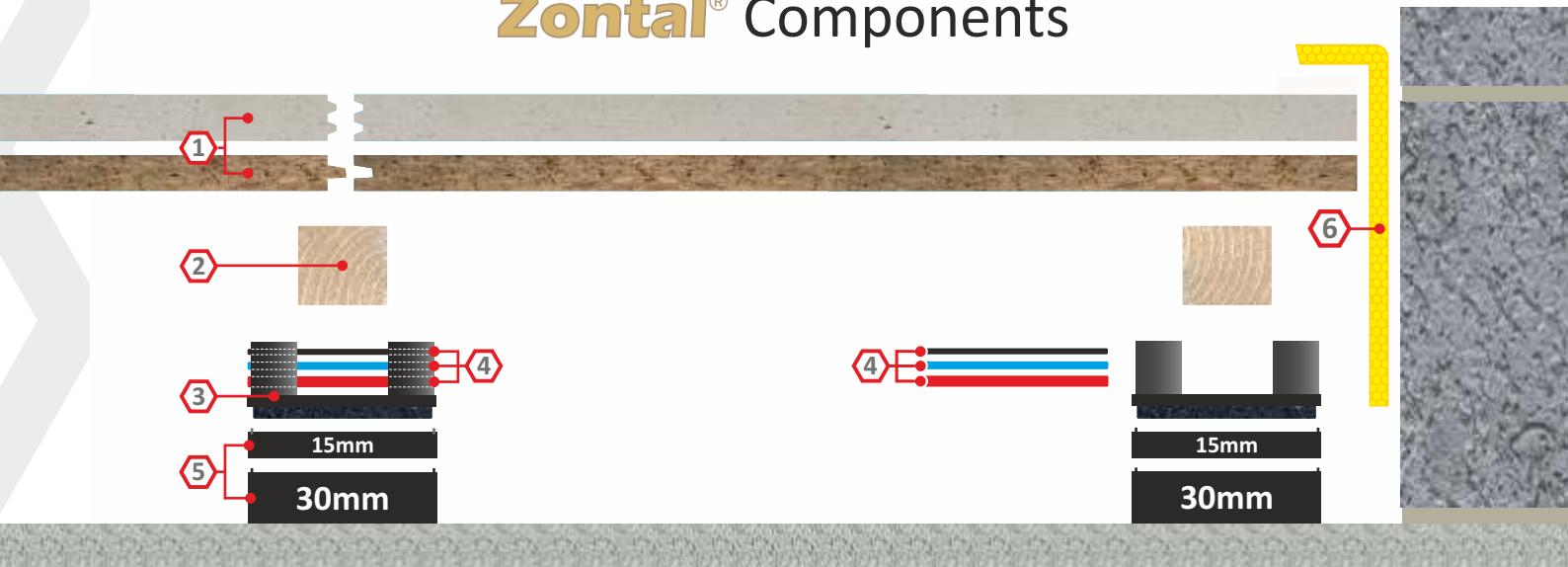


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Zontal® Acoustic Floor Levelling System

Zontal® Cradle & Batten systems are the ideal solution to both elevate and level an uneven concrete separating floor and deliver outstanding acoustic performance. The dry laid system is offered with the option of incorporating P5 T&G chipboard flooring or HiDECK® Structural low deflection floorboards which can directly accept brittle finishes, without the need of a fabricated underlay, such as plywood sheeting.

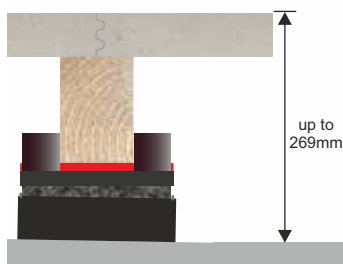
Zontal® Components



1	CELLECTA floorboard type	Thickness	2	CELLECTA Batten 40, 65
	P518 (T&G chipboard flooring)	18mm	3	CELLECTA RUBBERfon Acoustic Cradle
	P522 (T&G chipboard flooring)	22mm	4	CELLECTA Cradle Packers - 2, 3 & 5mm
	HiDECK Structural 25 (low deflection board)	25mm	5	CELLECTA Elevation Blocks - 15 & 30mm
	HiDECK Structural 28 (low deflection board)	28mm	6	CELLECTA YELOfon ES5 acoustic perimeter edge strip
CLASS A1	HiDECK Structural 30 (low deflection board)	30mm		

For product specifications see page 27 - 30

Zontal® Benefits



Quickly & easily levels an uneven floor & provides void for services

25dB $rd\ DL_w$



Outstanding acoustic performance

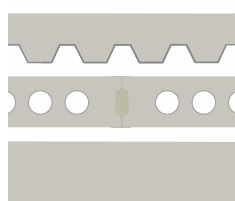


Robust Detail FFT2 compliant treatment

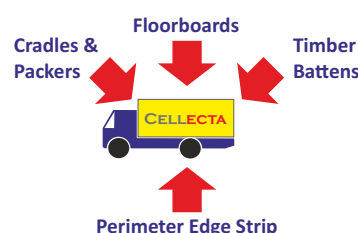
Zontal® Screed Z18-40



Lightweight treatment



Suitable for all types of concrete floors



Components supplied by CELLECTA



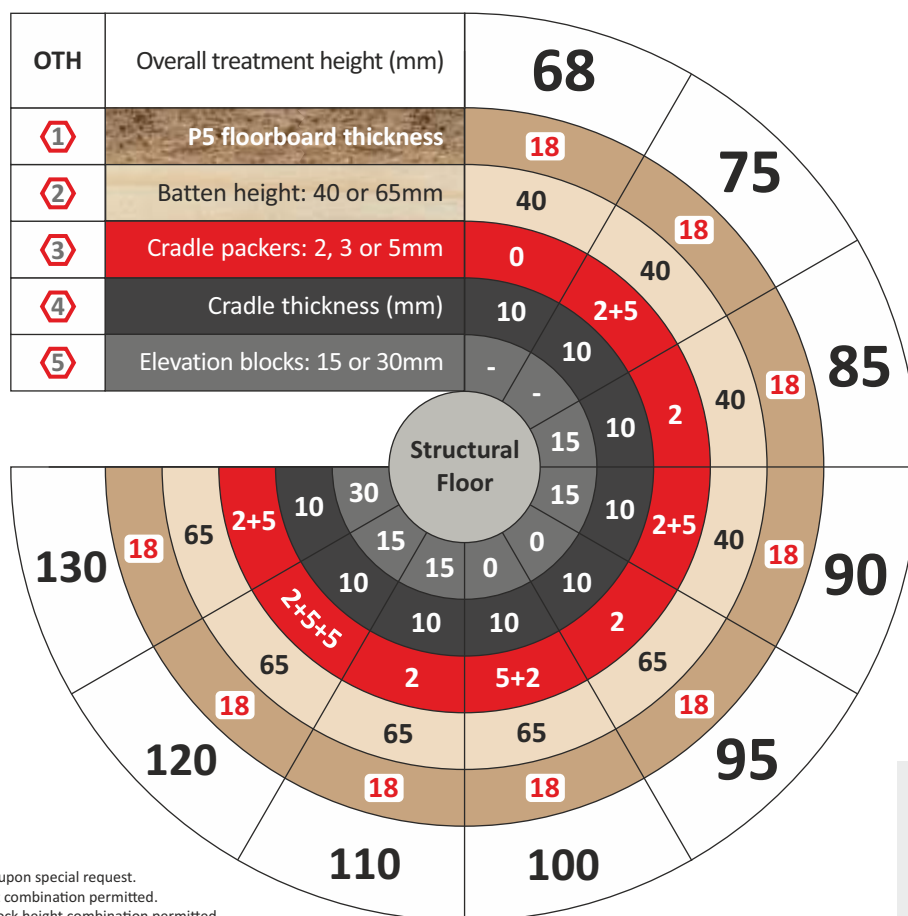
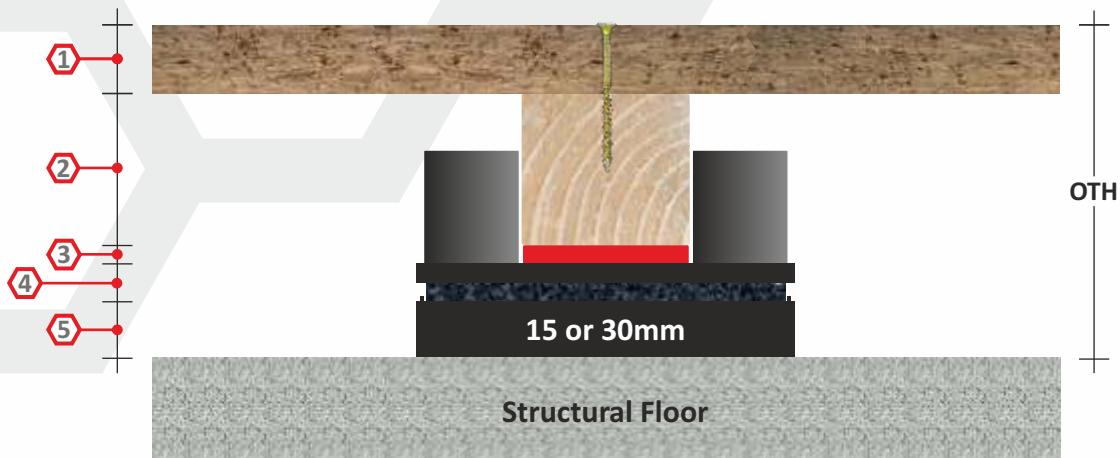
Dry laid system, speeds up the build process

- Carpet & Carpet Tiles
- Engineered & Solid Wood
- LVT & Vinyl
- Ceramic, Porcelain & Stone Tiles

Zontal® Z25, Z28 & Z30 accepts all floor coverings

Zontal® Heights Achievable

Zontal's® components combine together to produce a level floor to meet each project's height requirement. The overall system can be as little as 68mm deep, increasing in 1-2mm fine increments by adding packing shims.



Notes
 Other batten heights available upon special request.
 14mm maximum packer height combination permitted.
 150mm maximum elevation block height combination permitted.

Legend

Zontal levelling system
 Thickness of floorboard
Z18-40
 Height of batten

For advice on the most suitable combination of Zontal® components to achieve a specific height or request a free take off service, contact CELLECTA's technical team



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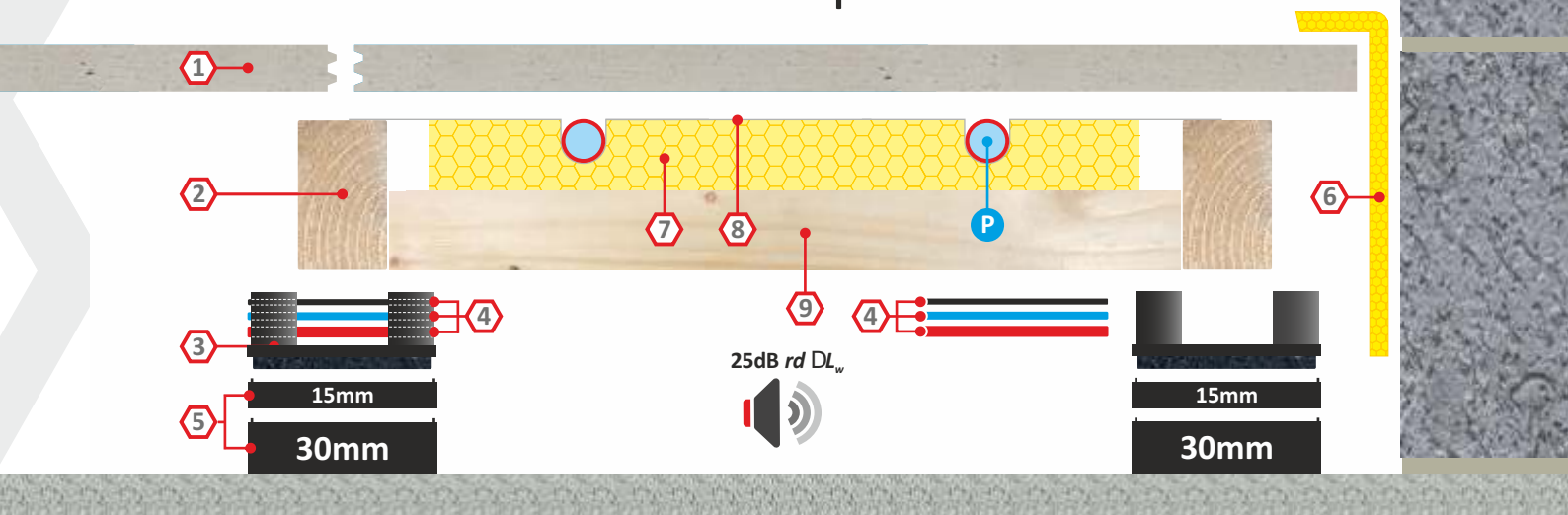


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Gobi® Acoustic Floor Levelling System with Integral UFH

Gobi® acoustic floor levelling treatments incorporate XFLO® high performance, routed underfloor insulation boards, that are made to accept any size pipe from 10-20mm. Each system is designed to level uneven concrete separating floors, deliver outstanding impact and airborne sound reduction and provide market leading rapid heat response times. In addition, HiDECK® Structural low deflection floorboards accept all floor finishes, enabling aesthetic design flexibility.

Gobi® Components



1	CELLECTA floorboard type	Thickness
CLASS A1	HiDECK Structural 25 (low deflection board)	25mm
	HiDECK Structural 28 (low deflection board)	28mm
	HiDECK Structural 30 (low deflection board)	30mm

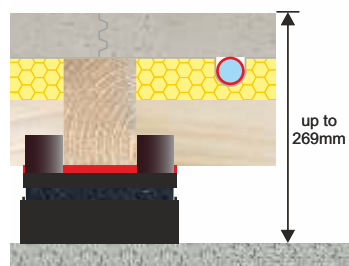
For product specifications see page 27 - 30

- 2 CELLECTA Batten 40, 65
- 3 CELLECTA RUBBERfon Acoustic Cradle
- 4 CELLECTA Cradle Packers - 2, 3 & 5mm
- 5 CELLECTA Elevation Blocks - 15 & 30mm
- 6 CELLECTA YELOfon ES5 acoustic perimeter edge strip

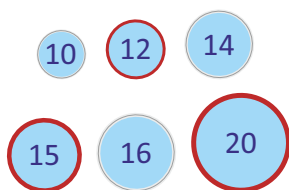
7	Insulation board options (routed to suite pipe used)	
	XFLO JB	XFLO JB-FF (foil faced)
8	Required	N/A
9	Required	Required

P Pipe size, manifold type & controls required designed and supplied by proprietary UFH company to optimise system's heating efficiency

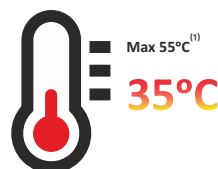
Gobi® Benefits



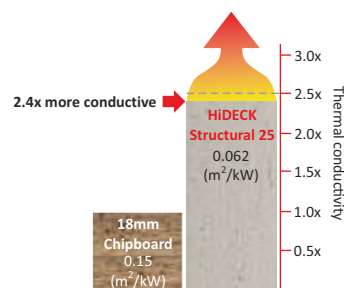
Quickly & easily levels an uneven floor & provides void for services



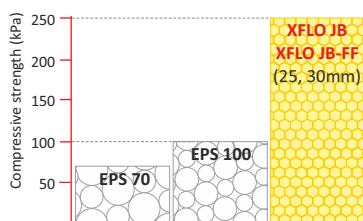
Insulation routed to suit pipe diameter



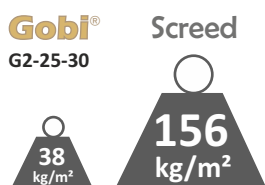
Can operate at a low flow temperature



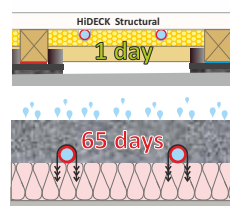
Superior response time



≤2.5x Stronger than EPS UFH boards



Low treatment weight



Dry laid system speeds up the build process

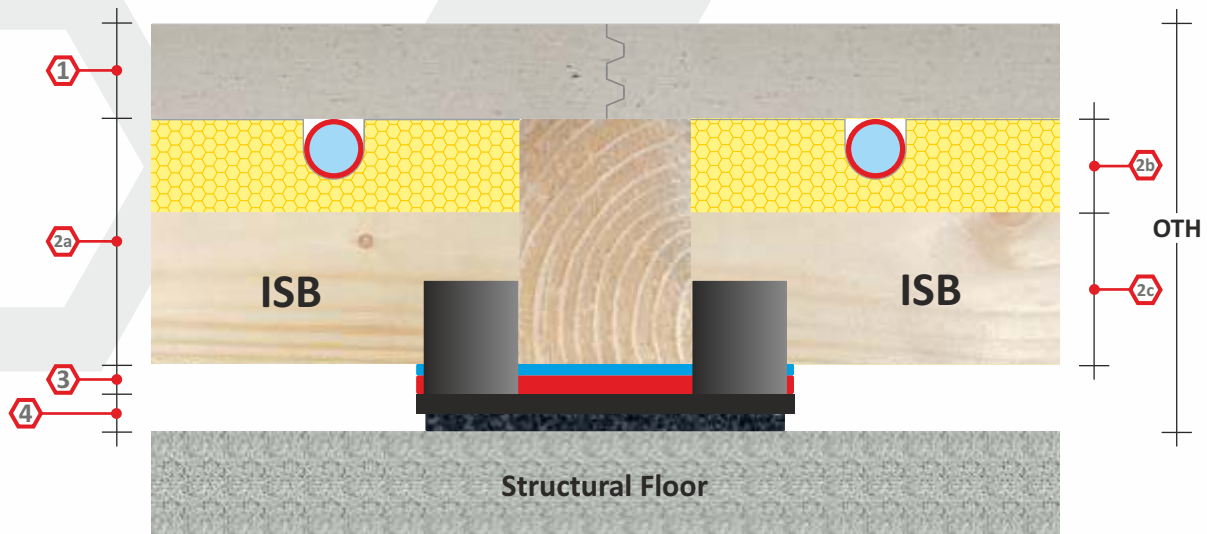
- Carpet & Carpet Tiles
- Engineered & Solid Wood
- LVT & Vinyl
- Ceramic, Porcelain & Stone Tiles

Accepts all floor coverings

(1) Maximum permissible flow temperature in accordance with Building Regulation Part L 2021

Gobi® Heights Achievable

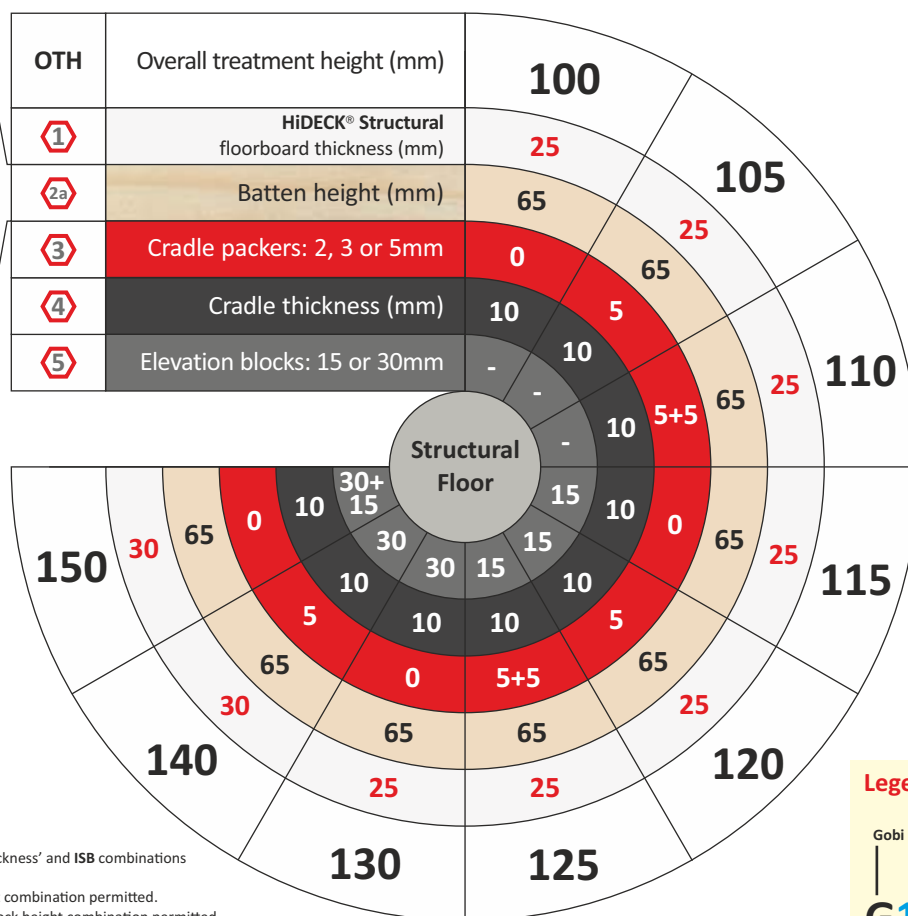
Gobi® components combine together to produce a level acoustic floor to meet each project's height requirement. The overall system can be as little as just 75mm deep, increasing in 1-2mm fine increments by adding packing shims.



UFH components

2b
XFLO® JB routed insulation thickness
25mm 30mm
40mm 35mm
ISB insulation support batten thickness
2c

Thermal performance
XFLO 25mm: 0.76m²K/W
XFLO 30mm: 0.91 m²K/W



2.4x
More conductive than a chipboard covered UFH system

Legend

Gobi levelling & UFH system
Thickness of floorboard
G1-25-30
Thickness of insulation
Performance value of heat diffuser

Notes

Other batten heights, XFLO thickness' and ISB combinations available upon special request.
14mm maximum packer height combination permitted.
150mm maximum elevation block height combination permitted.

For advice on the most suitable combination of Gobi® components to achieve a specific height or request a free take off service, contact CELLECTA's technical team



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Building Regulations

Approved Document E of the English & Welsh Building Regulations, and Section 5 of Scottish Building Standards address a number of areas: increased noise levels suffered by occupants of multi-storey dwellings, demands for higher density housing, greater use of noise producing equipment and, above all, absolute assurance that prescribed dB values are achieved.

CELLECTA manufactures an extensive range of high performance acoustic insulation solutions that can achieve the demanding legislative requirements with proven cost effective constructions.



Legislative Requirements

All separating floors and walls must be constructed in such a way as to achieve minimum sound insulation values.



Methods of compliance

Pre-Completion Testing (PCT)

This method of compliance requires the contractor to test a minimum of 1:10 units adopting each specific construction. Tests must be carried out by an accredited acoustic engineer with the structure needing to achieve the minimum prescribed acoustic values.



Airborne sound tested to BS EN ISO 140-4 1998

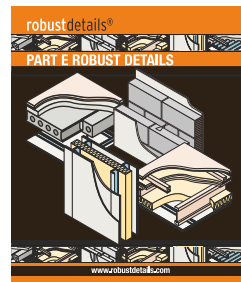


Impact sound tested to BS EN ISO 140-7 1998

Robust Details (RD)

This method of compliance eliminates the need for continual testing. Specifiers can select from a number of rigorously tested approved robust construction details that will, if installed correctly, provide a level of sound insulation in excess of Part E requirements. Contractors simply register each unit adopting the detail with Robust Details Limited, tel.03300 882141 www.robustdetail.com and pay a registration fee.

Robust Details handbook



Zontal® and **Gobi®** floor treatments exceed the acoustic performance values required to achieve Robust Detail FFT2 compliance. They have been independently validated by the **British Board of Agrément** and carry the **BBA Robust Detail** verified mark.

Building Regulation & Standards performance requirements

England & Wales Part E		
	New Build	Change of Use
Airborne (Walls & Floors)	$\geq 45 \text{ dB } D_{nT,w} + C_{tr}$	$\geq 43 \text{ dB } D_{nT,w} + C_{tr}$
Impact: (Floors)	$\leq 62 \text{ dB } L_{nT,w}$	$\leq 64 \text{ dB } L_{nT,w}$

Scottish Building Standards Section 5		
	New Build & Conversions	Traditional Buildings
Airborne (Walls & Floors)	$> 56 \text{ dB } D_{nT,w}^{(1)}$	$> 53 \text{ dB } D_{nT,w}$
Impact: (Floors)	$< 56 \text{ dB } L_{nT,w}$	$< 58 \text{ dB } L_{nT,w}$

⁽¹⁾ Effect of C_{tr} not taken into account



Minimum performance value achieved

Robust Detail Standards	
New Build	
Airborne (Walls & Floors)	$\geq 43 \text{ dB } D_{nT,w} + C_{tr}$
Impact: (Floors)	$\leq 60 \text{ dB } L_{nT,w}$

Robust Detail Product Performance

Steel-concrete composite and concrete floors

E-FS-1, E-FC-1, 2 & 7: Experience has shown that the mass of the floor and the ceiling treatment will exceed the required airborne acoustic values, thus eliminating the need for additional testing. However, a FFT2 resilient cradle and batten levelling system impact sound performance needs to be assessed and must achieve a minimum impact improvement of $rd\ D_{L_w}$ 17dB.

Both **Zontal®** and **Gobi®** cradle and batten acoustic treatments exceed the minimum performance values required by **Robust Detail Limited**. In addition, the data published in this manual has been independently verified by the British Board of Agrément (BBA).



Gobi G2-25-30

Robust Detail Registration Procedure

- STEP 1** Using the **Robust Detail** handbook and this manual, select a structural floor/wall combination
- STEP 2** Choose a **CELLECTA** acoustic treatment and resilient flanking strip
- STEP 3** Select an approved ceiling treatment
- STEP 4** Register the chosen construction with **Robust Detail Limited** (RDL) and notify Building Control by forwarding them a set of purchase statements issued to you by RDL
- STEP 5** Install each layer in accordance with the manufacturers' instructions and **Robust Detail** installation checklist

✓ **Part E** satisfied

✓ **Section 5** satisfied



RIBA Certified CPDs

UNDERFLOOR HEATING CPD FOR ARCHITECTS

- ⬢ Understanding the different types of underfloor heating
- ⬢ When to utilise a dry laid treatment over a wet screed:
benefits and disadvantages of each
- ⬢ How to comply with Part E & L and Section 5 & 6
- ⬢ The future of floor designs



INSULATED SUSPENDED GROUND FLOORS CPD FOR ARCHITECTS

- ⬢ What is a suspended ground floor
- ⬢ Types of insulated suspended ground floors:
Benefits and advantage of each
- ⬢ How to comply with Part L and Section 6
- ⬢ On site practicalities



BUILDING ACOUSTICS CPD FOR ARCHITECTS

- ⬢ Soundproofing & compliance with Part E and Section 5
- ⬢ Legislation made simple
- ⬢ Methods of compliance: PCT & Robust Details
- ⬢ New build, refurbishment and conversion
- ⬢ Solutions for floors, walls & ceiling



FLOOR LEVELLING SOLUTIONS CPD FOR ARCHITECTS

- ⬢ Problems with uneven separating floors
- ⬢ Legislative requirements
- ⬢ Dry laid and screed solutions
- ⬢ Solutions for steel and concrete floors
- ⬢ Integration of an underfloor heating system



Project References

One Nine Elms, London

Project size

42,000m²

Floor type

In-situ concrete slab

Acoustic + UFH treatment installed

Gobi® G2-25



Southwark Fire Station redevelopment

Project size

4,000m²

Floor types

Mix of concrete and timber floors

Acoustic + UFH treatment installed

Gobi® G2-25



One Thames City, Vauxhall, London

Project size

38,000m²

Floor type

In-situ concrete slab

Acoustic + UFH treatment installed

Gobi® G1-30



Binfield Learning Village, Bracknell

Project size

600m²

Floor type

In-situ concrete slab

Acoustic treatment installed

Zontal® Z18-40



Steel-concrete composite separating floor

Robust Detail E-FS-1 / V-FS-1

CELLECTA Zontal® acoustic cradle and batten levelling system laid on separating floor
Uneven in-situ concrete slab supported by profiled metal deck

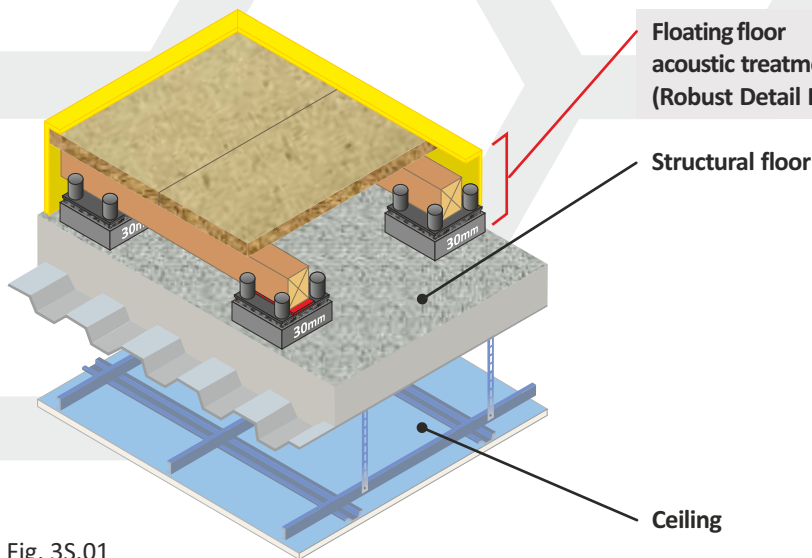


Fig. 3S.01

CELLECTA Zontal® acoustic cradle & batten levelling system, incorporating tongue and groove floorboard

In-situ concrete slab supported by profiled metal decking:

- "Shallow" or "deep" profiled metal decking
- Overall distance from top surface of concrete to underside of ceiling treatment 300mm (min)
- Concrete thickness 80mm (min) at shallowest point and 130mm (min) at deepest point
- Concrete density 2200kg/m³ (min)

See Table 3S.01b for ceiling treatment options

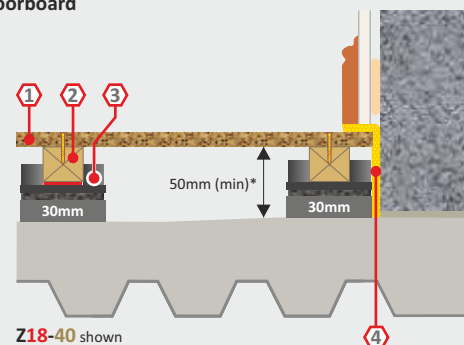
Table 3S.01a

CELLECTA Zontal® acoustic cradle and batten floor levelling system with tongue and groove floorboard

Components

- P5 T&G chipboard flooring**
P518: 18mm x 600mm x 2400mm (Zontal Z18)
P522: 22mm x 600mm x 2400mm (Zontal Z22) or
+
fon Adhesive
Bottle size: 1L / 33m² coverage
- Softwood timber batten⁽¹⁾**
Standard dimensions:
Batten 40: 40mm x 45mm x 2400mm
Batten 65: 65mm x 45mm x 2400mm
FSC certified.
- RUBBERfon® acoustic levelling cradles**
Dimensions: 10mm high x 100mm x 100mm
+ Levelling packers: 2, 3, 5mm
+ Stackable elevation blocks: 15, 30mm
- YELOfon® ES5/120 perimeter edge strip**
5mm x 120mm x 50m

HiDECK Structural low deflection floorboard
25mm x 600mm x 2400mm (Zontal Z25)
28mm x 600mm x 2400mm (Zontal Z28)
30mm x 600mm x 2400mm (Zontal Z30)
+
PRO Adhesive
Bottle size: 1L / 16m² coverage



⁽¹⁾ Other height battens available upon request.

*Robust Detail requirement - Minimum height required when floor is loaded to 25kg/m²

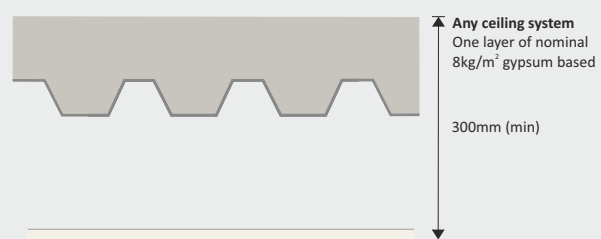
Airborne
54dB $D_{nT,w} + C_{tr}$
Impact
44dB $L_{nT,w}$
$rd\ DL_w = 25dB$
Building Regs
$\geq +8dB$

Table 3S.01b

Architectural and Specification Tools



Ceiling Treatment Options



Acoustic Performance

Rd impact performance values quoted were conducted at Sound Research Laboratories (UKAS ref. 0444) in accordance with BS EN ISO 10140-3 and BS EN ISO 10140-4 and rated in accordance with BS EN ISO 717-2:2013 as detailed in Appendix D of the Robust Details hand book (minimum value required $rd\ \Delta L_w = 17dB$).
PCT values quoted are typical, based on the treatment being installed correctly and pre-completion tested, with airborne performance tested in accordance with BS EN ISO 140-4:1998 and impact performance tested in accordance with BS EN ISO 140-7: 1998.

Third Party Accreditation and Approvals



Environmental Credentials



Steel-concrete composite separating floor **Robust Detail E-FS-1 / V-FS-1 +UFH**

CELLECTA Gobi® acoustic floor levelling system incorporating underfloor heating laid on separating floor
Uneven in-situ concrete slab supported by profiled metal deck

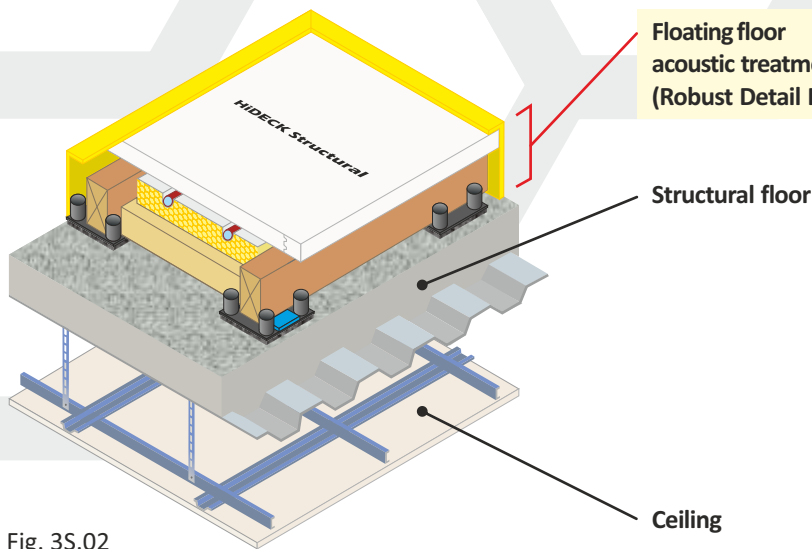


Fig. 3S.02

**Floating floor
acoustic treatment
(Robust Detail FFT2)**

CELLECTA Gobi® acoustic cradle and batten
levelling system incorporating underfloor
heating and highly conductive floorboard

In-situ concrete slab supported by profiled metal decking:

- "Shallow" or "deep" profiled metal decking
- Overall distance from top surface of concrete to underside of ceiling treatment 300mm (min)
- Concrete thickness 80mm (min) at shallowest point and 130mm (min) at deepest point
- Concrete density 2200kg/m³ (min)

See Table 3S.02b for ceiling treatment options

Table 3S.02a

CELLECTA Gobi® acoustic cradle and batten floor levelling system incorporating UFH & highly conductive floorboard

Components

1 HiDECK® Structural T&G floorboard

25mm x 600mm x 2400mm
28mm x 600mm x 2400mm
30mm x 600mm x 2400mm
Thermal resistance: 0.0625m²K/W
+
PRO Adhesive
Bottle size: 1L / 16m² coverage

2 Softwood timber batten

Standard dimensions⁽¹⁾:
Batten 65: 65mm x 45mm x 2400mm

3 RUBBERfon® acoustic levelling cradle

Dimensions: 10mm high x 100mm x 100mm
+ Levelling packers: 2, 3, 5mm
+ Stackable elevation blocks: 15, 30mm

4 YELOfon® ES5/120 perimeter edge strip

5mm x 120mm x 50m

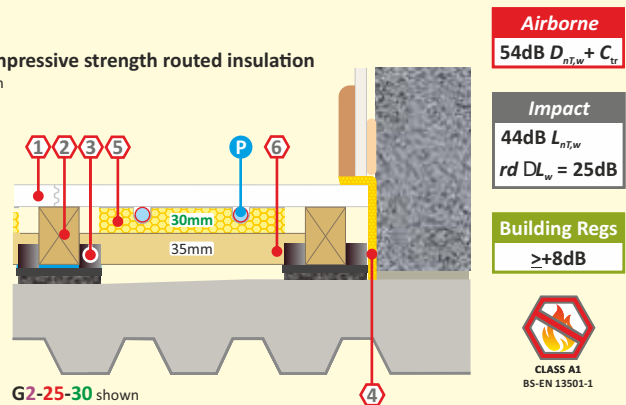
5 XFLO® JB-FF⁽²⁾ foil faced high compressive strength routed insulation

Dimensions: 25, 30mm x 300mm x 1250mm
Pipe centre: 150, 200, 300mm
Route size (OD): 10 - 20mm
(manufactured to suit pipe diameter)

6 Insulation support batten (ISB)

Width: 355mm
Depth: ISB-35 - 35mm (for 30mm XFLO)
Depth: ISB-40 - 40mm (for 25mm XFLO)

P Pipe (10 - 20mm), manifold
& controls supplied by
proprietary UFH company



⁽¹⁾ Other height battens available upon request. FSC certified.
⁽²⁾ Other thickness' available upon request.

Airborne
54dB $D_{nT,w} + C_{tr}$

Impact
44dB $L_{nT,w}$
 $rd\ DL_w = 25dB$

Building Regs
 $\geq +8dB$

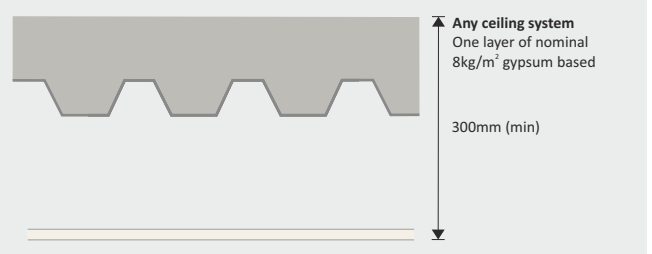


Table 3S.02b

Architectural and Specification Tools



Ceiling Treatment Options



Acoustic Performance

rd impact performance values quoted were conducted at Sound Research Laboratories (UKAS ref. 0444) in accordance with BS EN ISO 10140-3 and BS EN ISO 10140-4 and rated in accordance with BS EN ISO 717-2:2013 as detailed in Appendix D of the Robust Details hand book (minimum value required $rd\ \Delta L_w = 17dB$).
PCT values quoted are typical, based on the treatment being installed correctly and pre-completion tested, with airborne performance tested in accordance with BS EN ISO 140-4:1998 and impact performance tested in accordance with BS EN ISO 140-7: 1998.

Third Party Accreditation and Approvals



Environmental Credentials



Pre-cast concrete plank separating floor

Robust Detail E-FC-1

CELLECTA Zontal® acoustic cradle and batten levelling system laid on separating floor
Pre-cast concrete plank with un-even fully bonded screed

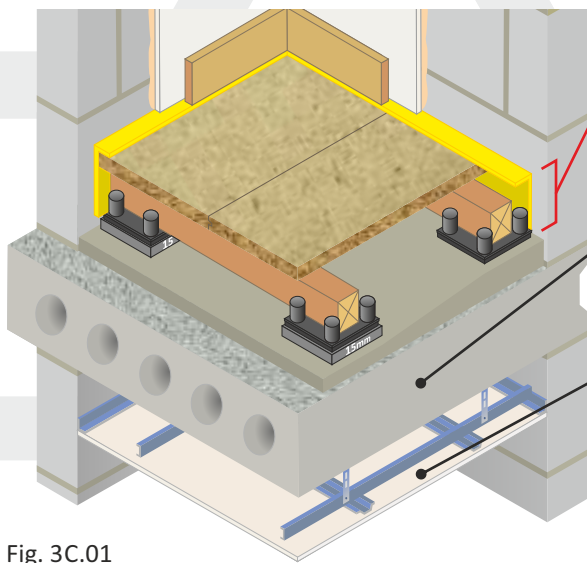


Fig. 3C.01

Floating floor acoustic treatment (Robust Detail FFT2)

CELLECTA Zontal® acoustic cradle & batten levelling system, incorporating tongue and groove floorboard

Structural floor

40mm (min) screed directly applied to plank.
Sand: cement or proprietary screed 80kg/m² (min) mass per unit area
• 150mm (min) pre-cast concrete floor plank
• 300kg/m² (min) mass per unit area

Ceiling

See Table 3C.01b for ceiling treatment options

FASTRACKCAD
ARCHITECTURAL CAD DATABASES



Table 3C.01a

CELLECTA Zontal® acoustic cradle and batten floor levelling system with tongue and groove floorboard

Components

1 P5 T&G chipboard flooring

P518: 18mm x 600mm x 2400mm (Zontal Z18)
P522: 22mm x 600mm x 2400mm (Zontal Z22) or

+ **fon Adhesive**

Bottle size: 1L / 33m² coverage

2 Softwood timber batten⁽¹⁾

Standard dimensions:
Batten 40: 40mm x 45mm x 2400mm
Batten 65: 65mm x 45mm x 2400mm
FSC certified

3 RUBBERfon® acoustic levelling cradles

Dimensions: 10mm high x 100mm x 100mm
+ Levelling packers: 2, 3, 5mm
+ Stackable elevation blocks: 15, 30mm

4 YELOfon® ESS/120 perimeter edge strip

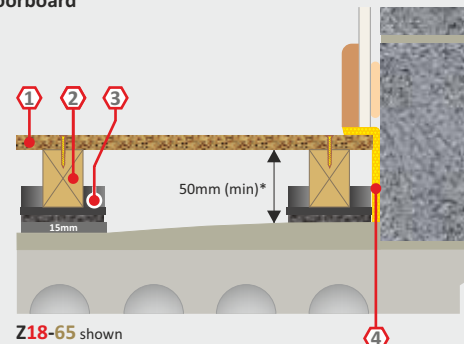
5mm x 120mm x 50m

HiDECK Structural low deflection floorboard

25mm x 600mm x 2400mm (Zontal Z25)
28mm x 600mm x 2400mm (Zontal Z28)
30mm x 600mm x 2400mm (Zontal Z30)

+ **PRO Adhesive**

Bottle size: 1L / 16m² coverage



⁽¹⁾ Other height battens available upon request.

*Robust Detail requirement - Minimum height required when floor is loaded to 25kg/m²

Airborne
52dB $D_{nT,w} + C_{tr}$

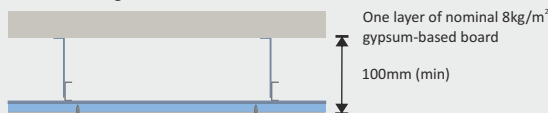
Impact
49dB $L_{nT,w}$
 $rd DL_w = 25dB$

Building Regs
≥+5dB

Table 3C.01b

Ceiling Treatment Options

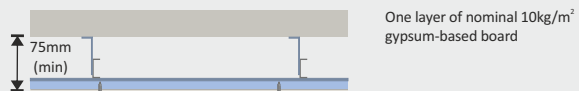
CT1 Metal ceiling - 100mm void



CT2 Timber batten & counter battens



CT3 Metal ceiling - 75mm void



CT4 Timber batten & metal resilient bars



Acoustic Performance

Rd impact performance values quoted were conducted at Sound Research Laboratories (UKAS ref. 0444) in accordance with BS EN ISO 10140-3 and BS EN ISO 10140-4 and rated in accordance with BS EN ISO 717-2:2013 as detailed in Appendix D of the Robust Details hand book (minimum value required $rd \Delta L_w = 17dB$).

PCT values quoted are typical, based on the treatment being installed correctly and pre-completion tested, with airborne performance tested in accordance with BS EN ISO 140-4:1998 and impact performance tested in accordance with BS EN ISO 140-7: 1998.

Third Party Accreditation and Approvals



Environmental Credentials



Pre-cast concrete plank separating floor

Robust Detail E-FC-1 + UFH

CELLECTA Gobi® acoustic floor levelling system incorporating underfloor heating laid on separating floor
Pre-cast concrete plank with un-even fully bonded screed

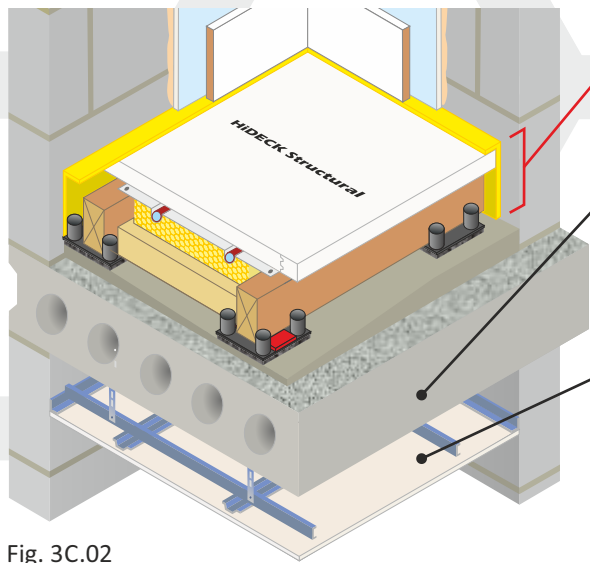


Fig. 3C.02

**Floating floor
acoustic treatment
(Robust Detail FFT2)**

Structural floor

Ceiling

CELLECTA Gobi® acoustic cradle and batten levelling system incorporating underfloor heating and highly conductive floorboard

40mm (min) screed directly applied to plank.
Sand: cement or proprietary screed 80kg/m² (min) mass per unit area
• 150mm (min) pre-cast concrete floor plank
• 300kg/m² (min) mass per unit area

See Table 3C.02b for ceiling treatment options

FASTRACKCAD
ARCHITECTURAL CAD DATABASES



Table 3C.02a

CELLECTA Gobi® acoustic cradle and batten floor levelling system incorporating UFH & highly conductive floorboard

Components

1 HiDECK® Structural T&G floorboard

25mm x 600mm x 2400mm
28mm x 600mm x 2400mm
30mm x 600mm x 2400mm
Thermal resistance: 0.0625m²K/W

PRO Adhesive

Bottle size: 1L/16m² coverage

2 Softwood timber batten

Standard dimensions⁽¹⁾:
Batten 65: 65mm x 45mm x 2400mm

3 RUBBERfon® acoustic levelling cradle

Dimensions: 10mm high x 100mm x 100mm
+ Levelling packers: 2, 3, 5mm
+ Stackable elevation blocks: 15, 30mm

4 YELOfon® ESS/120 edge strip

5mm x 120mm x 50m

5 XFLO® JB⁽²⁾ high compressive strength routed insulation board

Dimensions: 25, 30mm x 300mm x 1250mm
Pipe centre: 150, 200, 300mm
Route (OD): 10 - 20mm
(manufactured to suit pipe diameter)

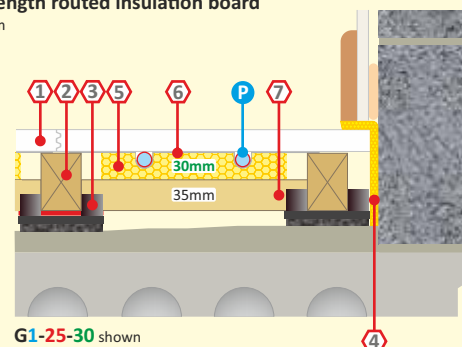
6 ULTRAplate 2i

Aluminium heat diffuser plate
(to suit pipe installed)
Dimensions: 390mm x 1000mm

7 Insulation support batten (ISB)

Width: 355mm
Depth: ISB-35 - 35mm (for 30mm XFLO)
Depth: ISB-40 - 40mm (for 25mm XFLO)

P Pipe (10 -20mm), manifold
& controls supplied by
proprietary UFH company



G1-25-30 shown

⁽¹⁾ Other height battens available upon request. FSC certified.

⁽²⁾ Other thickness' available upon request.

Airborne
54dB D_{nT,w} + C_{tr}

Impact
49dB L_{nT,w}
rd DL_w = 25dB

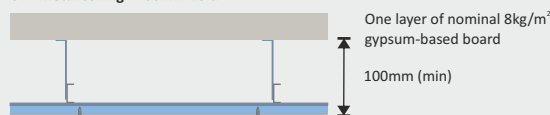
Building Regs
≥+5dB



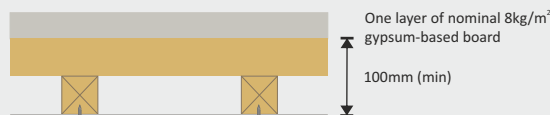
Table 3C.02b

Ceiling Treatment Options

CT1 Metal ceiling - 100mm void



CT2 Timber batten & counter battens



CT3 Metal ceiling - 75mm void



CT4 Timber batten & metal resilient bars



Acoustic Performance

Rd impact performance values quoted were conducted at Sound Research Laboratories (UKAS ref. 0444) in accordance with BS EN ISO 10140-3 and BS EN ISO 10140-4 and rated in accordance with BS EN ISO 717-2:2013 as detailed in Appendix D of the Robust Details hand book (minimum value required rd ΔL_w = 17dB).

PCT values quoted are typical, based on the treatment being installed correctly and pre-completion tested, with airborne performance tested in accordance with BS EN ISO 140-4:1998 and impact performance tested in accordance with BS EN ISO 140-7: 1998.

Third Party Accreditation and Approvals



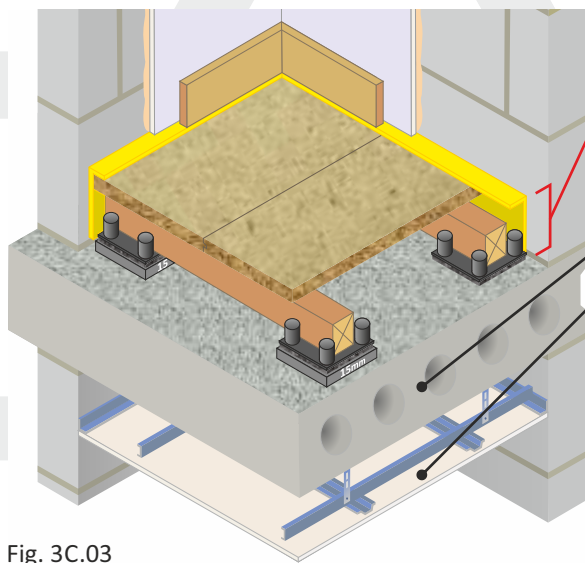
Environmental Credentials



Pre-cast concrete plank separating floor

PCT

CELLECTA Zontal® acoustic cradle and batten levelling system laid on separating floor
Un-even pre-cast concrete plank



Floating floor
acoustic treatment

Structural floor

Ceiling

CELLECTA Zontal® acoustic cradle & batten levelling system, incorporating tongue and groove floorboard

- 150mm (min) pre-cast concrete floor plank
- 300kg/m² (min) mass per unit area

See Table 3C.03b for ceiling treatment options

FASTRACKCAD
ARCHITECTURAL CAD DATABASES



Fig. 3C.03

Table 3C.03a

CELLECTA Zontal® acoustic cradle and batten floor levelling system with tongue and groove floorboard

Components

1 P5 T&G chipboard flooring

P518: 18mm x 600mm x 2400mm (Zontal Z18)

P522: 22mm x 600mm x 2400mm (Zontal Z22) or

+

fon Adhesive

Bottle size: 1L / 33m² coverage

2 Softwood timber batten⁽¹⁾

Standard dimensions:

Batten 40: 40mm x 45mm x 2400mm

Batten 65: 65mm x 45mm x 2400mm

FSC certified

3 RUBBERfon® acoustic levelling cradle

Dimensions: 10mm high x 100mm x 100mm

+ Levelling packers: 2, 3, 5mm

+ Stackable elevation blocks: 15, 30mm

4 YELOfon® ESS/120 perimeter edge strip

5mm x 120mm x 50m

HiDECK Structural low deflection floorboard

25mm x 600mm x 2400mm (Zontal Z25)

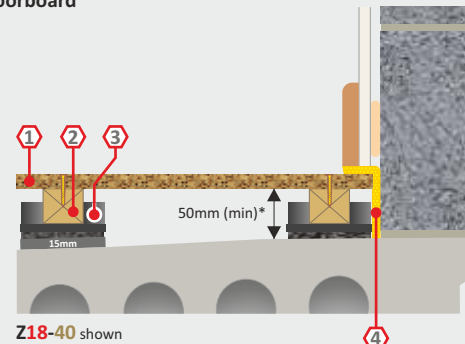
28mm x 600mm x 2400mm (Zontal Z28)

30mm x 600mm x 2400mm (Zontal Z30)

+

PRO Adhesive

Bottle size: 1L / 16m² coverage



⁽¹⁾ Other height battens available upon request.

*Robust Detail requirement - Minimum height required when floor is loaded to 25kg/m²

Airborne
50dB $D_{nT,w} + C_{tr}$

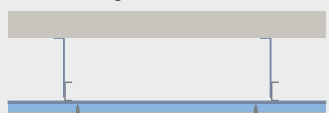
Impact
51dB $L_{nT,w}$
 $rd DL_w = 25dB$

Building Regs
≥+5dB

Table 3C.03b

Ceiling Treatment Options

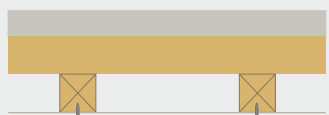
CT1 Metal ceiling - 100mm void



One layer of nominal 8kg/m² gypsum-based board

100mm (min)

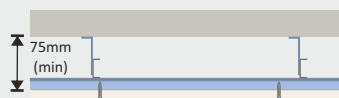
CT2 Timber batten & counter battens



One layer of nominal 8kg/m² gypsum-based board

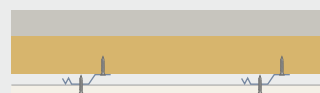
100mm (min)

CT3 Metal ceiling - 75mm void



One layer of nominal 10kg/m² gypsum-based board

CT4 Timber batten & metal resilient bars



One layer of nominal 10kg/m² gypsum-based board

65mm (min)

Acoustic Performance

PCT values quoted are typical, based on the treatment being installed correctly and pre-completion tested, with airborne performance tested in accordance with BS EN ISO 140-4:1998 and impact performance tested in accordance with BS EN ISO 140-7: 1998.

Third Party Accreditation and Approvals



Environmental Credentials



Pre-cast concrete plank separating floor

PCT + UFH

CELLECTA Gobi® acoustic floor levelling system incorporating underfloor heating laid on separating floor
Un-even pre-cast concrete plank

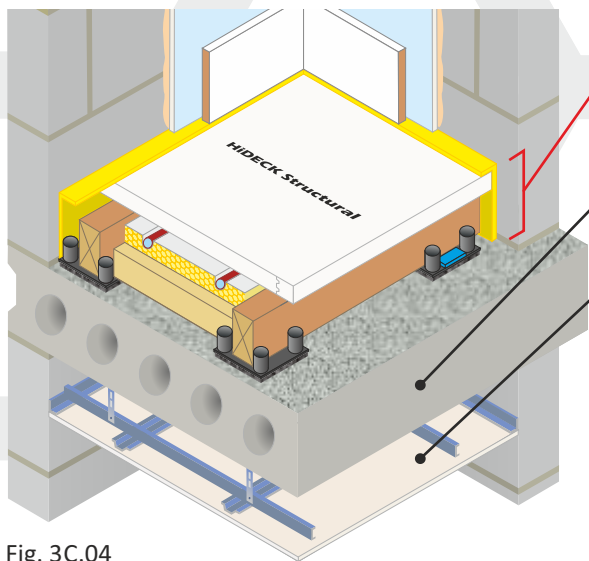


Fig. 3C.04

**Floating floor
acoustic treatment**

CELLECTA Gobi® acoustic cradle and batten levelling system incorporating underfloor heating and highly conductive floorboard

Structural floor

- 150mm (min) pre-cast concrete floor plank
- 300kg/m² (min) mass per unit area

Ceiling

See Table 3C.04b for ceiling treatment options

FASTRACKCAD
ARCHITECTURAL CAD DATABASES



Table 3C.04a

CELLECTA Gobi® acoustic cradle and batten floor levelling system incorporating UFH & highly conductive floorboard

Components

1 HiDECK® Structural T&G floorboard

25mm x 600mm x 2400mm
28mm x 600mm x 2400mm
30mm x 600mm x 2400mm
Thermal resistance: 0.0625m²K/W
+
PRO Adhesive
Bottle size: 1L/16m² coverage

2 Softwood timber batten

Standard dimensions⁽¹⁾:
Batten 65: 65mm x 45mm x 2400mm

3 RUBBERfon® acoustic levelling cradle

Dimensions: 10mm high x 100mm x 100mm
+ Levelling packers: 2, 3, 5mm
+ Stackable elevation blocks: 15, 30mm

4 YELOfon® ES5/120 perimeter edge strip

5mm x 120mm x 50m

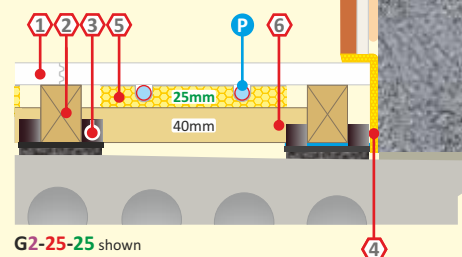
5 XFLO® JB-FF⁽²⁾ foil faced high compressive strength routed insulation

Dimensions: 25, 30mm x 300mm x 1250mm
Pipe centre: 150, 200, 300mm
Route size (OD): 10 - 20mm
(manufactured to suit pipe diameter)

6 Insulation support batten (ISB)

Width: 355mm
Depth: ISB-35 - 35mm (for 30mm XFLO)
Depth: ISB-40 - 40mm (for 25mm XFLO)

P Pipe (10 - 20mm), manifold
& controls supplied by
proprietary UFH company



G2-25-25 shown

⁽¹⁾ Other height battens available upon request. FSC certified.

⁽²⁾ Other thickness' available upon request.

Airborne
52dB $D_{nT,w} + C_{tr}$

Impact
51dB $L_{nT,w}$
 $rd\ DL_w = 25dB$

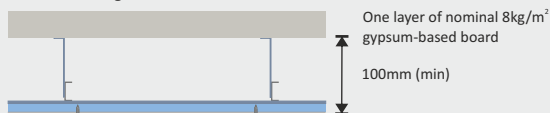
Building Regs
≥+5dB



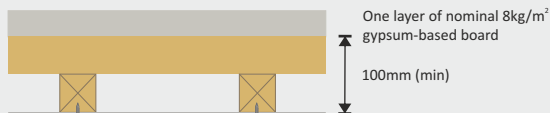
Table 3C.04b

Ceiling Treatment Options

CT1 Metal ceiling - 100mm void



CT2 Timber batten & counter battens



CT3 Metal ceiling - 75mm void



CT4 Timber batten & metal resilient bars



Acoustic Performance

PCT values quoted are typical, based on the treatment being installed correctly and pre-completion tested, with airborne performance tested in accordance with BS EN ISO 140-4:1998 and impact performance tested in accordance with BS EN ISO 140-7: 1998.

Third Party Accreditation and Approvals



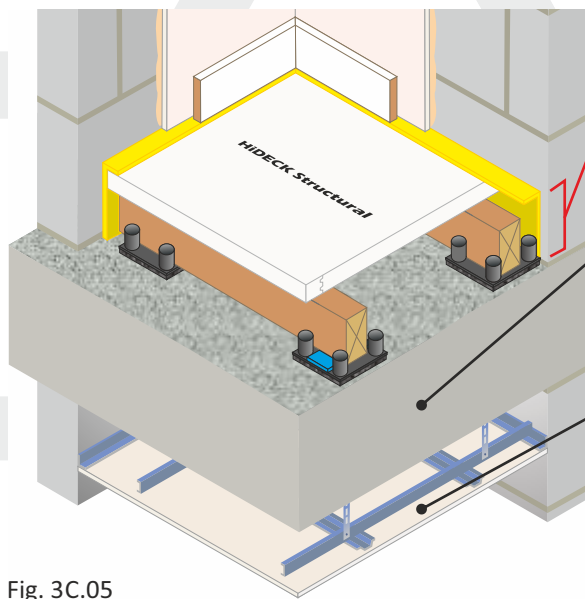
Environmental Credentials



In-situ concrete slab separating floor

Robust Detail E-FC-2

CELLECTA Zontal® acoustic cradle and batten levelling system laid on separating floor
Uneven in-situ concrete slab



Floating floor
acoustic treatment
(Robust Detail FFT2)

CELLECTA Zontal® acoustic cradle & batten levelling system, incorporating tongue and groove floorboard

Structural floor

- 250mm (min) in-situ concrete slab, 2400kg/m³ density without screed
- 200mm (min) in-situ concrete slab 2400kg/m³ density with screed: 40mm sand & cement screed or 80kg/m² (min) proprietary screed directly applied to slab

Ceiling

See Table 3C.05b for ceiling treatment options

Fig. 3C.05

Table 3C.05a

CELLECTA Zontal® acoustic cradle and batten floor levelling system with tongue and groove floorboard

Components

1 P5 T&G chipboard flooring

P518: 18mm x 600mm x 2400mm (Zontal Z18)
P522: 22mm x 600mm x 2400mm (Zontal Z22) or

+ fon Adhesive

Bottle size: 1L / 33m² coverage

2 Softwood timber batten⁽¹⁾

Standard dimensions:
Batten 40: 40mm x 45mm x 2400mm
Batten 65: 65mm x 45mm x 2400mm
FSC certified

3 RUBBERfon® acoustic levelling cradle

Dimensions: 10mm high x 100mm x 100mm
+ Levelling packers: 2, 3, 5mm
+ Stackable elevation blocks: 15, 30mm

4 YELOfon® ES5/120 perimeter edge strip

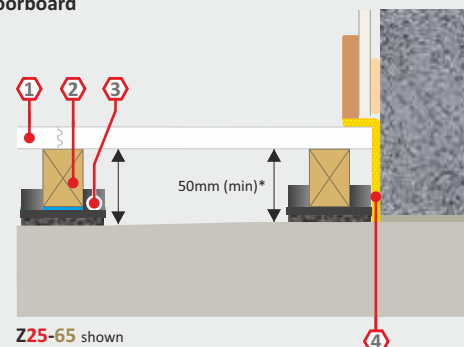
5mm x 120mm x 50m

HiDECK Structural low deflection floorboard

25mm x 600mm x 2400mm (Zontal Z25)
28mm x 600mm x 2400mm (Zontal Z28)
30mm x 600mm x 2400mm (Zontal Z30)

+ PRO Adhesive

Bottle size: 1L / 16m² coverage



⁽¹⁾ Other height battens available upon request.

*Robust Detail requirement - Minimum height required when floor is loaded to 25kg/m²

Airborne
55dB $D_{nT,w} + C_{tr}$

Impact
45dB $L_{nT,w}$
 $rd\ DL_w = 25dB$

Building Regs
 $\geq +8dB$

Table 3C.05b

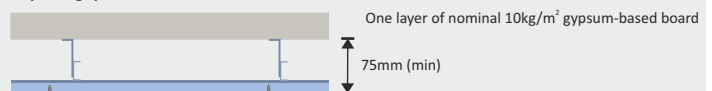
Architectural and Specification Tools

FASTRACKCAD
ARCHITECTURAL CAD DATABASES

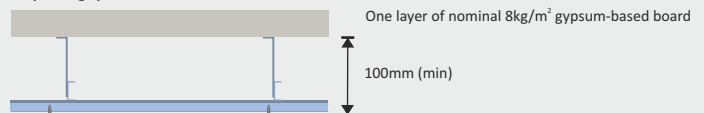


Ceiling Treatment Options

Any ceiling system - 75mm void



Any ceiling system - 100mm void



Acoustic Performance

Rd impact performance values quoted were conducted at Sound Research Laboratories (UKAS ref. 0444) in accordance with BS EN ISO 10140-3 and BS EN ISO 10140-4 and rated in accordance with BS EN ISO 717-2:2013 as detailed in Appendix D of the Robust Details hand book (minimum value required $rd\ \Delta L_w = 17dB$).

PCT values quoted are typical, based on the treatment being installed correctly and pre-completion tested, with airborne performance tested in accordance with BS EN ISO 140-4:1998 and impact performance tested in accordance with BS EN ISO 140-7: 1998.

Third Party Accreditation and Approvals



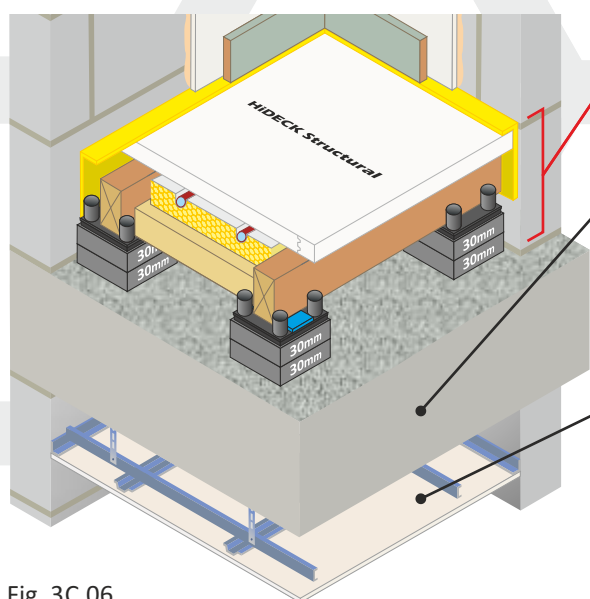
Environmental Credentials



In-situ concrete slab separating floor

Robust Detail E-FC-2 + UFH

CELLECTA Gobi® acoustic floor levelling system incorporating underfloor heating laid on separating floor
Uneven in-situ concrete slab



Floating floor
acoustic treatment
(Robust Detail FFT2)

CELLECTA Gobi® Cradle and batten
levelling system incorporating underfloor
heating and highly conductive floorboard

Structural floor

- 250mm (min) in-situ concrete slab, 2400kg/m³ density without screed
- 200mm (min) in-situ concrete slab 2400kg/m³ density with screed: 40mm sand & cement screed or 80kg/m² (min) proprietary screed directly applied to slab

Ceiling

See Table 2C.06b for ceiling treatment options

Fig. 3C.06

Table 3C.06a

CELLECTA Gobi® acoustic cradle and batten floor levelling system incorporating UFH & highly conductive floorboard

Components

1 HiDECK® Structural T&G floorboard

25mm x 600mm x 2400mm
28mm x 600mm x 2400mm
30mm x 600mm x 2400mm
Thermal resistance: 0.0625m²K/W

PRO Adhesive

Bottle size: 1L/16m² coverage

2 Softwood timber batten

Standard dimensions⁽¹⁾:
Batten 65: 65mm x 45mm x 2400mm

3 RUBBERfon® acoustic levelling cradle

Dimensions: 10mm high x 100mm x 100mm
+ Levelling packers: 2, 3, 5mm
+ Stackable elevation blocks: 15, 30mm

4 YELOfon® ES5/120 perimeter edge strip

5mm x 120mm x 50m

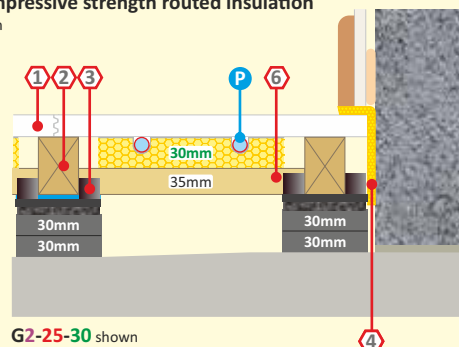
5 XFLO® JB-FF⁽²⁾ foil faced high compressive strength routed insulation

Dimensions: 25, 30mm x 300mm x 1250mm
Pipe centre: 150, 200, 300mm
Route size (OD): 10 - 20mm
(manufactured to suit pipe diameter)

6 Insulation support batten (ISB)

Width: 355mm
Depth: ISB-35 - 35mm (for 30mm XFLO)
Depth: ISB-40 - 40mm (for 25mm XFLO)

P Pipe (10 - 20mm), manifold
& controls supplied by
proprietary UFH company



⁽¹⁾ Other height battens available upon request. FSC certified.
⁽²⁾ Other thickness' available upon request.

Airborne
55dB $D_{nT,w} + C_{tr}$

Impact
45dB $L_{nT,w}$
 $rd\ DL_w = 25dB$

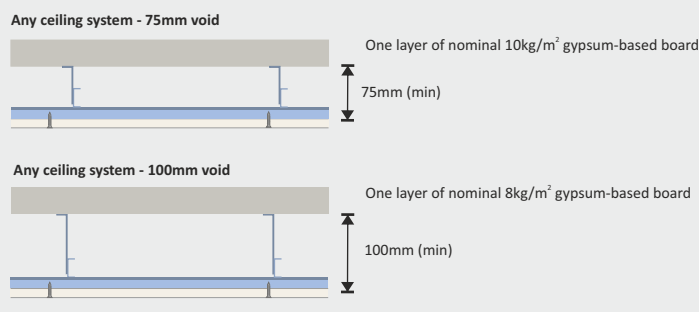
Building Regs
 $\geq +8dB$

Table 3S.06b

Architectural and Specification Tools



Ceiling Treatment Options



Acoustic Performance

Rd impact performance values quoted were conducted at Sound Research Laboratories (UKAS ref. 0444) in accordance with BS EN ISO 10140-3 and BS EN ISO 10140-4 and rated in accordance with BS EN ISO 717-2:2013 as detailed in Appendix D of the Robust Details hand book (minimum value required $rd\ \Delta L_w = 17dB$).
PCT values quoted are typical, based on the treatment being installed correctly and pre-completion tested, with airborne performance tested in accordance with BS EN ISO 140-4:1998 and impact performance tested in accordance with BS EN ISO 140-7: 1998.

Third Party Accreditation and Approvals



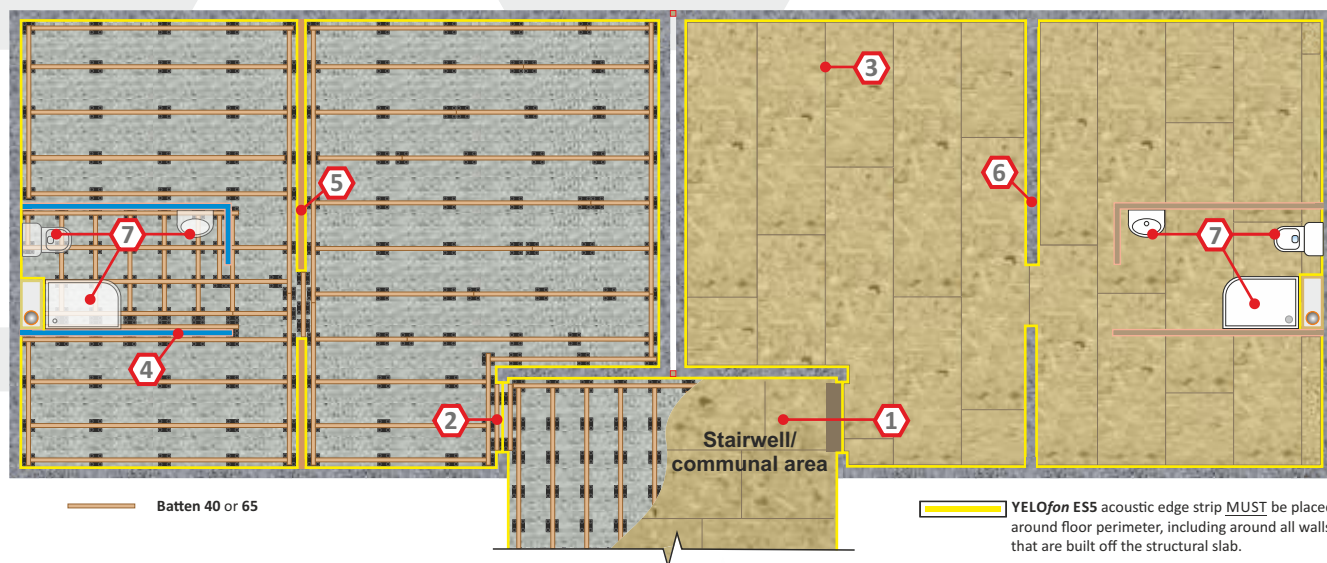
Environmental Credentials



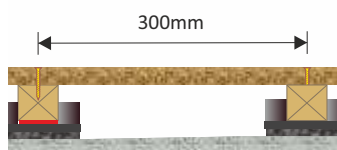
Zontal® Z18 and Z22 design & installation details

The acoustic performance of the floor will be compromised if the cradle and batten system is not completely isolated from the structural slab, soil pipes, door frames, the surrounding walls and their treatments. To address this risk, each potential problem area needs to be detailed accordingly.

Zontal® P518 / P522 chipboard covered floor

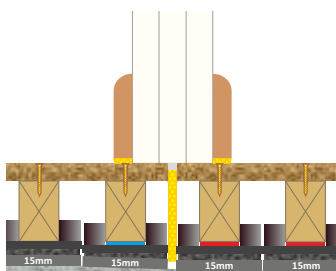


1 Communal areas/corridors



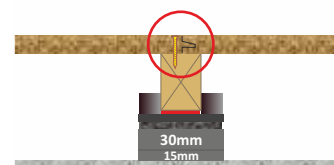
In communal areas and areas susceptible to high foot traffic, install cradles and battens at 300mm centres.

2 Door threshold



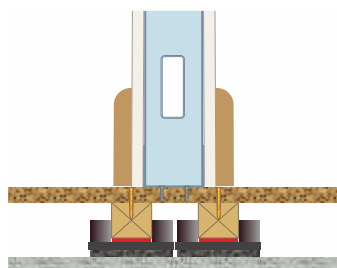
Double up battens each side of a door threshold to provide additional support. Refer to Part B and Section 2 for fire safety regulations.

3 Joining floorboards



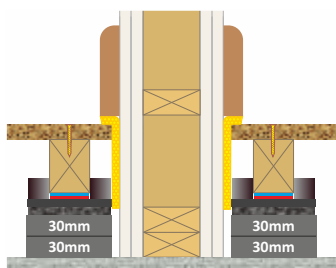
P518/P522 floorboards should be laid in a staggered formation, and where possible, short edges interlocked on a batten and bonded with *fon* Adhesive.

4 Non-load bearing partition built off the floor treatment



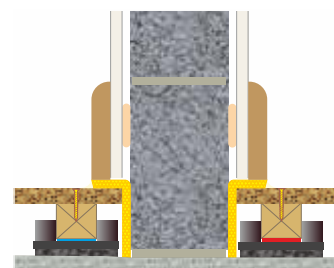
Double up cradle and batten system under internal non-load bearing walls.

5 Load-bearing timber stud partition built off the structural floor



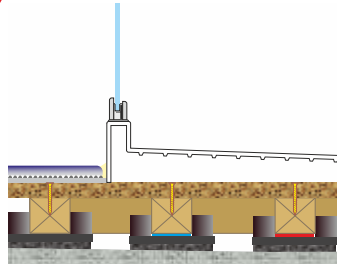
Where required, lightweight internal walls must meet Building Regulation Requirement E2.

6 Load-bearing blockwork wall built off the structural floor



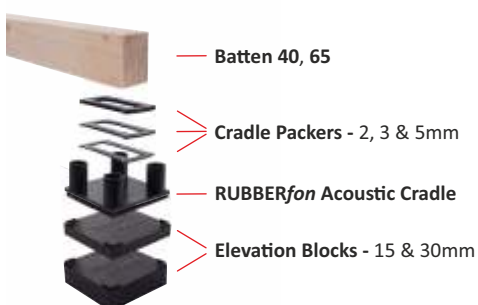
Internal blockwork walls built off the structural floor **MUST** be isolated from the floating floor treatment with YELOfon ES5 acoustic flanking strip.

7 Shower trays and sanitary ware



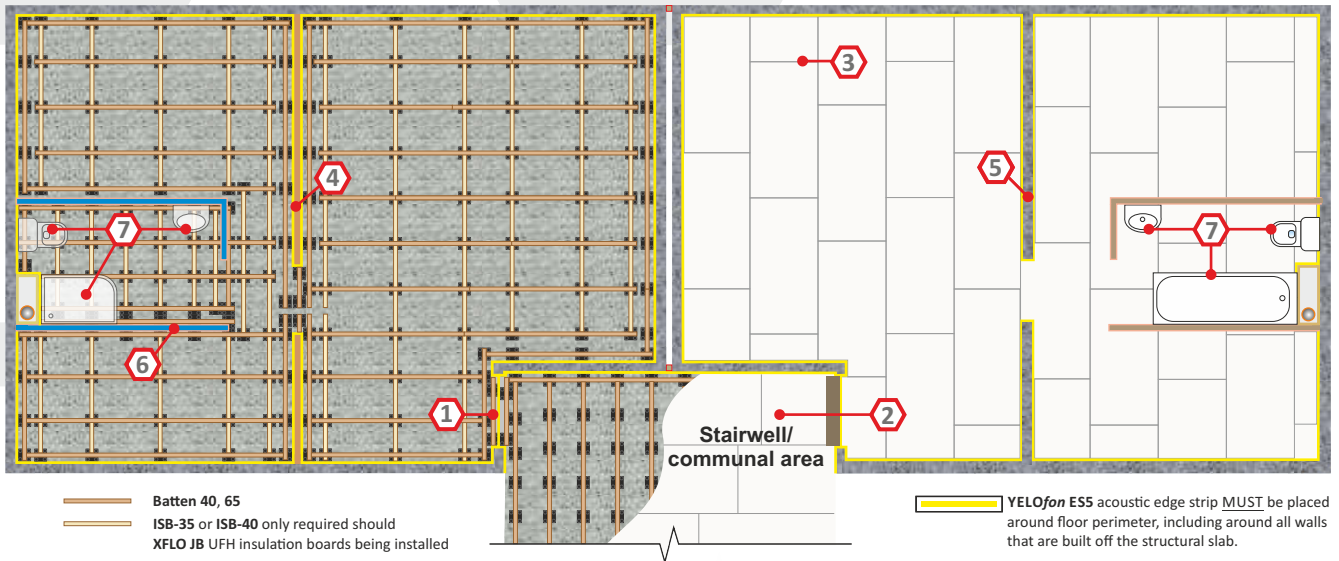
Under sanitaryware areas, including shower trays, battens should be laid in a 300mm x 300mm grid formation, with cross battens.

Components

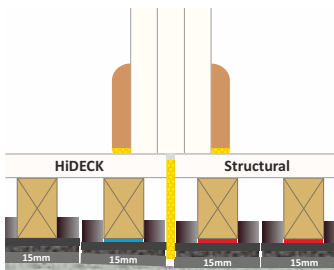


Gobi® & Zontal® Z25, Z28, & Z30 design & installation details

HiDECK® Structural covered floor

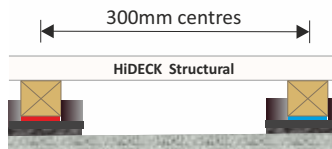


1 Door threshold



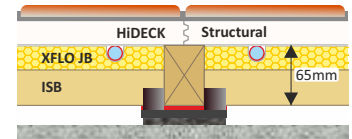
Double up battens each side of a door threshold to provide additional support.
Refer to Part B and Section 2 for fire safety regulations

2 Communal areas/corridors



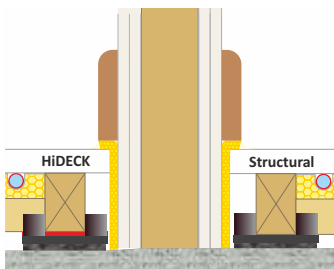
In communal areas and areas susceptible to high foot traffic, install cradles and battens at 300mm centres.

3 Joining floorboards



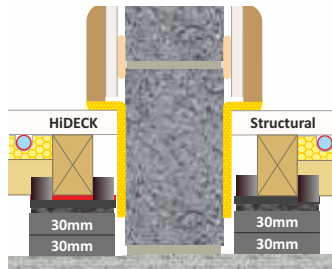
Lay HiDECK Structural floorboards in a staggered formation, ensuring the short edges join on a batten and are bonded together with PRO Adhesive.

4 Load-bearing timber stud partition built off the structural floor



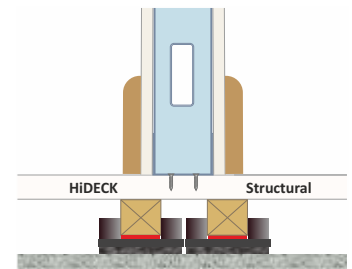
Where required, lightweight internal walls must meet Building Regulation Requirement E2.

5 Load-bearing blockwork wall built off the structural floor



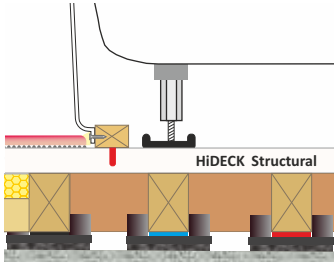
Internal block work walls built off the structural floor **MUST** be isolated from the floating floor treatment with YELOfon ES5 acoustic flanking strip.

6 Non-load bearing partition built off the floor treatment



Double up cradle and batten system under internal non-load bearing walls.

7 Bath surrounds and sanitary ware



Under sanitary ware areas, battens should be laid in a 300mm x 300mm grid formation.

For on the go access to information, including installation videos & technical data, download the **CELLECTA.app** for smart phones and tablet devices.



01634 29-66-77



collecta.co.uk



technical@collecta.co.uk

To ensure the floor treatment is able to withstand the loading imposed, both during construction and following occupancy, the cradle and battens must spaced out correctly.

Fig. BL.1 is an example of the setting out of the cradles and battens for a **Zontal**® acoustic levelling system incorporating either **P518/P522** or **HiDECK**® **Structural** floorboards.

Fig. BL.2 is an example of the setting out of the cradles, battens and insulation support battens for a **Gobi**® acoustic levelling system incorporating **XFLO**® **JB** underfloor heating insulation boards and **HiDECK**® **Structural** low deflection, highly conductive floorboards.



Fig. BL.1

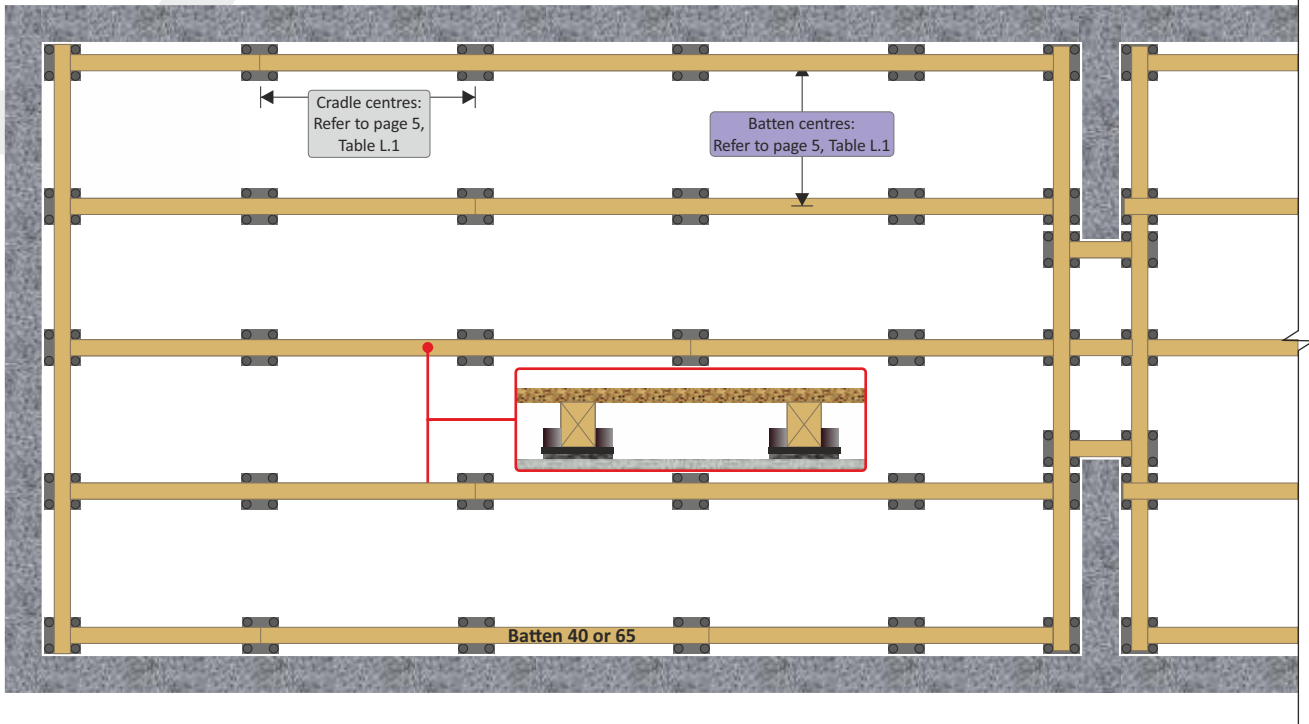
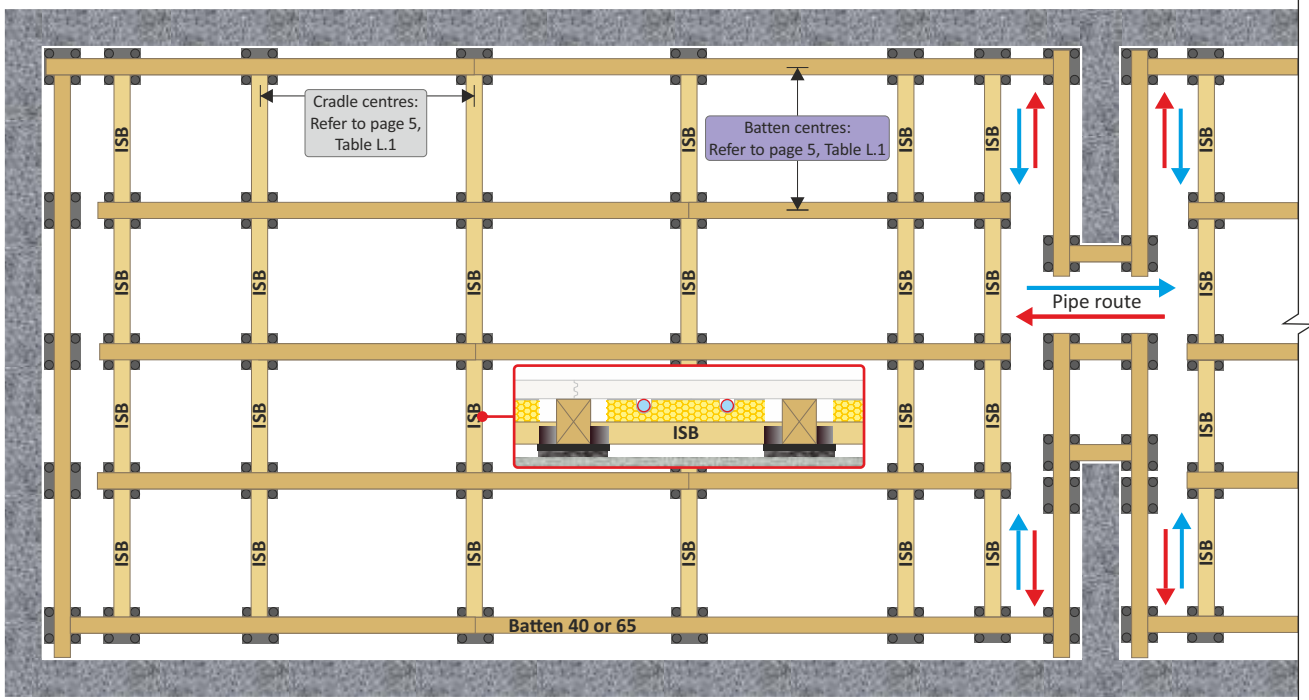


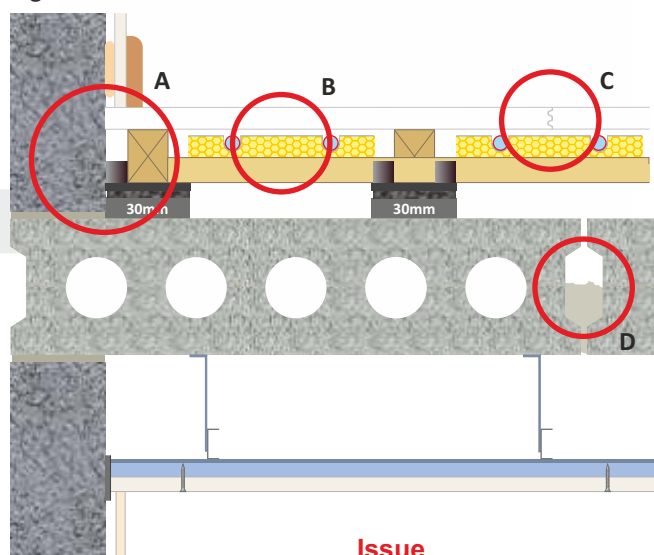
Fig. BL.2



Eliminating Acoustic Flanking & Poor Performance

The acoustic and heating efficiency of the floor will be adversely affected should the treatment not be detailed or installed correctly. Acoustic flanking transmission will occur if the floating floor treatment makes direct contact with the wall, its linings, door frames, services or any other structural element. Ceiling finishes must also be isolated from the surrounding walls, including the plaster/plasterboard finish. In addition, should the underfloor heating system not be installed correctly its effectiveness will be reduced. To address these issues, **CELLECTA** offers an extensive range of acoustic flanking strips and tapes, levelling packers, elevation blocks and insulation support battens to suit each specific treatment.

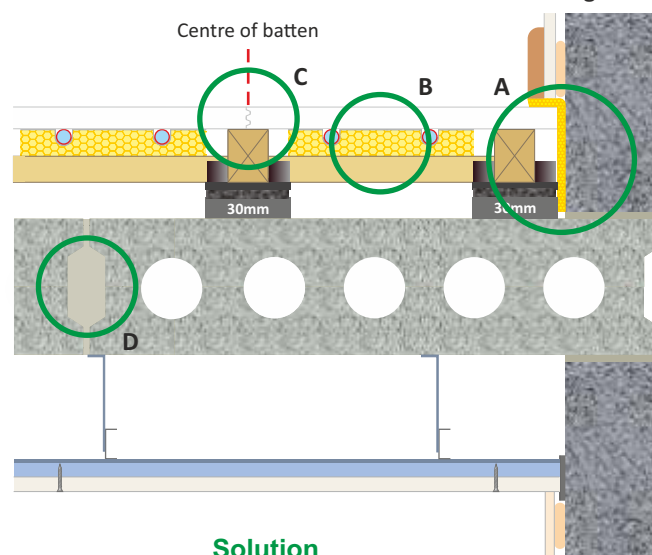
Fig. Cl.1



Issue

- A** **Acoustic bridging:** The cradle and batten acoustic treatment is in direct contact with the wall, skirting board and plasterboard
- B** **Poor heat transfer:** XFLO insulation boards not installed flush to the underside of the HiDECK Structural decking board
- C** **Risk of joint failing:** HiDECK Structural decking board's short edges not joining in correct place
- D** **Sound leakage:** Void in the concrete plank

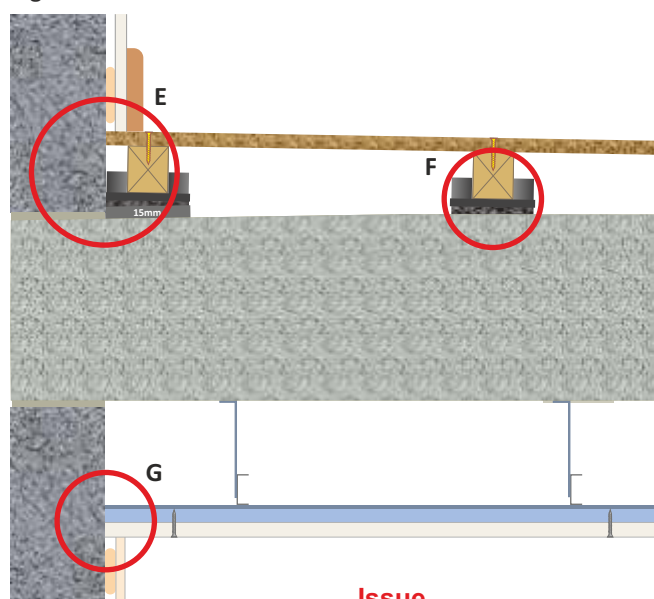
Fig. CS.1



Solution

- Install **YELOfon ES** edge strip around the floor's perimeter to isolate the cradle and batten acoustic treatment from the wall, plasterboard /plaster and skirting board.
- Install the appropriate height insulation support batten (**ISB**) to suit the **XFLO** insulation board installed.
- Ensure the battens are installed at 400 centres (max) and short edges of the **HiDECK Structural** join on the centre of the batten.
- Fill all voids and gaps in the concrete planks with mortar.

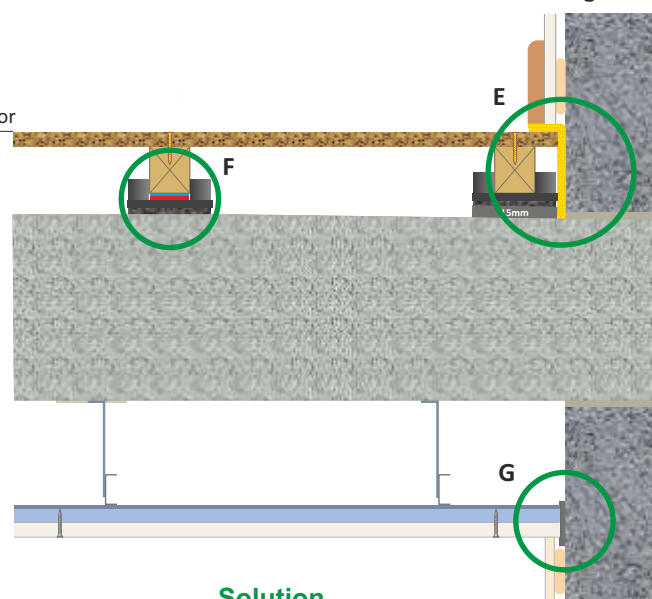
Fig. Cl.2



Issue

- E** **Acoustic bridging:** The cradle and batten acoustic treatment is in direct contact with the wall, skirting board and plasterboard
- F** **Finished floor not level**
- G** **Acoustic bridging:** Ceiling plasterboards making direct contact with the wall

Fig. CS.2



Solution

- Install **YELOfon ES** edge strip around the floor's perimeter to isolate the cradle and batten acoustic treatment from the wall, plasterboard /plaster and skirting board.
- Install cradle fine adjustment packers and, if required elevation blocks to level the floor to the desired finished height.
- Isolate the ceiling treatment from the wall with **CELECTA** self-adhesive **C-strip**.



Ceiling Treatments

Introduction

The resistance to airborne sound depends mainly on the mass per unit area of the structural floor and partly on the ceiling's construction. It is therefore important to choose a ceiling treatment that complements the performance of the chosen structural floor, to produce an overall structure that exceeds the required dB values.

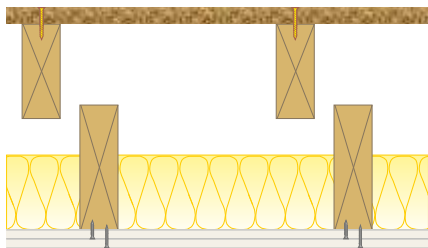
De-coupling the ceiling from the structural floor is an effective way of reducing the contact path that impact sound can follow. Adding mass in the way of plasterboard to the floor structure and filling the ceiling void with a sound absorbing quilt will also improve the acoustic performance of the structure.

Listed below are three types of ceiling treatments available in order of performance.

Ceiling Treatment A: Independent ceiling

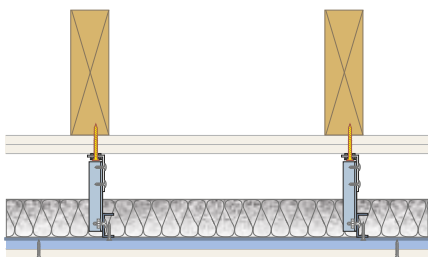
1) Independent joists

Cavity filled with 50mm **CELLECTA FIBREfon® Micro 50** or 100mm mineral wool (10-45kg/m³).



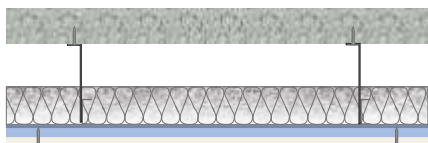
2) Proprietary metal frame suspended ceiling system⁽¹⁾ hung off **CELLECTA HP30** acoustic hangers.

Cavity filled with 50mm **CELLECTA FIBREfon® Micro 50** or 100mm mineral wool (10-45kg/m³).



3) Proprietary metal frame suspended ceiling system⁽¹⁾

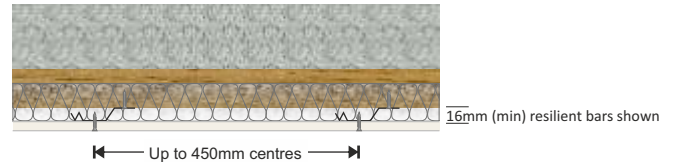
Cavity filled with 50mm **CELLECTA FIBREfon Micro 50** or 100mm mineral wool (10-45kg/m³).



Ceiling Treatment B: Plasterboard on proprietary resilient bars with absorbing material

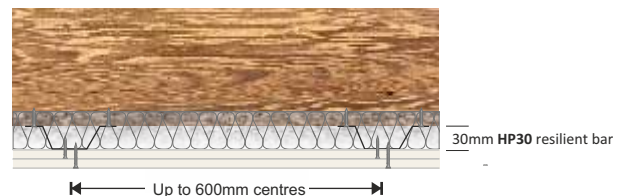
1) Proprietary resilient bars or **CELLECTA HP30** resilient bars fixed to timber battens.

Cavity filled with 50mm **CELLECTA FIBREfon® Micro 50** or 100mm mineral wool (10-45kg/m³).

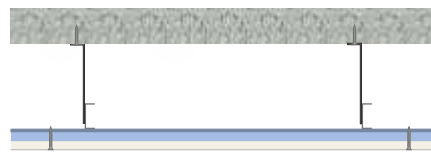


2) **CELLECTA HP30** resilient bars fixed to timber joists

Cavity filled with 50mm **CELLECTA FIBREfon® Micro 50** or 100mm mineral wool (10-45kg/m³).



3) Proprietary metal frame suspended ceiling system⁽¹⁾



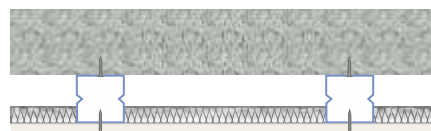
Ceiling Treatment C: Plasterboard on timber battens or proprietary resilient channels with absorbing material.

Cavity filled with 15mm **CELLECTA FIBREfon® Micro 15** or 25mm mineral wool (10-45kg/m³).

1. Timber battens



2. Proprietary resilient channels



Further guidance is given in Approved Document E of the Building Regulations, Section 5 of the Scottish Building Standards and the Robust Details handbook.

The manufacturer of the proposed ceiling system should also be consulted.



















Notes

⁽¹⁾ The use of a better performing ceiling is permitted provided there is no significant flanking transmission.










Professional advice should be sought to ensure the overall floor construction complies with current fire regulations.

CELLECTA's acoustic levelling treatments can be covered with a multitude of commonly installed floor finishes, including carpet, tiles, luxury vinyl tiles (LVT), vinyl rolls and both engineered and solid wood flooring.

Acoustic levelling system

Acoustic levelling system	Floor finish								
	Carpet	Carpet Tiles ⁽¹⁾	Ceramic Tiles ⁽²⁾	Porcelain Tiles ⁽²⁾	Stone Tiles ⁽³⁾	LVT ⁽⁴⁾	Vinyl ⁽⁴⁾	Engineered Wood ⁽⁵⁾	Solid Wood ⁽⁵⁾
Zontal® Z18 & Z22 (P518 & P522 floorboard)									
Zontal® Z25, Z28 & Z30 (HiDECK® Structural 25, 28, 30 floorboard)									

Acoustic + underfloor heating levelling system

Acoustic + underfloor heating levelling system	Floor finish								
	Carpet	Carpet Tiles ⁽¹⁾	Ceramic Tiles ⁽²⁾	Porcelain Tiles ⁽²⁾	Stone Tiles ⁽³⁾	LVT ⁽⁴⁾	Vinyl ⁽⁴⁾	Engineered Wood ⁽⁵⁾	Solid Wood ⁽⁵⁾
GOBi® G1 & G2-25, 28 & 30 (HiDECK® Structural 25, 28, 30 floorboard)									

Notes. Compatibility of floor finishes is provided as a guide. The floor covering manufacturer recommendations and relevant British Standards must be followed at all times.

(1) Further preparative measures may be required when gluing carpet tiles.

(2) Use appropriate board primer and tile adhesive recommended by the tile manufacture/supplier.

(3) Use appropriate board primer, tile adhesive and decoupling mat recommended by the tile manufacture/supplier.

(4) Contact manufacturer for suitability and installation advice.



(5) Check with the manufacturer to see if proposed flooring is suitable for UFH applications.

 Suitable

 Contact CELLECTA for further advice

Adhesives, primer and perimeter edge strips

Floorboard joint adhesives

Floorboard type	Suitable adhesive	
	fon Adhesive	PRO Adhesive
Collecta® P518, P522 floorboards		
HiDECK® Structural 25, 28, 30 boards		

CELLECTA PRO Adhesive: Moisture curing polyurethane (MCPU) joint adhesive

	Bottle size	1kg
	Typical coverage	16m ²
	Curing time	24 hours
	Application	Bonding HiDECK Structural board's T&G edges

CELLECTA fon Adhesive: Modified yellow PVA

	Bottle size	1kg
	Typical coverage	33m ²
	Curing time	24 hours
	Application	Bonding P518 & P522 T&G floorboard edges

Primer

CELLECTA MP60 Primer: Multi-purpose dispersion primer for preparation of board face prior to laying tiles

	Bottle size	5kg
	Typical coverage	60m ²
	Curing time	24 hours
	Application	Sealing HiDECK Structural gypsum floorboards

Acoustic perimeter edge strips

CELLECTA YELOfon ES5: 5mm thick, non-cross-linked, closed-cell polyethylene foam rolls

	Product reference	Dimensions
	ES5/100	5mm x 100mm x 50m
	ES5/120	5mm x 120mm x 50m
	ES5/150	5mm x 150mm x 50m

RUBBERfon® Cradles & Battens

Acoustic Floor Levelling and Elevation System



Product Information

RUBBERfon® Acoustic Cradles are Robust **Detail FFT2** compliant. Inserting high impact polypropylene packers and adding elevation blocks quickly enables the levelling of an uneven structural floor. Timber battens are incorporated to support the floorboard and, if required, insulation support battens (**ISB**) added to support the **XFLO** UFH boards.

Product Benefits

- Outstanding acoustic performance - **RD FFT2** compliant
- Raises and levels all types of separating floors
- Fine height adjustments easily made by inserting levelling packers
- FSC certified timber battens

Technical Data

	RUBBERfon® Cradles	Timber Battens*
Product description	High impact polypropylene acoustic levelling cradle	Kiln dried, regularised, planed softwood
Dimensions	10 x 100 x 100mm	Batten 40 Batten 65
Cradle height	10mm	40 x 45 x 2400 65 x 45 x 2400
Resilient pad composition	Recycled re-bonded rubber crumb	Insulation Support Battens (ISB)*
Levelling packers (recycled polypropylene)	2, 3, 5mm	Kiln dried, regularised, planed softwood
Elevation blocks (recycled polypropylene)	15, 30mm	ISB-35 ISB-40
		35 x 45 x 355 40 x 45 x 355

*Other sizes available upon request

Third Party Accreditation and Approvals



ISO 9001: 2015



ISO 14001: 2015

Environmental Credentials



ULTRAplate

Aluminium Heat Diffusion Plates



Product Information

CELLECTA's ULTRAplates are made from highly conductive aluminium. Plates are manufactured to suit the specific application, diameter of pipe and spacing required. When inserted into an **XFLO®** insulation board they provide outstanding homogenous transfer heat performance though to the floor's surface.

Product Benefits

- Highly conductive, increases the UFH's efficiency
- Made from high quality aluminum plate
- Manufactured to suit pipe diameter used
- Quick and easy to install
- 1, 2, 3 impression options

Technical Data

		ULTRAplate		
		1i	2i	3i
Product description	-	Aluminium heat diffusion plate		
Number of pipe impressions	-	1	2	3
Pipe diameters	mm	10, 12, 14, 15, 16, 20	10, 12, 14, 15, 16, 20	10, 12, 14, 15, 16, 20
Aluminium thickness	mm	0.05	0.05	0.05
Plate length	mm	1000	1000	1000
Standard plate width (other widths available subject to minimum quantities)	mm	130	390	390

Third Party Accreditation and Approvals



ISO 9001: 2015



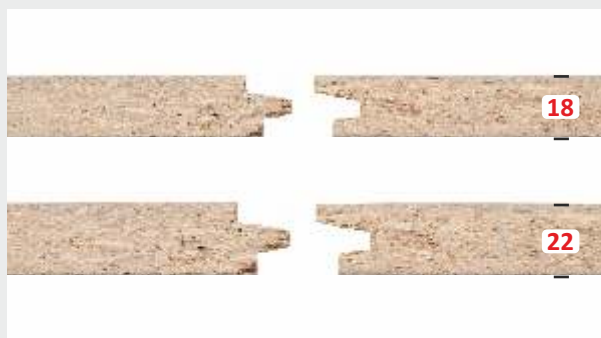
ISO 14001: 2015

Environmental Credentials



CELLECTA® P518 & P522

P5 Moisture Resistant, Tongue and Groove Floorboards



Product Information

CELLECTA's structural flooring boards have a unique precise tongue and groove profile, for a tighter, more consistent board joint. Produced using UK sourced timber and recycled materials wherever possible.

CELLECTA's P5 floorboards provide a sustainable solution for cradle and batten applications.

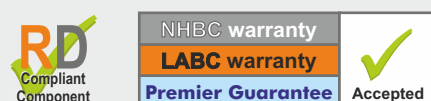
Product Benefits

- ⬢ Moisture resistant
- ⬢ Tongue and groove edge profile
- ⬢ Suitable for kitchens and bathrooms
- ⬢ Sustainable
- ⬢ Quick and easy to install

Technical Data

		CELLECTA®	
		P518	P522
Product description	-	Moisture resistant P5 tongue & grooved structural floorboard	Moisture resistant P5 tongue & grooved structural floorboard
Overall thickness	mm	18	22
Board dimensions	mm	600 x 2400	600 x 2400
Thermal resistance	m ² K/W	0.150	0.183
Bearing spacing (45mm wide batten)	mm	400 (max) centers	600 (max) centers
Weight	kg/m ² kg/board	10.80 15.55	13.20 19.01
Associated flanking strip required	-	YELOfon ESS/100	YELOfon ESS/120

Third Party Accreditation and Approvals



Environmental Credentials



HiDECK® Structural 25, 28 & 30

High Conductivity Structural Floorboard



Product Information

HiDECK® Structural is a highly conductive structural floorboard ideal for acoustic batten & cradle and batten applications incorporating an underfloor heating system. The board's rapid heat transfer characteristics enables an UFH system to operate more efficiently, at flow rates as low as 35°C, providing long term running cost savings.

Product Benefits

- ⬢ Outstanding acoustic and fire performance
- ⬢ Robust Detail proprietary floorboard for FFT2
- ⬢ Low thermal resistance - Perfect for UFH applications
- ⬢ 2.4*x more conductive than chipboard floorboards
- ⬢ Directly accepts all types of floor covering, inc. tiles

Technical Data

		HiDECK® Structural		
		25	28	30
Product description	-	Tongue and groove, high density gypsum, low thermal resistance structural floorboard		
Thickness	mm	25*	28	30
Board dimensions	mm	600 x 1200	600 x 1200	600 x 1200
Thermal resistance	m ² K/W	0.0625	0.070	0.075
Bearing spacing (45mm wide batten)	mm	400 (max) centers	400 (max) centers	400 (max) centers
Weight	kg/m ² kg/board	31.25 22.50	35.00 25.20	37.50 27.00
Associated flanking strip required	-	YELOfon ESS/120	YELOfon ESS/120	YELOfon ESS/120

Third Party Accreditation and Approvals



Environmental Credentials



XFLO® JB & JB-FF

Gobi System Underfloor Heating Floorboards



Product Information

XFLO® JB boards are designed to be fitted between the **Gobi®** system's timber battens and sit on insulation support battens (**ISB**).

XFLO® JB-FF boards have an aluminium foil facing for added thermal diffusion. Both boards are manufactured to suit the pipe diameter and spacing required to achieve the desired thermal output.

Product Benefits

- ⬢ High thermal performance
- ⬢ Manufactured to suit pipe and spacing required
- ⬢ Quick and easily incorporated into a cradle and batten levelling system

Technical Data

		XFLO®	
		JB	JB-FF
Product description	-	Between joist /batten UFH board	Foil faced between joist/batten UFH brd
Strength at 10% compression	kPa	250/300	250/300
Thermal conductivity	W/mK	0.033	0.033
Temperature range	°C	-50/+75	-50/+75
Route sizes available (to suit pipe diameter)	mm	10, 12, 14, 15, 16, 18, 20	10, 12, 14, 15, 16, 18, 20
Pipe centres	mm	125, 150, 200	125, 150, 200
Board sizes	mm	300 x 1250	300 x 1250
Thickness' (other sizes manufactured to order)	mm	25, 30	25, 30

Third Party Accreditation and Approvals



ISO 9001: 2015



ISO 14001: 2015

Environmental Credentials



Legislation & Standards

HM Building Regulations - Approved Document E: Resistance to the passage of sound, 2010 edition

HM Building Regulations - Approved Document L1A & L1B: Conservation of Fuel and Power in Dwellings

HM Building Regulations - Approved Document L2A & L2B: Conservation of Fuel and Power in Buildings Other Than Dwellings

Scottish Building Standards - Section 5: Noise
Scottish Building Standards - Section 6: Energy

Welsh Government Building Regulations - Approved Document E: Resistance to the passage of sound, 2010 edition

Welsh Government Building Regulations - Approved Document L1A & L1B: Conservation of Fuel and Power in Dwellings

Welsh Government Building Regulations - Approved Document L2A & L2B: Conservation of Fuel and Power in Buildings Other Than Dwellings

BS EN ISO 13370: 2017 - Thermal performance of buildings: heat transfer via the ground: Calculation Methods

EN 12667: 2001 - Thermal performance of building materials and products. Determination of thermal resistance by means of guarded hot plate and heat flow meter methods. separating floor

BS EN ISO 717-1: 2013 - Acoustics. Rating of sound in buildings and of building elements

BS EN 13164:2012+A1: 2015 - Thermal insulation products for buildings. Factory made extruded polystyrene foam (XPS) product specification

BS EN 826:2013 - Thermal insulating products for building applications: Determination of compression behaviour

BS EN 12087:2013 - Thermal insulating products for building applications. Determination of long-term water absorption by immersion

BS EN 12088:2013 - Thermal insulating products for building applications. Determination of long-term water absorption by diffusion

BS EN ISO 11925-2:2010 - Reaction to fire tests. Ignitability of products subjected to direct impingement of flame. Single-flame source test

BS 8204-2:2003+A2:2011 - Screeds, bases and in-situ floorings. Concrete wearing surfaces. Code of practice - Levelness of floors:
SR1 - 3mm gap over a 2m straight edge, laid in contact with the floor
SR2 - 5mm gap over a 2m straight edge, laid in contact with the floor
SR3 - 10mm gap over a 2m straight edge, laid in contact with the floor

CELLECTA and The Environment



CELLECTA operates a progressive, sustainable environmental policy, with all our insulation products manufactured under **ISO 9001 & 14001** management controls. We use materials that, where possible, are made from recycled materials and are recyclable.

Architectural Drawings

Architects and designers can quickly and easily insert CELLECTA insulation products into their drawings by either downloading the specific detail from CELLECTA's website or contacting CELLECTA's technical team who will email the relevant **FASTRACKCAD** or **BIMstore** file.

Specification Clauses

Architects, designers and specifiers can quickly and easily insert CELLECTA insulation products into their specification document, by either downloading the specific NBS clause from CELLECTA's website, contacting the technical team on 01634 29-66-77 or emailing technical@cellecta.co.uk, who will send the relevant clause.

Installation Instructions

For detailed installation instructions and advice contact: CELLECTA's technical team on 01634 29-66-77 or email technical@cellecta.co.uk

Fire Classification

Where possible CELLECTA's insulation boards contain fire retardant additives to inhibit accidental ignition. However, plastic foams and wood are combustible and may burn rapidly if exposed to intense fire.

XFLO® - Euroclass **E***

HiDECK® Structural Euroclass **A1***

(non-combustable)

*When tested in accordance with BS EN 13501-1: 2007 +A1: 2009

UKCA Marking

There is no UKCA marking requirements for acoustic treatments.



HiDECK® Structural & XFLO® insulation boards are manufactured in accordance with UK legislation

Product Packaging



>30%
Recycled
Plastic

CELLECTA acoustic products are packed or palletised in such a way that they arrive on site in pristine condition.

On-site Handling & Storage

CELLECTA polyethylene and XPS can be stored outside, but should be protected from long-term exposure to direct sunlight, otherwise surface degradation may occur. Floorboards, cradles and battens must be stored on level ground, in a dry environment, undercover and not stored outside.

Health and Safety

Copies of safety data sheets for all CELLECTA products are available upon request.

Notes

CELLECTA reserves the right to amend product specifications without prior notice. Colours shown are for illustration purposes. Product technical data stated is typical. The information included in this technical manual is based on CELLECTA's experience and is believed to be reliable. Decibel values quoted and applications illustrated are typical and should not be taken as a basis for design.

CELLECTA, as the manufacturer, has no control over the installation of its products. The purchaser should evaluate the product's suitability and is responsible for adhering to any laws or regulations in this respect, making the purchaser also liable for observing any third party rights.



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CELLECTA's extensive range of high performance underfloor heating, thermal and acoustic insulation products are supported by a technical advice line, staffed by experienced consultants who can provide a number of useful services including:

- U-value, condensation risk or imposed load calculations
- Advice on the most suitable products to use
- Issue detailed fixing instructions
- Arrange site surveys
- Technical specifications



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