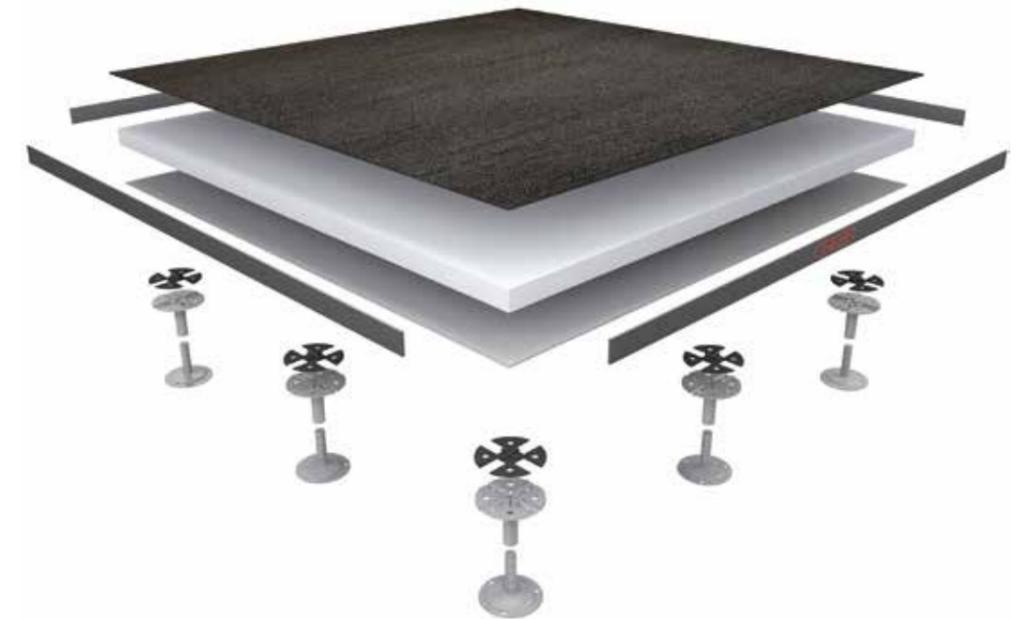


RAISED FLOORS

TECHNICAL MANUAL

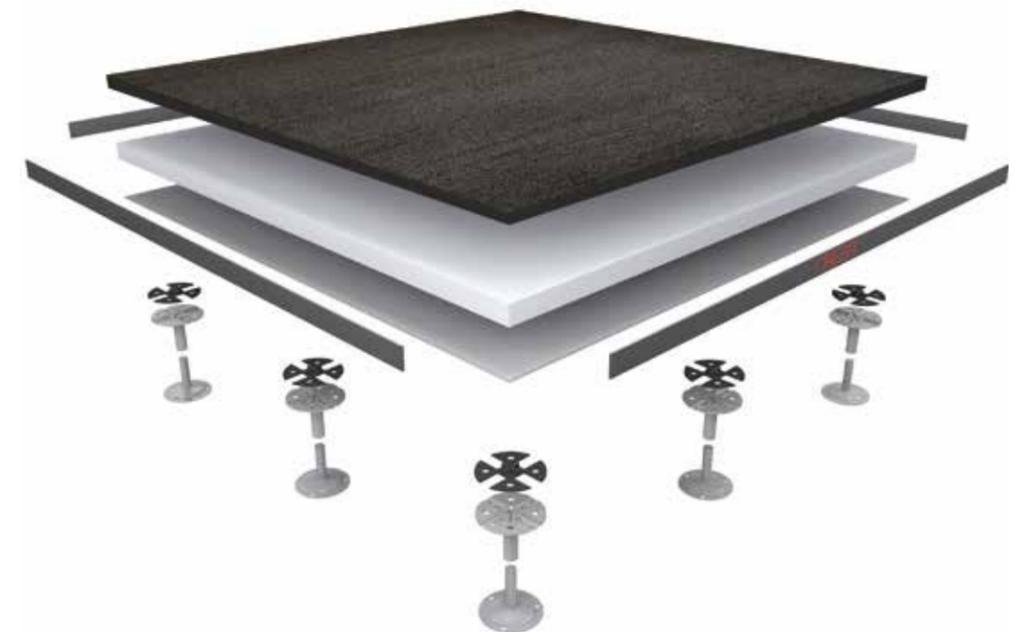
Contents

Raised Floors with laminated porcelain ZERO.3



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NEWFLOOR	12

Raised Floors with Panaria porcelain tiles



CRESPI	18
NEWFLOOR	24

Casa del dolce
Location: Fara Gera D'Adda (BG) - Italy



Edificio Deltazero
Location: Switzerland



Fitness center
Location: Germany



New headquarters of Casa Milan
Location: Milan - Italy



RAISED FLOORING ZERO.3

STRUCTURAL CORE

Panel made of anhydrous calcium sulphate reinforced with organic fibres

TYPE OF COVERING TILES:

ZERO.3 3mm ceramic tiles in laminated porcelain.

OPERATIONS ON TILE:

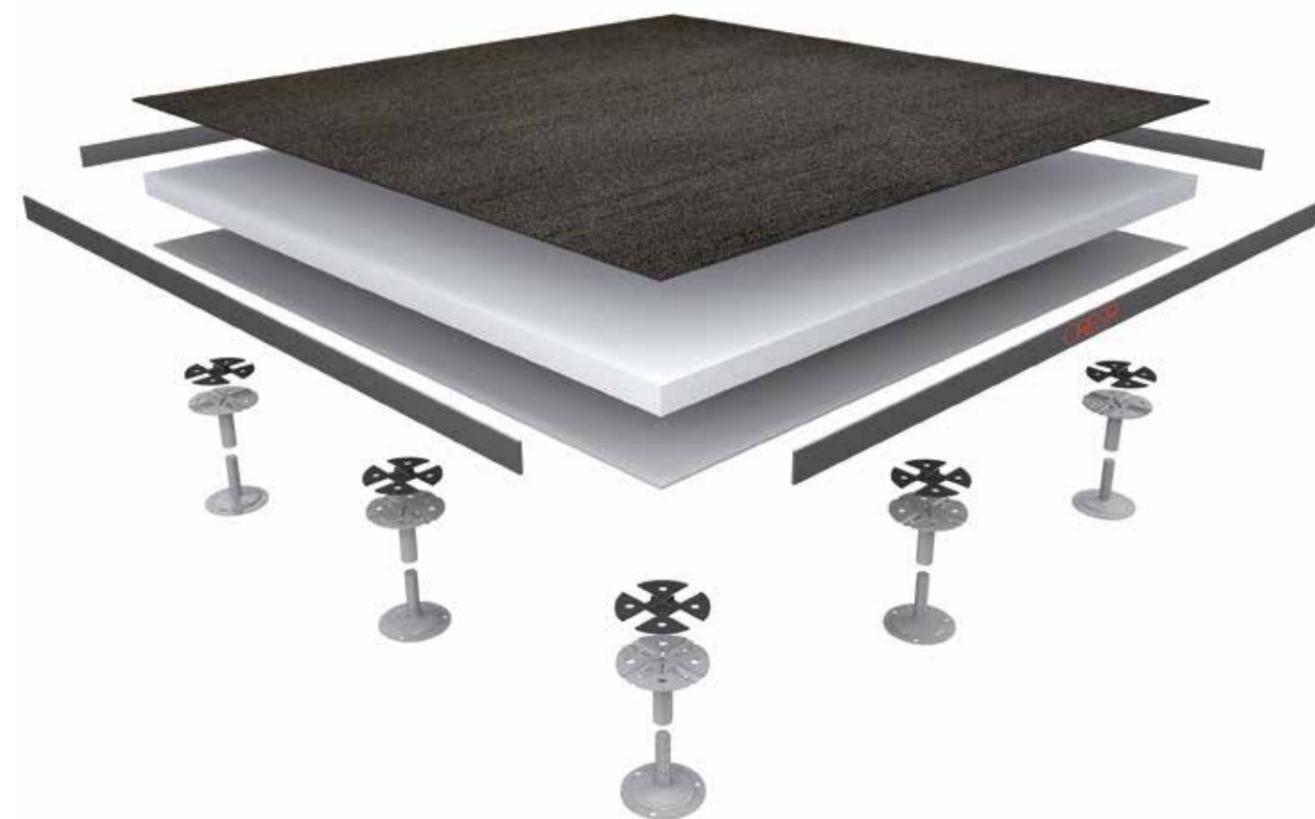
None

PRODUCTION PROCESS

Binding using fire and water resistant resin and dimensional rectification with impact-resistant edge

COVERING TILE SIZES:

- Multiple formats, also rectangular, integrated and inter-connectible. Maximum size 100x100 cm



SYSTEM DESCRIPTION:

The Modular Raised Floor (MRF) is a detachable and removable system. It consists of a bearing structure and inspectable panels that form a walkable surface with a ZERO.3 finish.

The MRF system has all the requirements essential for modern "intelligent" buildings which are highly eco-friendly and LEED / BREEAM certified. The MRF has a high content of recycled material and offers excellent acoustic comfort to both airborne and impact noise. It is fire-resistant, does not store electrostatic charges and has a high resistance to accidental loads. The MRF can be produced with adjustable shims and supports so as to optimise the space for wiring and piping.

The MRF can be produced upon request in a special anti-seismic version, certified for earthquakes up to 7° on the Richter scale.

The Modular Raised Floor (MRF) is made of:

- Top finish: ZERO.3 ;
- Structural Core: high density anhydrous calcium sulphate, fire-proof (Class A1 fire reaction), adjustable thickness, so as to optimise space for wiring and piping yet offer a high resistance to loads
- Protective perimeter edge: in self-extinguishing polymer with a colour similar to the upper finish;
- Lower finish: special sound absorbing film made of self-extinguishing polymers;
- Vertical supports: moulded and ribbed galvanized steel designed to withstand high accidental loads;
- Joints for acoustic decoupling: designed with a special insulating material to meet the standards required by regulations (Decree 05.12.1997), with regards to the passive acoustic requirements of buildings.

Many module types as well as finished floor heights (between 6 and 200 cm) are available; such as anti-seismic and sound insulating, dry heating systems or sealed for hospitals, cleanrooms or residences.

The performances of a raised floor system are defined by the Standard UNI EN 12825:2003. The following are the main features of a finished floor 20cm high, as required by the standard:

■ TOTAL THICKNESS OF FINISHED PANEL

Between 31 and 37 mm according to the module

■ DENSITY OF STRUCTURAL CORE

≥ 1500 kg/m³

■ DIMENSIONAL VARIATION

(After 24 hours of immersion in water):
≤ 0,3%

■ WEIGHT OF FINISHED PANEL

Approximately 56 kg/m²

■ CONCENTRATED BREAKING LOAD

Class 2 (≥ 6 kN)

■ SAFETY FACTOR

2

■ CONCENTRATED WORKING LOAD

≥ 3kN

■ BENDING DUE TO WORKING LOAD

Class A (≤ 2.5 mm)

■ RESISTANCE TO THE DISTRIBUTED LOAD

≥ 2,200 kg/m³

■ DIMENSIONAL AND ANGULAR TOLERANCE OF THE PANELS

Class 1 (± 0,2 mm)

■ THICKNESS TOLERANCE OF THE PANEL

(Excluding laminated porcelain surface finish)
Class 1 (± 0,3 mm)

■ FIRE REACTION OF THE MODULAR PANEL

Fire-proof Class A1 (according to UNI EN 13501)

■ FIRE RESISTANCE

REI 30 (UNI EN 1366-6)

■ THERMAL CONDUCTIVITY λ *

1,64 (0,44+1,2) W/m K

* The thermal conductivity refers to that of the finished panel including the laminated porcelain tile. The value λ for ceramic finish is taken from the values published by KlimaHaus - CasaClima

■ ACOUSTIC INSULATION AIRBORNE NOISE

41 Db according to the equation of the law of mass in diffused sound field with Assessment Index 500 Hz

■ ACOUSTIC INSULATION TO TRAMPLING SYSTEM

(Framework law 447/95):
Decoupling soundproofing joint

■ ELECTRICAL RESISTANCE

About >2x10¹⁰ ohms

■ TYPE OF SUPPORTING STRUCTURE

Adjustable vertical steel supports with a self-extinguishing gasket

■ GALVANISATION OF THE BEARING METAL STRUCTURE

In accordance with Directive 2000/52/EC. Does not include hexavalent chromium

■ GASKETS OF THE SUPPORTING STRUCTURE AND EDGES OF THE PANEL

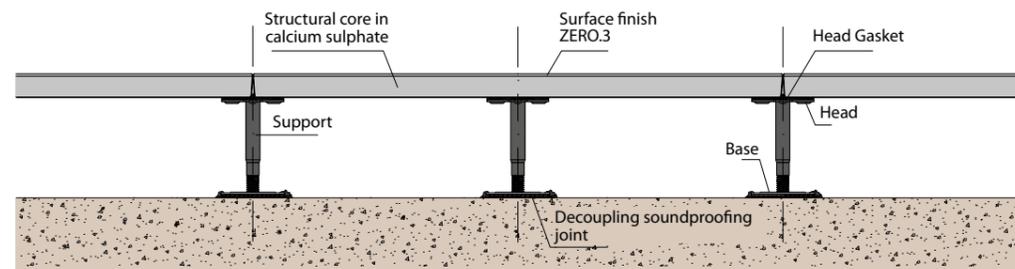
In self-extinguishing polymers

RAISED FLOORING ZERO.3

ZERO.3 + structural core in calcium sulphate + supporting structure

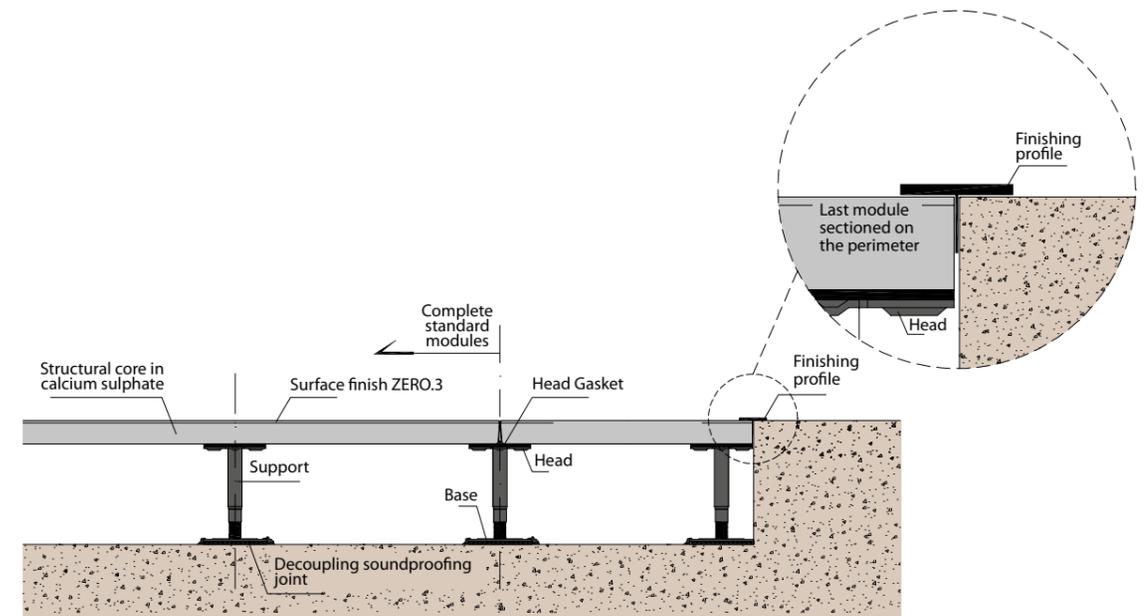
Solution Type

Vertical section - Scale 1:10



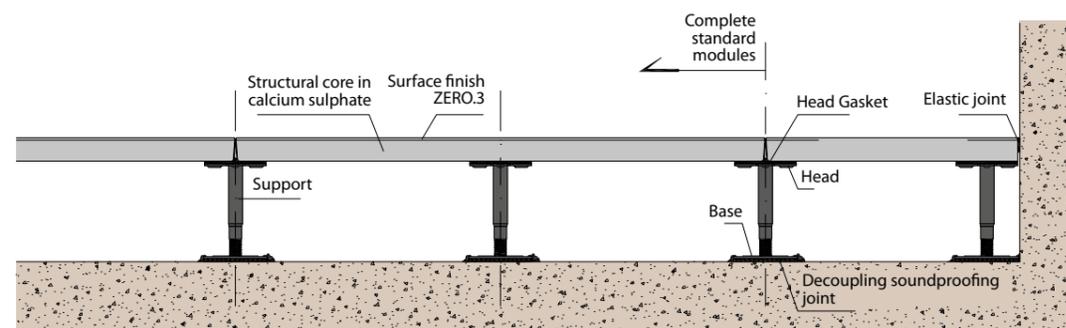
Closing element solution with incomplete panel

Vertical section - Scale 1:10



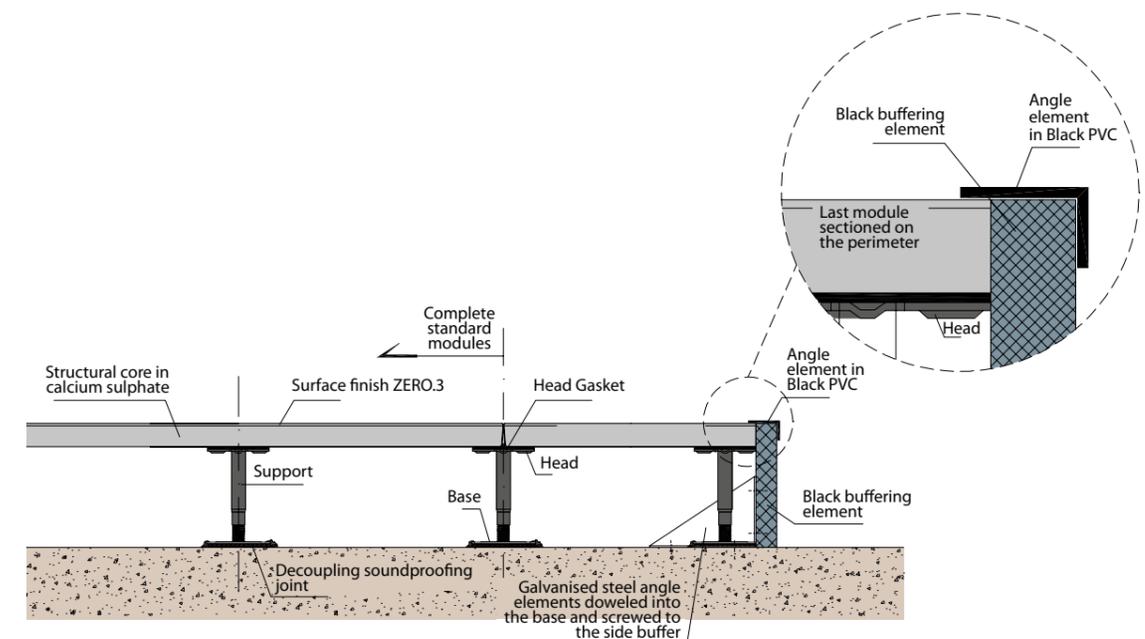
Starting solution with a whole module

Vertical section - Scale 1:10



Threshold solution with T-shaped profile

Vertical section - Scale 1:10



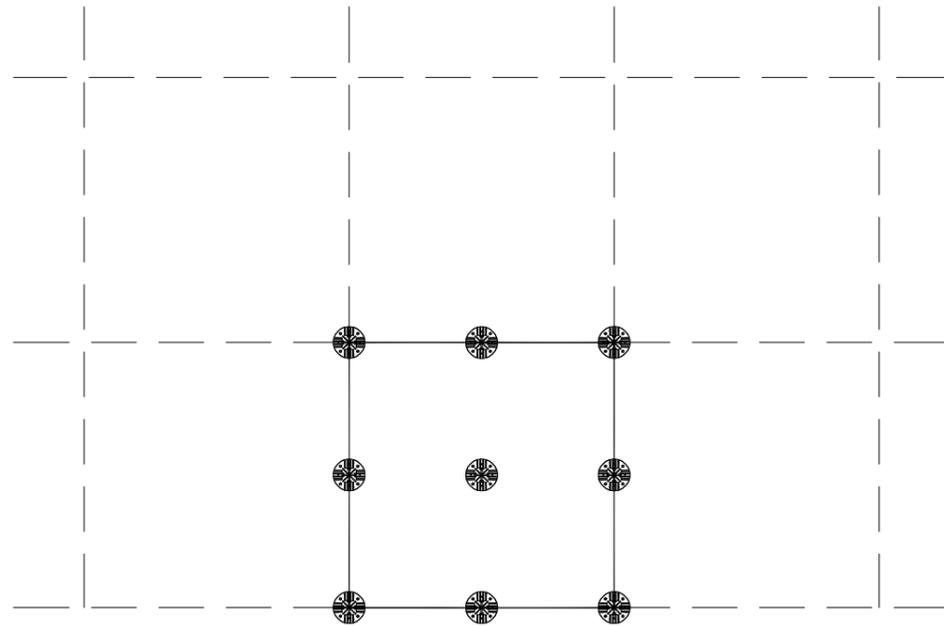
RAISED FLOORING ZERO.3



ZERO.3 + structural core in calcium sulphate + supporting structure

Distribution of supports

Vertical section - Scale 1:20



RAISED FLOORING ZERO.3



STRUCTURAL CORE

Panel in inert high density calcium sulphate, class 0 thickness 30/34 mm(>1500 Kg/m³)

TYPE OF COVERING TILES:

ZERO.3 3mm ceramic slabs in laminated porcelain.

OPERATIONS ON TILE:

None

PRODUCTION PROCESS

Binding using water dispersing vinyl adhesive and rectification with impact-resistant edge

COVERING TILE SIZES:

- Multiple formats, also rectangular, integrated and inter-connectible. Maximum size 100x50 cm



SYSTEM DESCRIPTION:

The Modular Raised Floor (MRF) is a detachable and removable system. It consists of a bearing structure and inspectable panels that form a walkable surface with a ZERO.3 finish.

The MRF system has all the requirements essential for modern "intelligent" buildings which are highly eco-friendly and LEED / BREEAM certified. The MRF has a high content of recycled material and offers excellent acoustic comfort to both airborne and impact noise. It is fire-resistant, does not store electrostatic charges and has a high resistance to accidental loads. The MRF can be produced with adjustable shims and supports so as to optimise the space for wiring and piping.

The Modular Raised Floor (MRF) is made of:

- Top finish: ZERO.3 ;
- Structural Core: high density anhydrous calcium fibre, fire-proof (Class A1 fire reaction), adjustable thickness, so as to optimise space for wiring and piping yet offer a high resistance to loads
- Protective perimeter edge: self-extinguishing polymer with a colour similar to the upper finish;
- Lower finish: aluminium sheet 0.05 mm thick reinforced with tear and scratch resistant PVC that creates an excellent vapor barrier;
- Vertical supports: moulded and ribbed galvanized steel designed to withstand high accidental loads;
- Joints for acoustic decoupling: designed with a special insulating material to meet the standards required by regulations (Decree 05.12.1997), with regards to the passive acoustic requirements of buildings.

Many module types as well as finished floor heights (between 6 and 200 cm) are available; such as sound insulating, dry heating systems or sealed for hospitals, cleanrooms or residences.

The performances of a raised floor system are defined by the Standard UNI EN 12825:2003. The following are the main features of a finished floor 20cm high, as required by the standard:

■ TOTAL THICKNESS OF FINISHED PANEL

Between 33 and 36 mm according to the module

■ DENSITY OF STRUCTURAL CORE

≥ 1500 kg/m³

■ DIMENSIONAL VARIATION

(After 24 hours of immersion in water):
≤ 0,3%

■ WEIGHT OF FINISHED PANEL

Approximately 56 kg/m²

■ CONCENTRATED BREAKING LOAD

Class 2 (≥ 6 kN)

■ SAFETY FACTOR

2

■ CONCENTRATED WORKING LOAD

≥ 3kN

■ BENDING DUE TO WORKING LOAD

Class A (≤ 2.5 mm)

■ RESISTANCE TO THE DISTRIBUTED LOAD

≥ 2,200 kg/m³

■ DIMENSIONAL AND ANGULAR TOLERANCE OF THE PANELS

Class 1 (± 0,2 mm)

■ THICKNESS TOLERANCE OF THE PANEL

(Excluding laminated porcelain surface finish)
Class 1 (± 0,3 mm)

■ FIRE REACTION OF THE MODULAR PANEL

Fire-proof Class Bfl-s1 (according to UNI EN 13501)

■ FIRE RESISTANCE

REI 30 (UNI EN 1366-6)

■ THERMAL CONDUCTIVITY λ *

1,64 (0,44+1,2) W/m K

* The thermal conductivity refers to that of the finished panel including the laminated porcelain tile. The value λ for ceramic finish is taken from the values published by KlimaHaus - CasaClima

■ ACOUSTIC INSULATION AIRBORNE NOISE

41 Db according to the equation of the law of mass in diffused sound field with Assessment Index 500 Hz

■ ACOUSTIC INSULATION TO TRAMPLING SYSTEM

(Framework law 447/95):
Decoupling soundproofing joint

■ ELECTRICAL RESISTANCE

About >2x10¹⁰ ohms

■ TYPE OF SUPPORTING STRUCTURE

Adjustable vertical steel supports with a self-extinguishing gasket

■ GALVANISATION OF THE BEARING METAL STRUCTURE

In accordance with Directive 2000/52/EC. Does not include hexavalent chromium

■ GASKETS OF THE SUPPORTING STRUCTURE AND EDGES OF THE PANEL

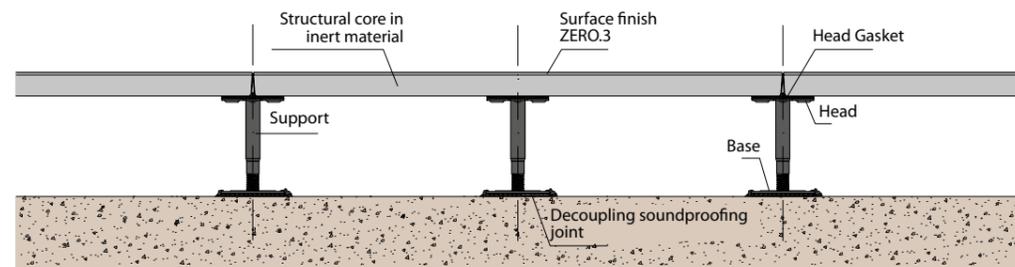
In self-extinguishing polymers

RAISED FLOORING ZERO.3

ZERO.3 + structural core in inert materials + supporting structure

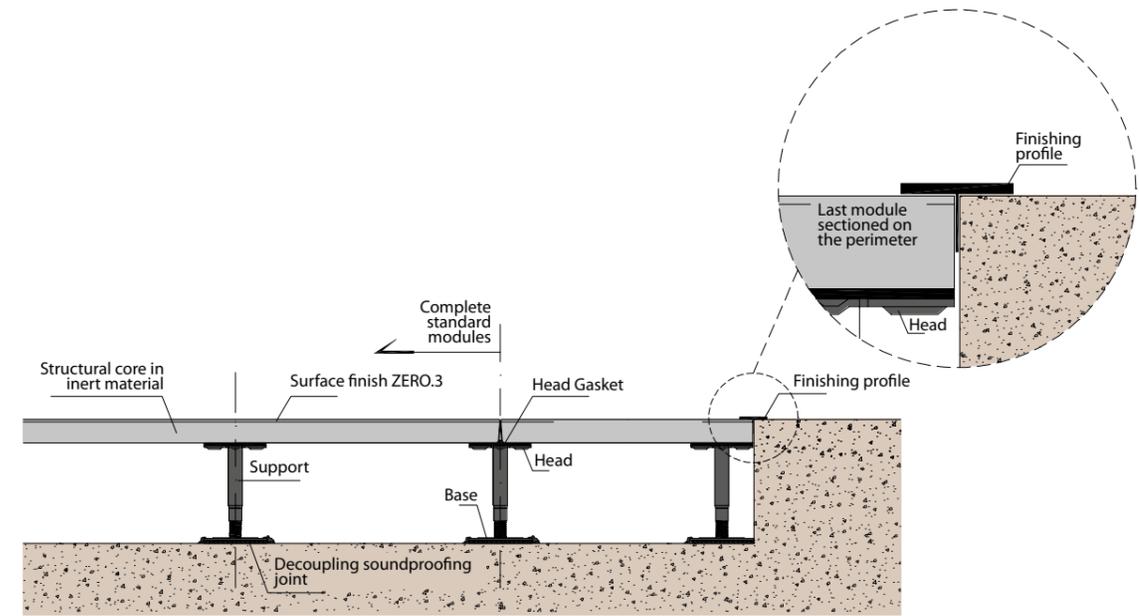
Solution Type

Vertical section - Scale 1:10



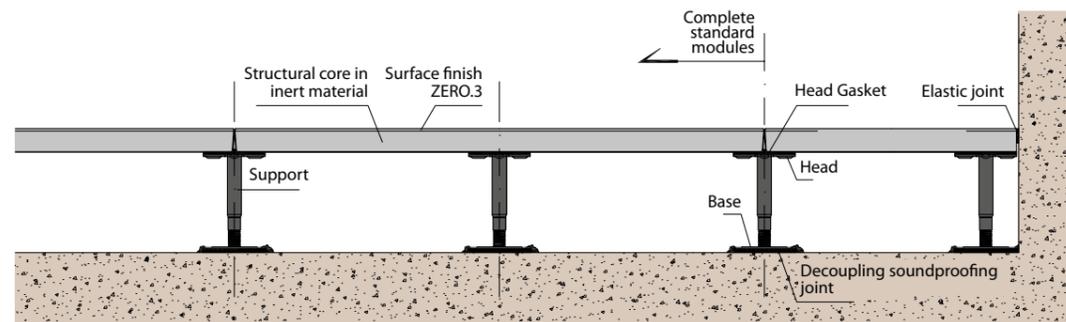
Closing element solution with incomplete panel

Vertical section - Scale 1:10



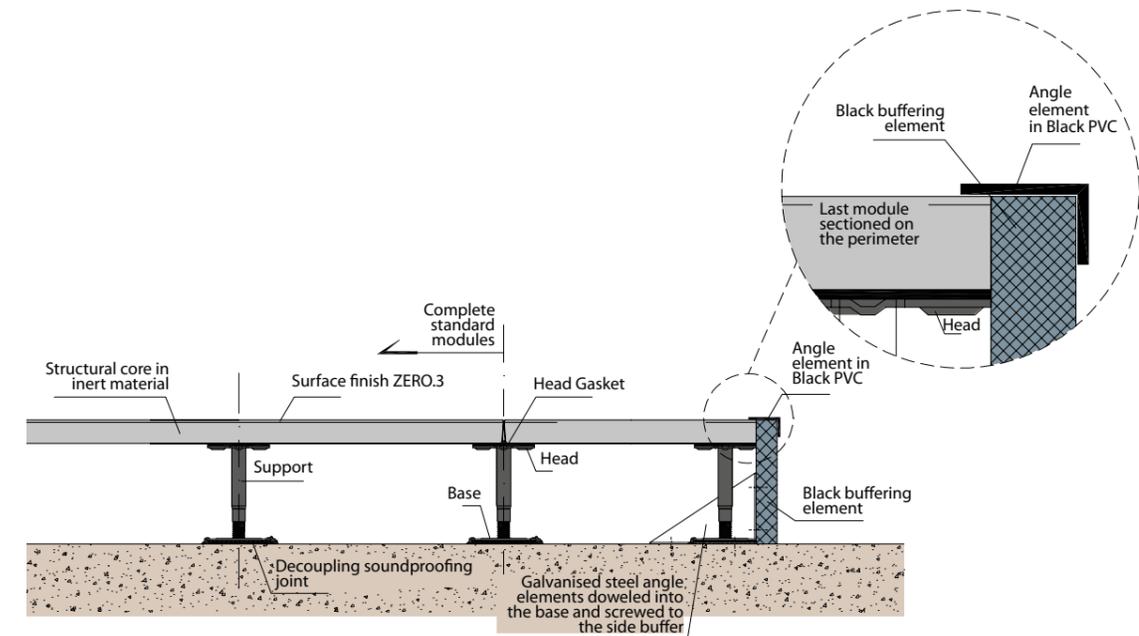
Starting solution with a whole module

Vertical section - Scale 1:10



Threshold solution with T-shaped profile

Vertical section - Scale 1:10



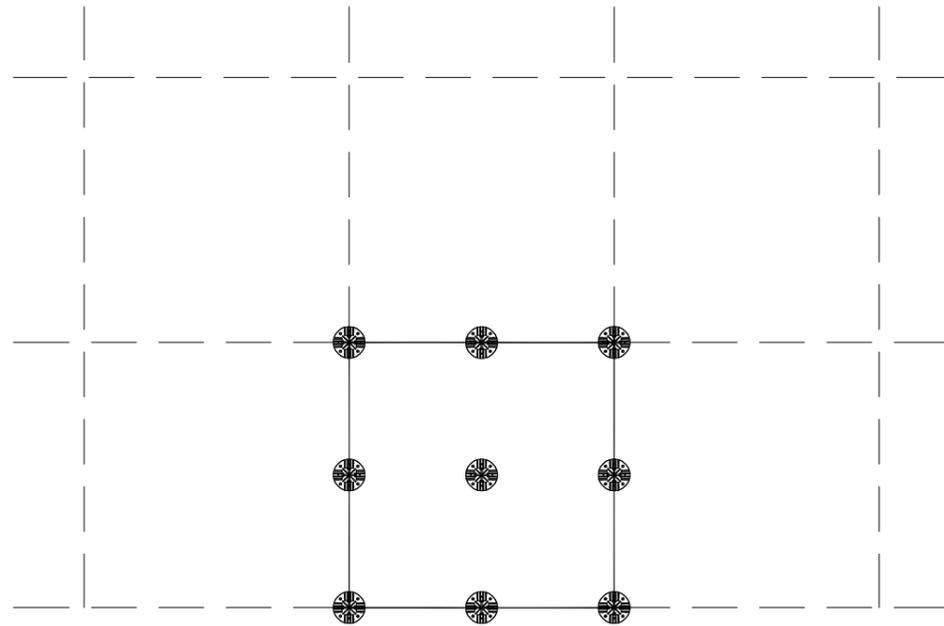
RAISED FLOORING ZERO.3



ZERO.3 + structural core in inert materials + supporting structure

Distribution of supports

Vertical section - Scale 1:20



RAISED FLOOR PANARIA PORCELAIN TILES

STRUCTURAL CORE

Panel made of anhydrous calcium sulphate reinforced with organic fibres

TYPE OF COVERING TILES:

Panaria porcelain tiles with thickness from 9 to 20 mm

OPERATIONS ON TILE:

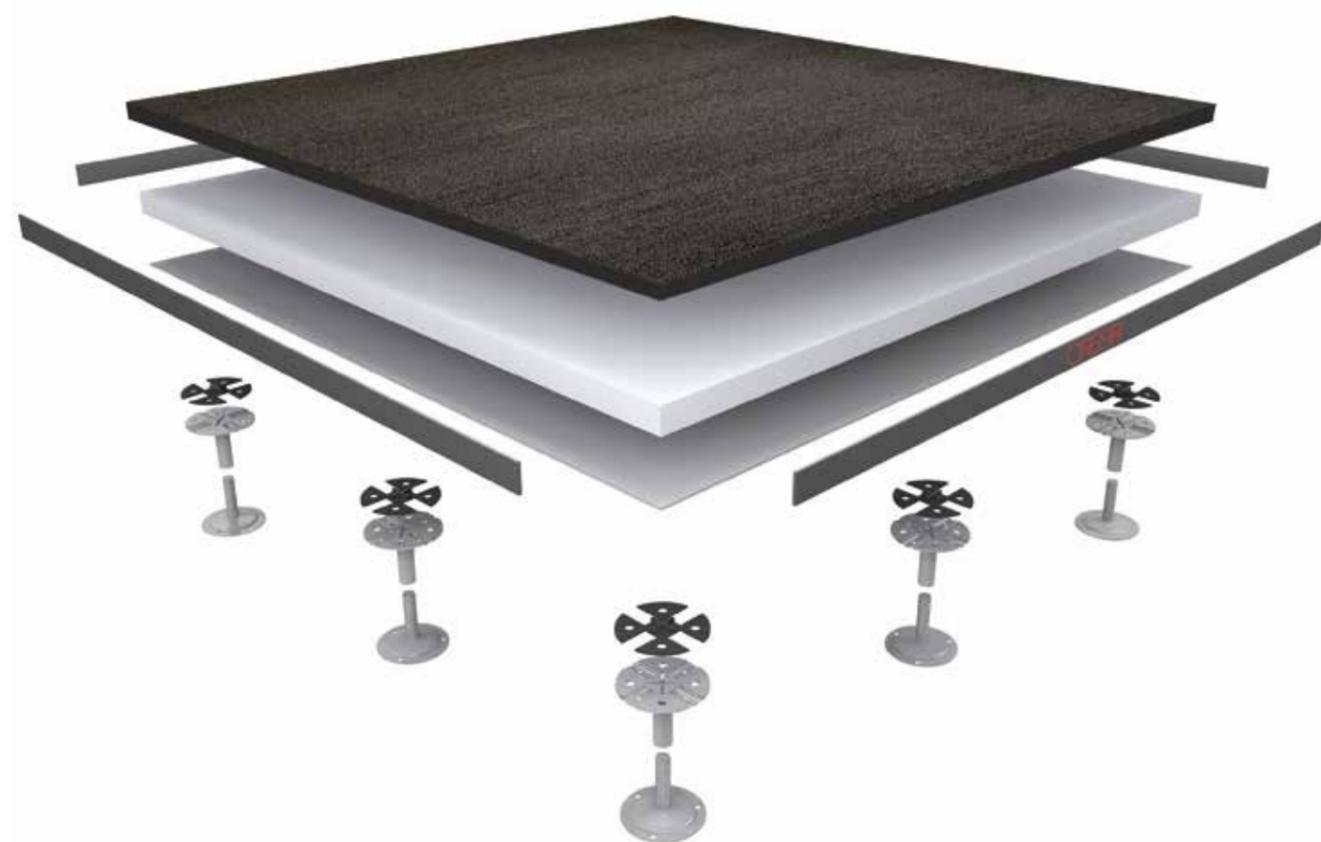
None

PRODUCTION PROCESS

Binding using fire and water resistant resin and dimensional rectification with impact-resistant edge

COVERING TILE SIZES:

- Multiple formats, also rectangular, integrated and inter-connectible.



SYSTEM DESCRIPTION:

The Modular Raised Floor (MRF) is a detachable and removable system. It consists of a bearing structure and inspectable panels that form the walkable surface which is finished with 9 to 20mm thick porcelain tiles.

The MRF system has all the requirements essential for modern "intelligent" buildings which are highly eco-friendly and LEED / BREEAM certified. The MRF has a high content of recycled material and offers excellent acoustic comfort to both airborne and impact noise. It is fire-resistant, does not store electrostatic charges and has a high resistance to accidental loads. The MRF can be produced with adjustable shims and supports so as to optimise the space for wiring and piping.

The MRF can be produced upon request in a special anti-seismic version, certified for earthquakes up to 7° on the Richter scale.

The Modular Raised Floor (MRF) is made of:

- Top finish: ceramic porcelain tiles with a thickness between 9 and 20 mm;
- Structural Core: high density anhydrous calcium sulphate, fire-proof (Class A1 fire reaction), adjustable thickness, so as to optimise space for wiring and piping yet offer a high resistance to loads
- Protective perimeter edge: self-extinguishing polymer with a colour similar to the upper finish;
- Lower finish: special sound absorbing film made of self-extinguishing polymers;
- Vertical supports: moulded and ribbed galvanized steel designed to withstand high accidental loads;
- Joints for acoustic decoupling: designed with a special insulating material to meet the standards required by regulations (Decree 05.12.1997), with regards to the passive acoustic requirements of buildings.

Many module types as well as finished floor heights (between 6 and 200 cm) are available; such as anti-seismic and sound insulating, dry heating systems or sealed for hospitals, cleanrooms or residences.

The performances of a raised floor system are defined by the Standard UNI EN 12825:2003. The following are the main features of a finished floor 20cm high, as required by the standard:

■ TOTAL THICKNESS OF FINISHED PANEL

Between 31 and 37 mm according to the module

■ DENSITY OF STRUCTURAL CORE

≥ 1500 kg/m³

■ DIMENSIONAL VARIATION

(After 24 hours of immersion in water):
≤ 0,3%

■ WEIGHT OF FINISHED PANEL

Approximately 56 kg/m²

■ CONCENTRATED BREAKING LOAD

Class 2 (≥ 6 kN)

■ SAFETY FACTOR

2

■ CONCENTRATED WORKING LOAD

≥ 3kN

■ BENDING DUE TO WORKING LOAD

Class A (≤ 2.5 mm)

■ RESISTANCE TO THE DISTRIBUTED LOAD

≥ 2,200 kg/m³

■ DIMENSIONAL AND ANGULAR TOLERANCE OF THE PANELS

Class 1 (± 0,2 mm)

■ THICKNESS TOLERANCE OF THE PANEL

(Excluding Surface finish porcelain stoneware)
Class 1 (± 0,3 mm)

■ FIRE REACTION OF THE MODULAR PANEL

Fire-proof Class A1 (according to UNI EN 13501)

■ FIRE RESISTANCE

REI 30 (UNI EN 1366-6)

■ THERMAL CONDUCTIVITY λ *

1,64 (0,44+1,2) W/m K

* The thermal conductivity refers to that of the finished panel including the laminated porcelain tile. The value λ for ceramic finish is taken from the values published by KlimaHaus - CasaClima

■ ACOUSTIC INSULATION AIRBORNE NOISE

41 Db according to the equation of the law of mass in diffused sound field with Assessment Index 500 Hz

■ ACOUSTIC INSULATION TO TRAMPLING SYSTEM

(Framework law 447/95):
Decoupling soundproofing joint

■ ELECTRICAL RESISTANCE

About >2x10¹⁰ ohms

■ TYPE OF SUPPORTING STRUCTURE

Adjustable vertical steel supports with a self-extinguishing gasket

■ GALVANISATION OF THE BEARING METAL STRUCTURE

In accordance with Directive 2000/52/EC. Does not include hexavalent chromium

■ GASKETS OF THE SUPPORTING STRUCTURE AND EDGES OF THE PANEL

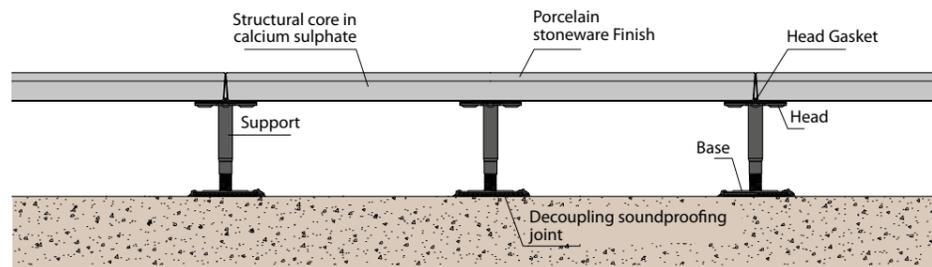
In self-extinguishing polymers

RAISED FLOOR PANARIA PORCELAIN TILES

Panaria porcelain tiles + structural core in calcium sulphate + supporting structure

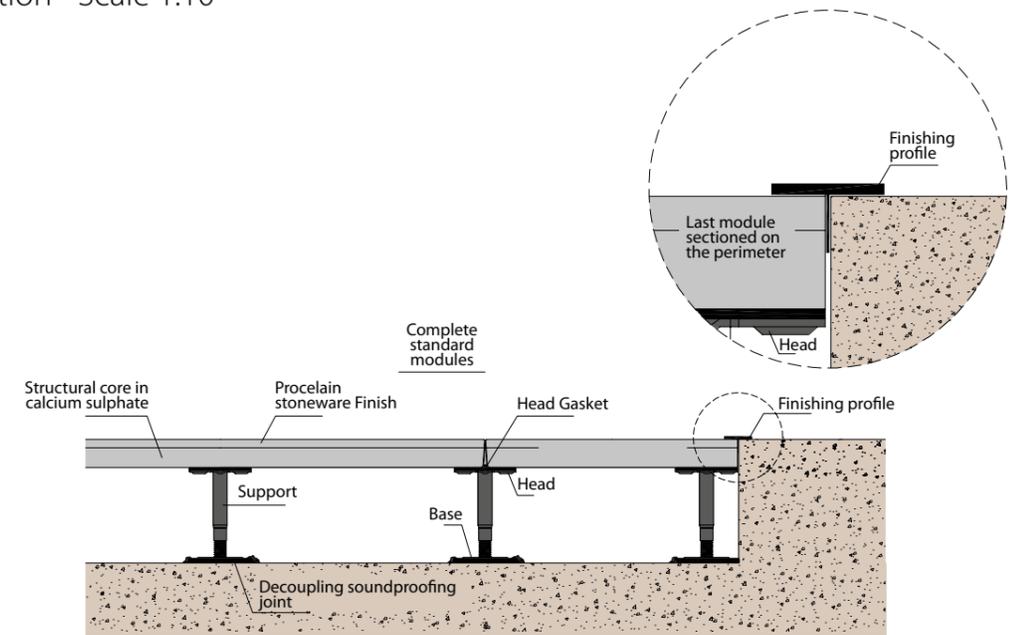
Solution Type

Vertical section - Scale 1:10



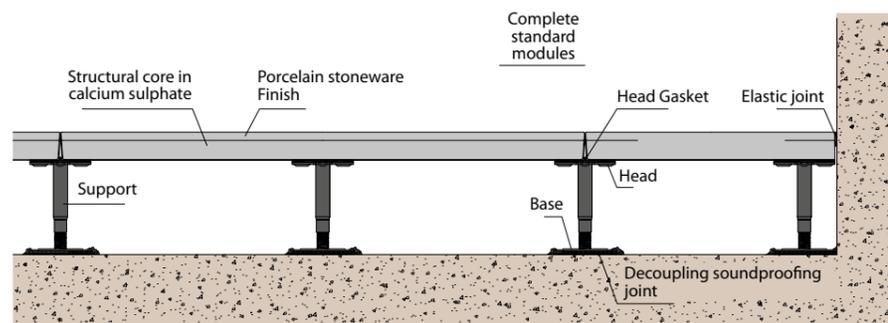
Closing element solution with incomplete panel

Vertical section - Scale 1:10



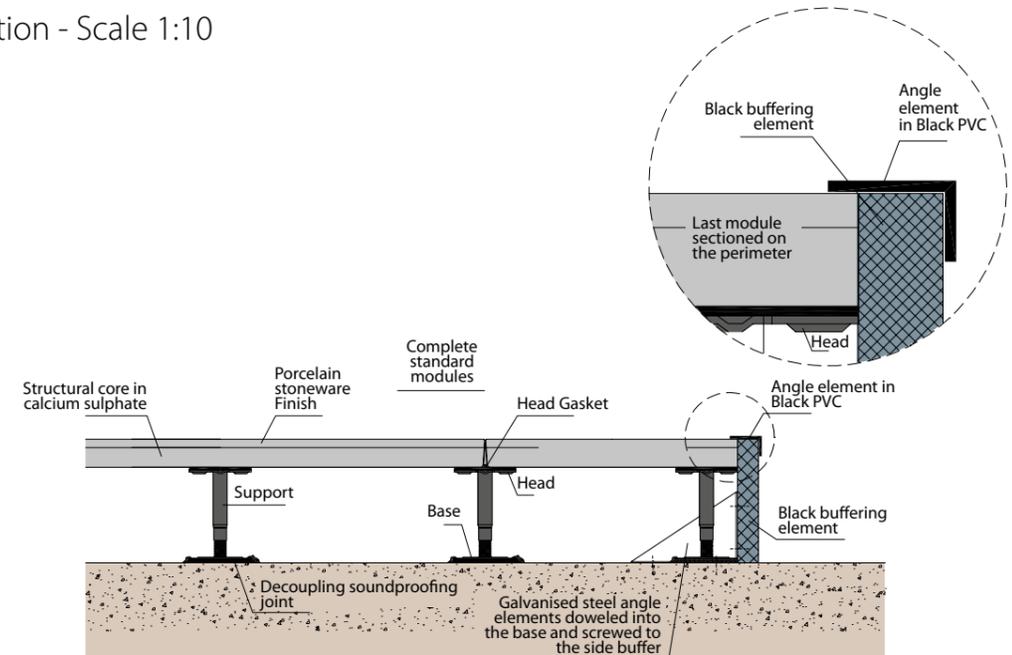
Starting solution with a whole module

Vertical section - Scale 1:10



Threshold solution with T-shaped profile

Vertical section - Scale 1:10

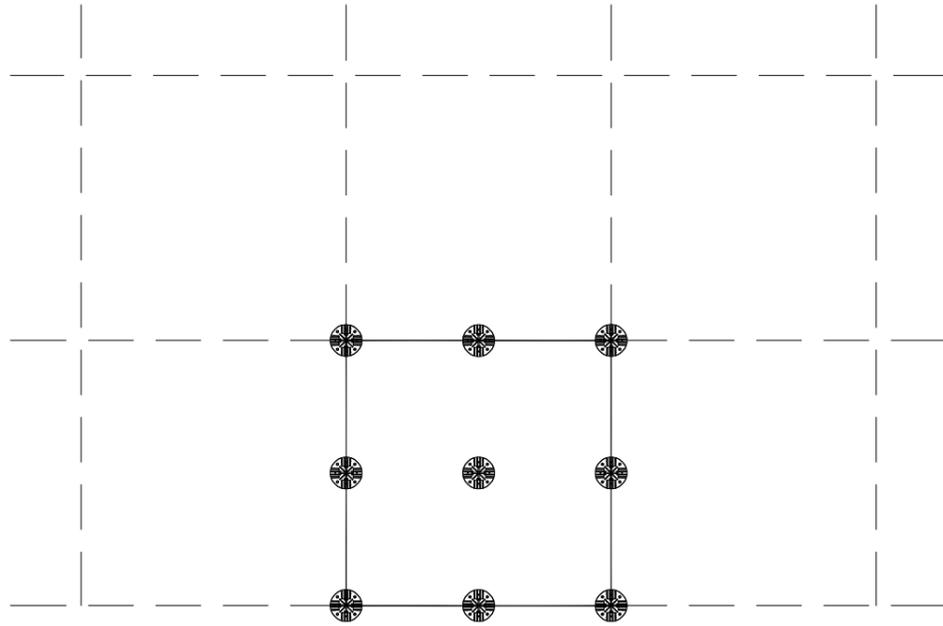


RAISED FLOOR PANARIA PORCELAIN TILES

Panaria porcelain tiles + structural core in calcium sulphate + supporting structure

Distribution of supports

Vertical section - Scale 1:20



RAISED FLOOR PANARIA PORCELAIN TILES



STRUCTURAL CORE

Panel in inert calcium sulphate material; in class 0 thickness 30-40 mm high density ($>1500 \text{ Kg/m}^3$)

TYPE OF COVERING TILES:

Panaria porcelain tiles with thickness from 9 to 20 mm

OPERATIONS ON TILE:

None

PRODUCTION PROCESS

Binding using water dispersing vinyl adhesive and rectification with impact-resistant edge

COVERING TILE SIZES:

- Multiple formats, also rectangular, integrated and inter-connectible.



SYSTEM DESCRIPTION:

The Modular Raised Floor (MRF) is a detachable and removable system. It consists of a bearing structure and inspectable panels that form the walkable surface which is finished with 9 to 20mm thick porcelain tiles.

The MRF system has all the requirements essential for modern "intelligent" buildings which are highly eco-friendly and LEED / BREEAM certified. The MRF has a high content of recycled material and offers excellent acoustic comfort to both airborne and impact noise. It is fire-resistant, does not store electrostatic charges and has a high resistance to accidental loads. The MRF can be produced with adjustable shims and supports so as to optimise the space for wiring and piping.

The Modular Raised Floor (MRF) is made of:

- Top finish: ceramic porcelain tiles with a thickness between 9 and 20 mm;
- Structural Core: high density anhydrous calcium fibre, fire-proof (Class A1 fire reaction), adjustable thickness, so as to optimise space for wiring and piping yet offer a high resistance to loads
- Protective perimeter edge: self-extinguishing polymer with a colour similar to the upper finish;
- Lower finish: special sound absorbing film made of self-extinguishing polymers;
- Vertical supports: moulded and ribbed galvanized steel designed to withstand high accidental loads;
- Joints for acoustic decoupling: designed with a special insulating material to meet the standards required by regulations (Decree 05.12.1997), with regards to the passive acoustic requirements of buildings.

Many module types as well as finished floor heights (between 6 and 200 cm) are available; such as sound insulating, dry heating systems or sealed for hospitals, cleanrooms or residences.

The performances of a raised floor system are defined by the Standard UNI EN 12825:2003. The following are the main features of a finished floor 20cm high, as required by the standard:

■ TOTAL THICKNESS OF FINISHED PANEL

Between 40 and 54 mm according to the module

■ DENSITY OF STRUCTURAL CORE

$\geq 1500 \text{ kg/m}^3$

■ DIMENSIONAL VARIATION

(After 24 hours of immersion in water):
 $\leq 0,3\%$

■ WEIGHT OF FINISHED PANEL

Approximately 69 kg/m^2

■ CONCENTRATED BREAKING LOAD

Class 3 ($\geq 8 \text{ kN}$)

■ SAFETY FACTOR

2

■ CONCENTRATED WORKING LOAD

$\geq 4 \text{ kN}$

■ BENDING DUE TO WORKING LOAD

Class A ($\leq 2.5 \text{ mm}$)

■ RESISTANCE TO THE DISTRIBUTED LOAD

$\geq 2,200 \text{ kg/m}^3$

■ DIMENSIONAL AND ANGULAR TOLERANCE OF THE PANELS

Class 1 ($\pm 0,2 \text{ mm}$)

■ THICKNESS TOLERANCE OF THE PANEL

(Excluding Surface finish porcelain stoneware)
Class 1 ($\pm 0,3 \text{ mm}$)

■ FIRE REACTION OF THE MODULAR PANEL

Fire-proof Class Bfl-s1 (according to UNI EN 13501)

■ FIRE RESISTANCE

REI 30 (UNI EN 1366-6)

■ THERMAL CONDUCTIVITY λ *

1,64 (0,44+1,2) W/m K

* The thermal conductivity refers to that of the finished panel including the laminated porcelain tile. The value λ for ceramic finish is taken from the values published by KlimaHaus - CasaClima

■ ACOUSTIC INSULATION AIRBORNE NOISE

41 Db according to the equation of the law of mass in diffused sound field with Assessment Index 500 Hz

■ ACOUSTIC INSULATION TO TRAMPLING SYSTEM

(Framework law 447/95):
Decoupling soundproofing joint

■ ELECTRICAL RESISTANCE

About $>2 \times 10^{10} \text{ ohms}$

■ TYPE OF SUPPORTING STRUCTURE

Adjustable vertical steel supports with a self-extinguishing gasket

■ GALVANISATION OF THE BEARING METAL STRUCTURE

In accordance with Directive 2000/52/EC. Does not include hexavalent chromium

■ GASKETS OF THE SUPPORTING STRUCTURE AND EDGES OF THE PANEL

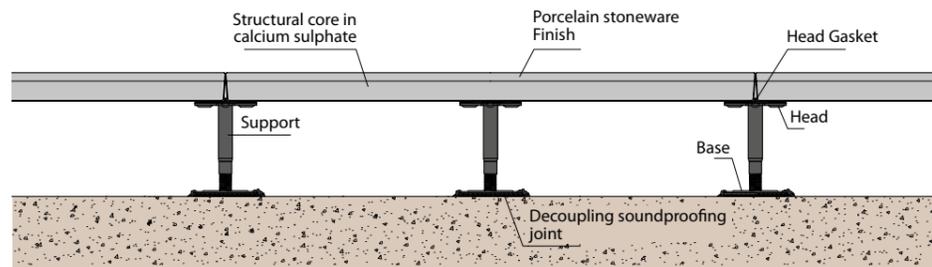
In self-extinguishing polymers

RAISED FLOOR PANARIA PORCELAIN TILES

Panaria porcelain tiles + structural core in calcium sulphate + supporting structure

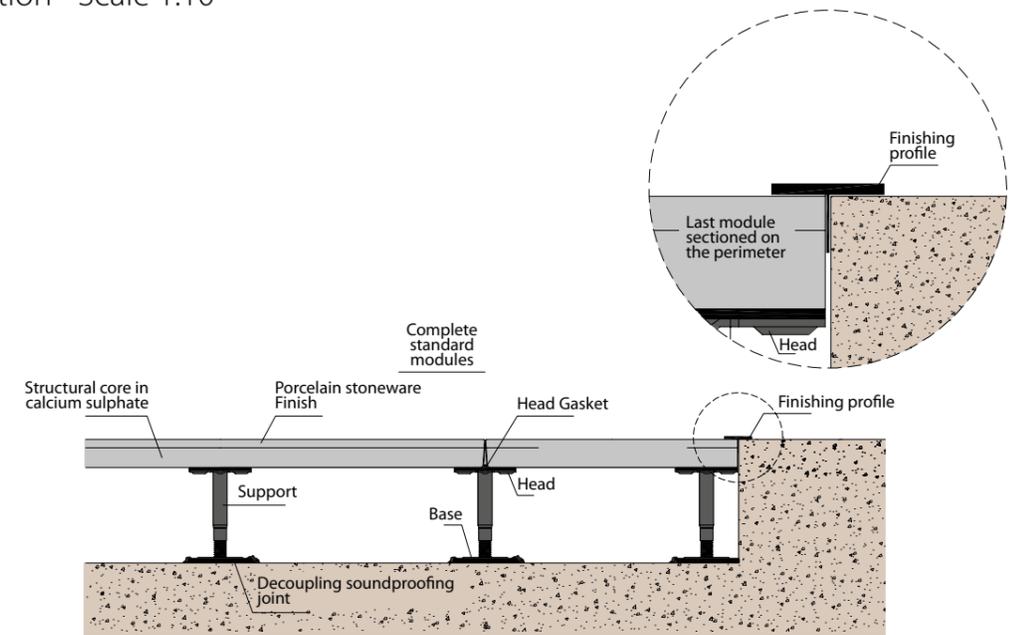
Solution Type

Vertical section - Scale 1:10



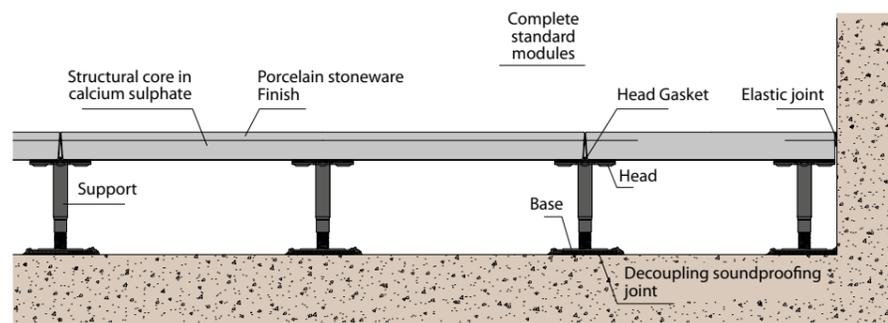
Closing element solution with incomplete panel

Vertical section - Scale 1:10



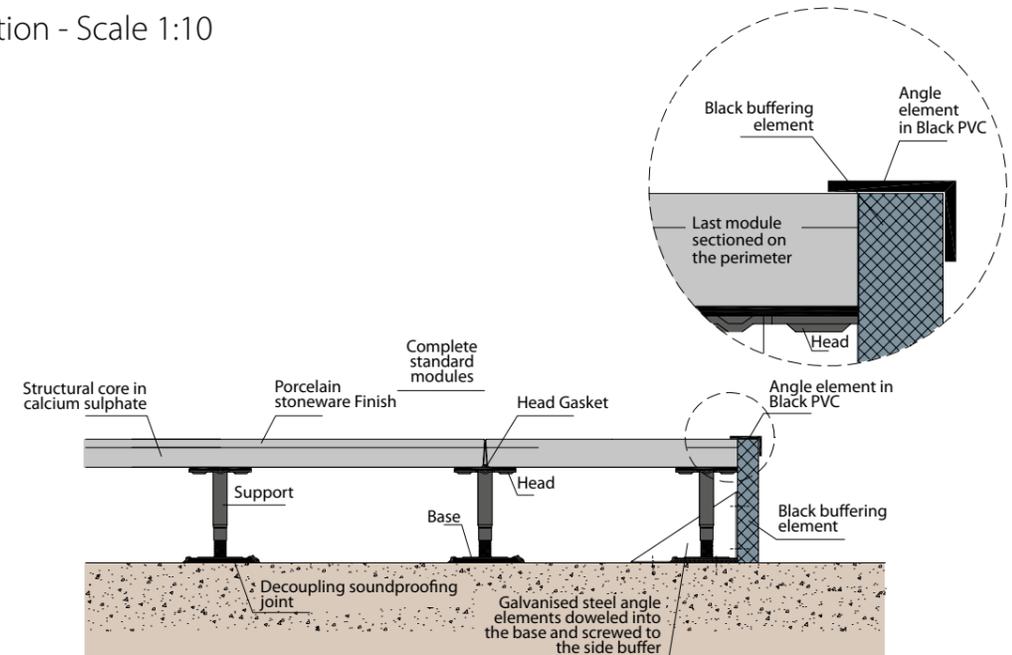
Starting solution with a whole module

Vertical section - Scale 1:10



Threshold solution with T-shaped profile

Vertical section - Scale 1:10



RAISED FLOOR PANARIA PORCELAIN TILE



Panaria porcelain tiles + structural core in calcium sulphate + supporting structure

Distribution of supports

Vertical section - Scale 1:20

