

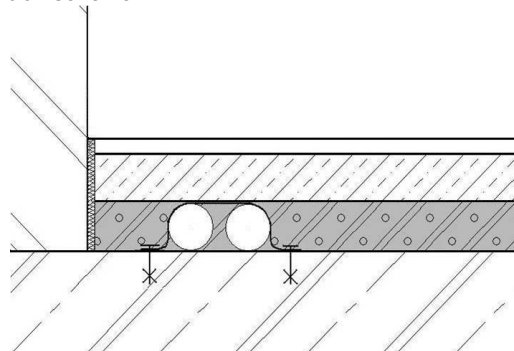
FLOOR WITH FOAM CONCRETE WITHOUT SOUNDPROOF INSULATION

Modification: PBG 35 - PBG 50

Data Sheet No. 211

Utilization: The floor is designed for use in **indoor (civil) structures** located between two heated rooms. According to STN 73 0035 it is usable for useful standard (random) load defined in the chart No.3 in groups 1 and 2, i.e. flats, halls and hallways, rooms of hostels and hotels, office rooms. This floor is usable for group 3 in the case the load does not exceed the value of 700 kg/m^3 of the object weight when acting on floor through 4 feet with ground size of $15 \times 15 \text{ mm}$. According to STN EN ISO 717-2 the impact noise reduction index is $\Delta L_w = \text{min } 13 \text{ dB}$.

Layer composition scheme:



- wear layer
- screed - min thickness as per manufacturer's recommendation
- separation foil or paper
- levelling layer SIRCONTEC PBG 35 – PBG 50
- (conduit - water or electricity distribution)
- bearing slab

Floor layers must be separated from the masonry by an elastic material — EPS, foam PE, etc.

Description of layers:

Wear layer: parquets, paving, carpet, PVC. In the case of laying this layer on a cement screed without anchoring, it is recommended to provide the cement screed with a dustless coating.

Screed—bearing layer:

- Manually processed, preferably from prefabricated mixtures, compression strength min 20 MPa, flexural strength min 5 Mpa, e.g. BAUMIT screed, thickness min 45 mm or according to the manufacturer's technical documentation
- Self-levelling anhydrite or plaster screed, compression strength min 20 MPa, flexural strength min 5 Mpa, e.g. BAUMIT CSFE 225, thickness min 35 mm, or thickness according to the manufacturer's technical documentation

Separating layer: PE foil or separating paper

Levelling layer: foam concrete SIRCONTEC PBG 35 or 50, see DS No. 115, recommended min. thickness over the bearing slab min. 45 mm for PBG 35 and 30 mm for PBG 50.

Bearing slab: steel concrete, ceramic ceiling, wooden ceiling with sufficient loading capacity (static calculation is necessary)

Masonry: rendered with floated finish, line-type contact of the bearing slab and the masonry

Floor separation from the masonry: elastic moisture non-absorbent strip – foam PE, EPS, min. thickness of 5 mm.

Related standards:

STN 73 0035	Loading of building structures
STN 73 1201	Designing of concrete structures
STN EN ISO 717 –2	Acoustics—evaluation of sound insulation in structures and buildings—normative requirements on the step soundproofness of the horizontal separating structures in housing and public buildings

Fabrication:

Wear layer: corresponding supplier's application instructions must be followed

Screed: corresponding supplier's application instructions must be followed

Separating layer: If there is no moisture stop under PBG, it should be applied immediately after PBG foam concrete has achieved its walk-on strength, otherwise leave PBG layer to achieve its natural moisture content.

Layer of the foam concrete SIRCONTEC PBG 35 or 50: it is necessary to keep the General conditions for manufacturing and processing of SIRCONTEC light concretes, Manufacturing processes for the foam concrete SIRCONTEC PBG 35 and 50.

Designing:

The screed thickness is always designed by the authorized engineer specialized in statics regarding the purpose of usage and thus also the floor loading.

It is possible to obtain on request at SIRCONTEC company further details concerning the levelling layer made of the foam concrete PBG 35 or PBG 50.

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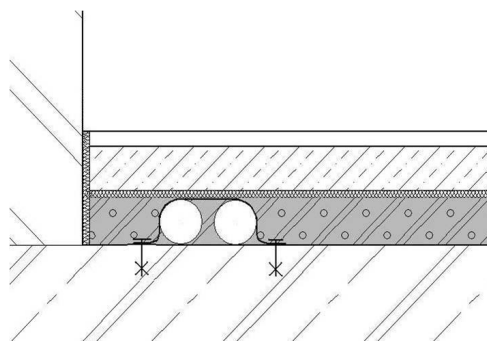
FLOOR WITH SCREED AND SOUND INSULATION

Modification: PBG 40 - PBG 50

Data Sheet No. 212

Utilization: The floor is determined for usage in public and housing buildings with placing between two heated spaces, wherever it is required to reduce step or air-conducted noise. According to STN 73 0035 it is usable for useful standard (random) load defined in the chart No.3 in groups 1 and 2, i.e. flats, halls and hallways, rooms of hostels and hotels, office rooms. This floor is usable for group 3 in the case the load does not exceed the value of 700 kg/m^3 of the object weight when acting on floor through 4 feet with ground size of $15 \times 15 \text{ mm}$. According to STN EN ISO 717-2 the impact noise reduction index for the floor composition alone is $\Delta L_{nw} = \text{min } 23 \text{ dB}$ if EKM 1006 acoustic pad is used. The value of ΔL_{nw} depends also on the type of wear layer used. The values of impact noise reduction for SIRCONTEC floors depending on the type of wear layer and steel-concrete floor slab are included in DS 207, 208 and 209.

Layer composition scheme:



- wear layer
- screed - min thickness as per manufacturer's recommendation
- sound-insulating layer - EKM 10xx-, thickness min 6 mm
- levelling layer SIRCONTEC PBG 35-50
- (conduit - water or electricity distribution)
- bearing slab

Floor layers must be separated from the masonry by an elastic material — EPS, foam PE etc.

Description of layers:

Wear layer: parquets, paving, carpet, PVC. In the case of laying this layer on a cement screed without anchoring, it is recommended to provide the cement screed with a dustless coating.

Concrete screed—spread layer:

- manually prepared, ideally prefabricated, min. compressive strength of min. 20 MPa, min. tensile flexural strength of min. 5 MPa, e.g. BAUMIT estrich (screed), thickness min. 45 mm or according to manufacturer's technical documentation
- self-levelling cast screed (anhydrite or plaster), min. compressive strength of min. 20 MPa, min. tensile flexural strength of min. 5 MPa, e.g. BAUMIT CSFE 225, min. thickness of min. 35 mm or according to manufacturer's technical documentation

Sound-insulating layer: EKM 10xx, acoustic EPS

Levelling layer: foam concrete SIRCONTEC PBG 35 or 50, see DS No. 115.

Bearing slab: steel concrete, ceramic ceiling, wooden ceiling with sufficient loading capacity (static calculation is necessary)

Masonry: rendered with floated finish, line-type contact of the bearing slab and the masonry

Floor separation from the masonry: elastic moisture non-absorbent strip – foam PE, EPS, min. thickness of 5 mm.

Related standards:

STN 73 0035	Loading of building structures
STN 73 1201	Designing of concrete structures
STN EN ISO 717 -2	Acoustics—evaluation of sound insulation in structures and buildings—normative requirements on the step soundproofness of the horizontal separating structures in housing and public buildings

Fabrication:

Wear layer: it is necessary to maintain relevant application rules of the supplier

Screed: to apply immediately after installation of the sound insulating layer, it is necessary to maintain relevant application rules of the supplier

Sound insulating layer: to apply immediately after reaching of the walking strength of SIRCONTEC foam concrete PBG 35 or 50, it is necessary to keep the respective Manufacturing process

Layer of the foam concrete SIRCONTEC PBG 35 or 50: it is necessary to keep the General conditions for manufacturing and processing of SIRCONTEC light concretes, Manufacturing processes for the foam concrete SIRCONTEC PBG 35 and 50.

Designing:

The screed thickness is always designed by the authorized engineer specialized in statics regarding the purpose of usage and thus also the floor loading.

It is possible to obtain on request at SIRCONTEC company further details concerning the levelling layer made of the foam concrete PBG 35 or PBG 50.

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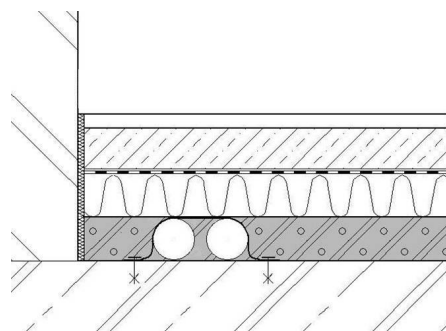
FLOOR WITH FOAM CONCRETE, SOUND AND THERMAL INSULATION

Modification: PBG 40 - PBG 50

Data Sheet No. 213

Utilization: The floor is determined for usage in public and housing buildings with placement over unheated spaces, wherever it is required to reduce impact or airborne noise.
 According to STN 73 0035 it is usable for useful standard (random) load defined in the chart No.3 in groups 1 and 2, i.e. flats, halls and hallways, rooms of hostels and hotels, office rooms.
 This floor is usable for group 3 in the case the load does not exceed the value of 700 kg/m^3 of the object weight when acting on floor through 4 feet with ground size of $15 \times 15 \text{ mm}$.
 According to STN EN ISO 717-2 the impact noise reduction index for the floor composition alone is $\Delta L_{nw} = \text{min } 23 \text{ dB}$ depending on the thickness and the type of thermal-insulating layer and the type of wear layer.
 The values of impact noise reduction for SIRCONTEC floors depending on the type of wear layer and steel-concrete floor slab are included in DS 207, 208 and 209.

Layer composition scheme:



- wear layer
- screed min 30-45 mm thick, see layer description below
- separation foil or paper
- thermal insulation layer
- levelling layer SIRCONTEC PBG 35-50
- (conduit - water or electricity distribution)
- bearing slab

Floor layers must be separated from the masonry by an elastic material — EPS, foam PE, etc.

Description of layers:

Wear layer: parquets, paving, carpet, PVC. In the case of laying this layer on a cement screed without anchoring, it is recommended to provide the cement screed with a dustless coating.

Concrete screed—spread layer:

- manually prepared, ideally prefabricated, min. compressive strength of min. 20 MPa, min. tensile flexural strength of min. 5 MPa, e.g. BAUMIT estrich (screed), thickness min. 45 mm or according to manufacturer's technical documentation
- self-levelling cast screed (anhydrite or plaster), min. compressive strength of min. 20 MPa, min. tensile flexural strength of min. 5 MPa, e.g. BAUMIT CSFE 225, min. thickness of min. 35 mm or according to manufacturer's technical documentation

Separating layer: PE foil or separating paper

Thermal and possibly also sound insulation layer: polystyrene foam (EPS), thickness min 15 mm, it is recommended to use floor EPS with guaranteed noise insulation.

Levelling layer: foam concrete SIRCONTEC PBG 35 or 50, see DS No. 115.

Bearing slab: steel concrete, ceramic ceiling, wooden ceiling with sufficient loading capacity (static calculation is necessary)

Masonry: rendered with floated finish, line-type contact of the bearing slab and the masonry

Floor separation from the masonry: elastic moisture non-absorbent strip – foam PE, EPS, min. thickness of 5 mm.

Related standards:

STN 73 0035	Loading of building structures
STN 73 1201	Designing of concrete structures
STN EN ISO 717 -2	Acoustics—evaluation of sound insulation in structures and buildings—normative requirements on the step soundproofness of the horizontal separating structures in housing and public buildings

Fabrication: **Wear layer:** it is necessary to maintain relevant application rules of the supplier
Screed: to apply immediately after installation of the separating layer, it is necessary to maintain relevant application rules of the supplier
Separating layer: to apply immediately after laying of the thermal layer
Thermal insulation layer: to apply immediately after reaching of the walking strength of SIRCONTEC PBG 35-50, it is necessary to keep the respective Manufacturing process
Layer of the foam concrete SIRCONTEC PBG 35-50: it is necessary to keep the General conditions for manufacturing and processing of SIRCONTEC light concretes, Manufacturing processes for the foam concrete SIRCONTEC PBG 35 - 50.

Designing: The screed thickness is always designed by the authorized engineer specialized in statics regarding the purpose of usage and thus also the floor loading.
 It is possible to obtain on request at SIRCONTEC company further details concerning the levelling layer made of the foam concrete PBG 35 or PBG 50.

Validity: from 01.08.2010

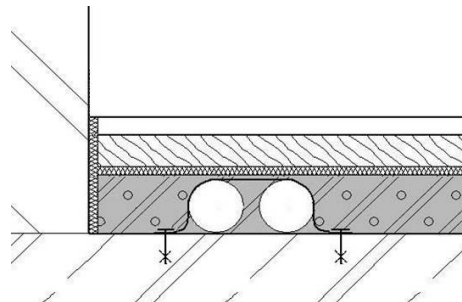
WOODEN BEARING LAYER FLOOR WITH SOUND INSULATION

Modification: PBG 40 or PBG 50

Data Sheet No. 214

Use: The floor is designed for use in public **indoor structures** located between two heated rooms. According to STN 73 0035 standard, it can be used for useful standard (random) load defined in Table 3 in groups 1 and 2, i.e. flats, hallways and entrance halls, hostel and hotel rooms, offices. This floor can be used for a group 3, if the load does not exceed 700 kg/m^3 of a burden weight acting on the floor via 4 legs with a floor size $15 \times 15 \text{ mm}$.

Layer arrangement:



- Wear layer
- OSB 3 structural slab
- Soundproof layer min 5 mm
- SIRCONTEC PBG 35-50 levelling layer
- installation tube - water or electricity distribution
- Bearing slab

Floor layers must be separated from walls with flexible material — EPS, foam PE, etc.

Layer description:

Wear layer: parquets, paving, carpet, PVC. If this layer is placed on a cement screed freely without fixing, it is recommended to apply dust-free paint on the cement screed.

OSB slab: structural load bearing slab for a humid environment (OSB 3 type), groove and tongue, e.g. thickness:

- Min 15 mm thick, if the load does not exceed 500 kg/m^3 of the object weight applied on the floor via 4 legs with a floor size $15 \times 15 \text{ mm}$.
- Min 18 mm thick, if the load does not exceed 700 kg/m^3 the object weight applied on the floor via 4 legs with a floor size $15 \times 15 \text{ mm}$.

Sound insulating layer: EKM 10xx, acoustic EPS, this layer may be excluded when there are no sound insulating requirements laid on the floor.

Levelling layer: foam concrete SIRCONTEC PBG 35 or 50, see DS No. 115.

Bearing slab: steel concrete, ceramic ceiling, wooden ceiling with sufficient loading capacity (static calculation is necessary)

Masonry: rendered with floated finish, line-type contact of the bearing slab and the masonry

Floor separation from the masonry: elastic moisture non-absorbent strip – foam PE, EPS, min. thickness of 5 mm.

Related standards:

STN 73 0035	Loading of building structures
STN 73 1201	Designing of concrete structures
STN EN ISO 717 –2	Acoustics—evaluation of sound insulation in structures and buildings—normative requirements on the step soundproofness of the horizontal separating structures in housing and public buildings

Realisation:

Wear layer: corresponding supplier's application instructions must be followed

OSB slabs: to be applied together with soundproof insulation acc. to the slab supplier's instructions

Soundproof insulating layer: to be applied immediately when ascendable strength of SIRCONTEC PBG 35- 50 foam concrete is achieved, corresponding SIRCONTEC production procedure must be followed.

SIRCONTEC PBG 35 - 50 foam concrete layer: General conditions for SIRCONTEC lightweight concrete production and processing, SIRCONTEC PBG 35 - PBG 50 foam concrete production procedures must be followed.

Design:

The thickness of the OSB slab is always designed by the authorized engineer specialized in statics regarding the purpose of usage and thus also the floor loading.

It is possible to obtain on request at SIRCONTEC company further details concerning the levelling layer made of the foam concrete PBG 35 or PBG 50.

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