3.1 General

The VarioComp board is a pure tube carrier and thermal conduction element - and should therefore be regarded as a floor covering and not as a component of the floor structure. Why? The necessary static support, thermal and impact sound insulation and protection against moisture diffusion must already be provided by the construction underneath the VarioComp board.

The following items must be coordinated between the architect, construction manager, installation technician and floor layer:

- Horizontal level line
- Floor structure with appropriate strength, necessary vapour retarders/barriers, necessary thermal insulation/impact sound insulation and expansion joints
- VarioComp filling compound to be applied by installer, floor layer or construction manager
- Floor covering, with heat sensors if required

1. DRY

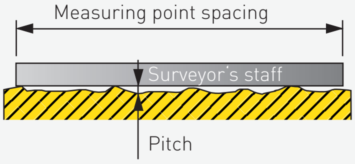
The substrate must be dry, dust and grease free. Maximum residual humidity of the subsurface (CM values):

- Untreated concrete: 3.0 %
- Cement screed: 2.0 %
- Calcium sulphate screed: 0.5 %

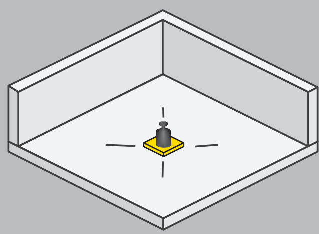
2. LEVEL

The required evenness is as follows (ÖNORM DIN 18202):

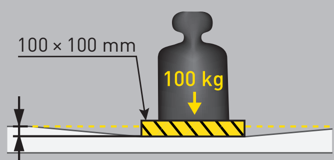
Measuring point spacing			
0.1 m	1 m	4 m	10 m
1 mm	3 mm	9 mm	12 mm
Maximim pitch			



3. LOAD-BEARING



Distance to the walls at least 250 mm



Maximum deformation V_m
with 100 kg on 100 × 100 mm.

The load-bearing capacity specified in the table below must be provided. If there are several concentrated loads, these must be at least 500 mm apart.
Caution: The sum of the concentrated loads must not exceed the maximum permissible floor load capacity. Particularly heavy objects (pianos, aquariums, bathtubs) must be given special consideration!

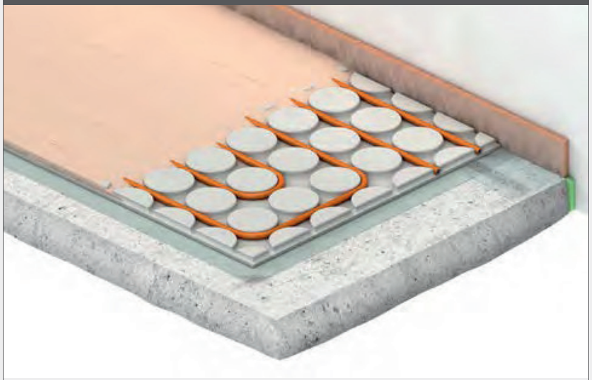
Room usage examples in accordance with ÖNORM EN 1991-1-1	Max. concentrated load Q_k	Max. service load q_k	Max. deformation V_m (with 100 kg on 100 × 100 mm)
Category A1: Floors of rooms in residential buildings and houses, wards and hospital rooms (without heavy diagnostic instruments), rooms in hotels and lodgings, kitchens, toilets and rooms with residential-type use in existing buildings **Category B1:** Office floors in existing buildings	2.0 kN	2.0 kN/m²	1.5 mm
Category B2: Office floors in office buildings **Category C1:** Floors in rooms with tables etc., e. g. classrooms in schools, cafés, restaurants, dining areas, reading rooms, reception rooms, wards and hospital rooms (with heavy diagnostic instruments)	3.0 kN	3.0 kN/m²	1.0 mm
Category C2: Floors in rooms with fixed seating, e. g. in churches, theatres, cinemas, conference rooms, lecture halls, meeting halls, waiting rooms, train station waiting rooms	4.0 kN	4.0 kN/m²	Consultation is necessary

VarioComp – Subsurface

(Extract from VBOOK8 7/2025 | Sheet 2/3)

VARIOTHERM

Screed / Bare slab



Screed:

- Test for evenness, and if necessary, even out using levelling compound.
- Test for dryness.

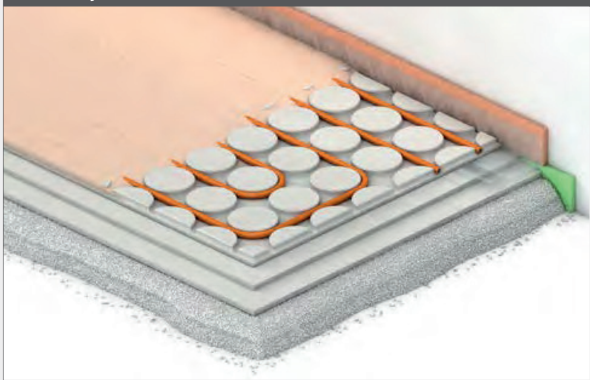
Bare slab:

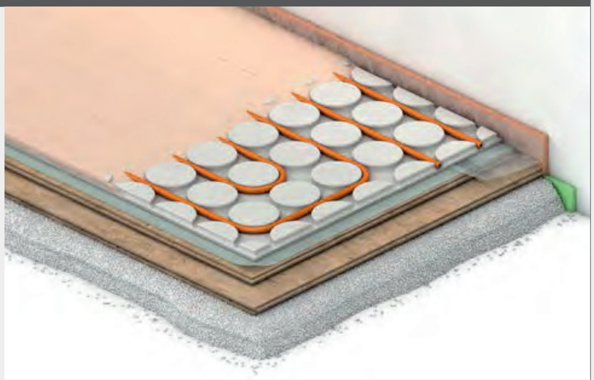
- Test for evenness, and if necessary, even out using levelling compound.
- Building sealant, if required.

Wooden beam ceiling

- Check sagging, surface evenness and load-bearing capacity (see e. g. max. deformation Vm, Chapter. 3.1); reinforce construction if required

Fill /Dry construction





Fill

- Loose fill (necessary compaction must be provided!)
- Bonded fill (oven dry density 350 kg/m³, compression strength 0.4–0.5 N/mm²)
- Trickle protection sheet, if required

Load distribution layer[1] needed! e.g.

- 20 mm dry screed element, processing according to manufacturer's instructions
- 2 × 15 mm OSB board, glued and screwed
- 2 × 19 mm chipboard (V100), glued and screwed

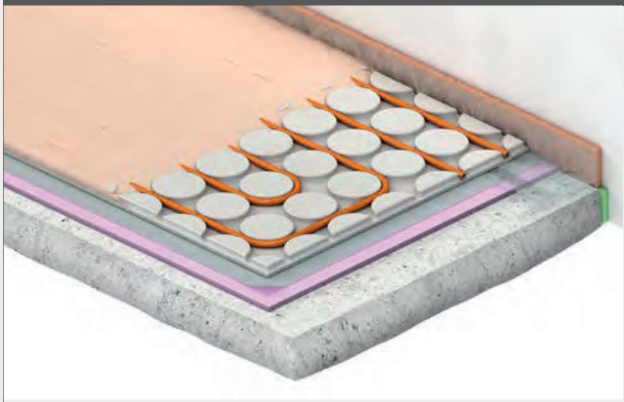
[1] The load distribution layers are given as examples. VarioComp boards, XPS and other insulation boards are not suitable as load distribution layers!

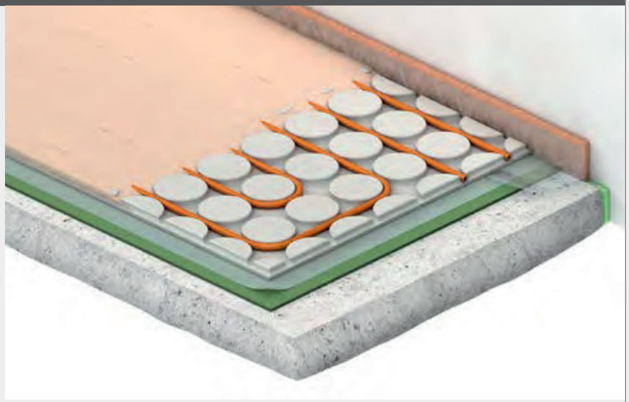
VarioComp – Subsurface

(Extract from VBOOK8 7/2025 | Sheet 3/3)

VARIOTHERM

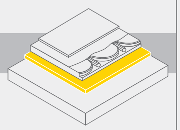
VarioComp boards on thermal/impact sound insulations up to 30 mm thickness





The VarioComp board can be laid directly on thermal/impact sound insulations up to an insulation thickness of 30 mm. The requirement is for a sufficiently high compressive strength of the underlay boards:

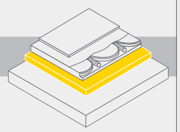
Insulation thickness max. 15 mm and compressive stress (at 10 % compression) ≥ 150 kPa (15 t/m²)



- 5 mm: Variotherm SILENT underlay board, 1 layer
- 10 mm: Variotherm SILENT underlay board, 2 layers (staggered) or
- 10 mm: Variotherm XPS underlay board, 1 layer
- 15 mm: Variotherm XPS+SILENT underlay boards (staggered)

<< For details see chapter 4.3

Insulation thickness max. 20 mm and compressive stress (at 10 % compression) ≥ 200 kPa (20 t/m²)

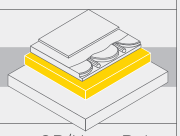


- Variotherm XPS underlay boards, 2 layers (staggered)

Additional product examples:

Ardex DS 40	Gutex Multiplex-top	PCI (BASF) Polysilent	Unifloor Jumpax CP/Heat-Pak
Austrotherm Universalplatte	Jackon Jackodur KF 300 Standard GL	PCI (BASF) Pecidur	Unifloor Heat-Foil
Austrotherm Uniplatte	Jackon Jackoboard	Styrodur 2800C	Unifloor Redupax/Redupax+
DOW Styrofoam LB-A/LBH-X/RTM-NC-X	DOW Floormate 200-A	Wedi building board	

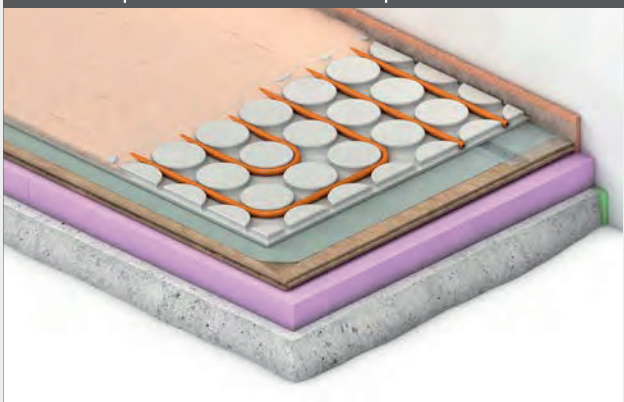
Insulation thickness max. 30 mm and compressive stress (at 10 % compression) ≥ 300 kPa (30 t/m²)



Product examples:

Austrotherm XPS Top 30	Jackon Jackoboard	PCI (BASF) Polysilent	Unifloor Jumpax CP/Heat-Pak
DOW Floormate 500-A	Jackon Jackodur KF 300 Standard GL	PCI (BASF) Pecidur	Wedi Bauplatte
DOW Styrofoam LB-A/LBH-X/RTM-NC-X	Kingspan GreenGuard GG300	Styrodur 3000 CS/SQ	Foamglas T4+

VarioComp boards on thermal/impact sound insulations[1] starting from > 30 mm thickness



For laying on thermal/impact sound insulations[1] starting from > 30 mm, a load distribution layer[2] is additionally needed! e.g.:

- 18 mm OSB board, tongue and groove bonded
- 19 mm chipboard (V100), tongue and groove bonded
- 25 mm dry screed element, processing according to manufacturer's instructions
- 2 × 15 mm OSB board, glued and screwed
- 2 × 19 mm chipboard (V100), glued and screwed

[1] The insulation below the load distribution layer must be sufficiently stable for walking (e. g. XPS), and must be approved for floor constructions by the manufacturer. See also max. deformation, chapter 3.1.

[2] The load distribution layers are given as examples. VarioComp boards, XPS and other insulation boards are not suitable as load distribution layers.