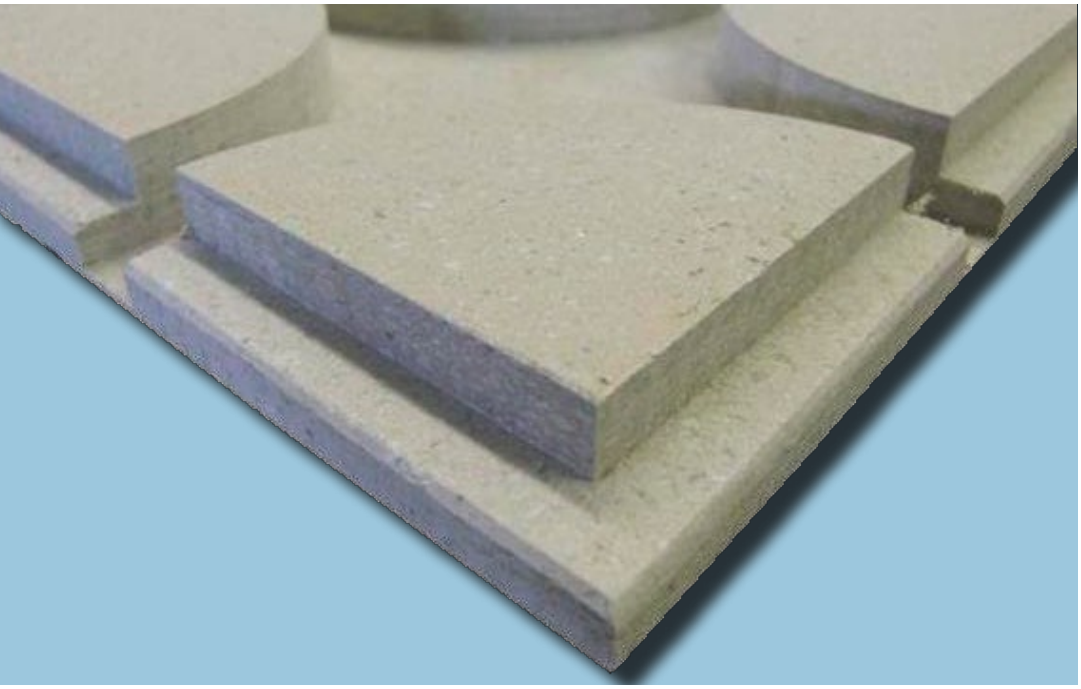


GIFAtec

TI Klima

Technical Information 08/2023

GIFAfloor Klima 25

Gypsum fibre element to accommodate underfloor heating pipes

Product description

GIFAfloor Klima 25 are pre-routed gypsum fibre membranes for the installation of underfloor heating. The elements can be laid as a prefabricated screed or in a second layer on GIFAfloor PRESTO.

Storage

GIFAfloor Klima 25 Elements must be stored flat, dry and protected from the weather.

Qualitity

The product is subject to continuous factory production control..

Properties and added value

- Non-combustible
- Suitable for indoor use according to AgBB-scheme (Eurofins certificate)
- Building biology recommended (IBR award certificate)
- High strength
- High load-bearing capacity
- High dimensional stability
- Easy to install and quickly walkable

GIFAfloor Klima 25

Gypsum fibre element to accommodate underfloor heating pipes

Notice of use

This document contains information that applies exclusively to the GIFAfloor Klima 25 elements produced in accordance with EN 15283-2.

Machining and further processing

GIFAfloor Klima 25 can be processed with standard machine tools and tools for wood-based material processing.

Product range

Description	Width mm	Length mm	Thickness mm	Packaging Unit Pcs/Pallet	Packaging Unit Weight [kg] / Pallet	Article number	EAN
GIFAfloor Klima 25 HK	600	600	25	70	ca. 1000	184146	4003982407061
GIFAfloor Klima 25 NP						170804	4003982295569
GIFAfloor Klima 25 RP						161545	4003982295545
		1200		25		161546	4003982295552

Material	Packaging Unit	Consumption	Article number	EAN
Wood Fibre Insulation Board WF	256 Pcs/Pallet	As required	82291	4003982216069
Screed Primer	10 kg-Bucket	Approx. 200 g/m^2	5355	4003982020116
Uniflott	25 kg Bag	Approx. 300 g/m² / Approx. 170 g/m heating pipe	3114	4003982019905
GIFAfloor Edge Insulatin Strip MW	100 Pcs/Box	Approx. 15 pieces per 18 m²	109147	4003982202628
	10 Pcs/Box	Approx. 15 pieces per 18 m²	756440	4003982550644
GIFAbond blue	1,2 kg-Bottle	Approx. 67 g/m^2 Approx. 18 m² per bottle	676976	4003982534910

Floor structures depending on the live loads

Possible structure underneath the base layer/underfloor heating			
Point load in kN	**Area load** in kN/m²	**Insulation layer**	**Levelling layer**
1	**2**	1 x wood fibre insulation board WF 10 mm / Fasoperl A8 / painter's fleece	Heavy fill ≤ 50 mm
1	**2**	1 x wood fibre insulation board WF 10 mm / Fasoperl A8 / painter's fleece	Heavy fill ≤ 100 mm
1	**2**	2 x wood fibre insulation board WF 10 mm / Fasoperl A8 / painter's fleece	Heavy fill ≤ 50 mm
1	**2**	2 x wood fibre insulation board WF 10 mm / Fasoperl A8 / painter's fleece	Heavy fill ≤ 100 mm

Note	The load-bearing capacity of the raw floor must be guaranteed at every point. For levelling minor unevenness of the unfinished floor, use levelling compounds on a suitable primer. Constructions for higher working loads on request.

Basics

Use categories and working loads based on DIN EN 1991-1-1/NA:2010-12

Use or areas of application Examples according to DIN EN 1991-1-1/NA:2010-12 Row	Use and examples	Area load in kN/m²	Point load in kN
0	Accessible attic, not suitable for residential purposes, (accessible attic space up to 1.80 m clear height)	1	1
1	Rooms and corridors in residential buildings, bed rooms in hospitals, hotel rooms including associated kitchens and bathrooms	2	1
2	Corridors in office buildings, office areas, medical practices without heavy equipment, ward rooms, recreation rooms including corridors. Areas of sales rooms up to 50 m² floor space in residential, office and similar buildings	2	2
3	Office areas with higher load	3	2
4	Corridors and kitchens in hospitals, hotels, old people's homes, corridors in boarding schools, etc.; treatment rooms in hospitals, including operating theatres without heavy equipment; cellar rooms in residential buildings	3	3
5	Areas with tables; e.g. day nurseries, crèches, school rooms, cafés, restaurants, dining rooms, reading rooms, recepti-on rooms, staff rooms (allocation of working loads deviating from DIN EN 1991-1-1/NA:2010-12)	4	3
6	Areas with fixed seating, e.g. areas in churches, theatres or cinemas, congress halls, lecture halls, waiting rooms	4	4
7	Office areas, work areas and corridors with heavy equipment; freely accessible areas; e.g. museum areas, exhibition areas, entrance areas in public buildings, hotels, as well as the corridors belonging to lines 5 + 6	5	4
7.1	Areas for large gatherings of people; e.g. in buildings such as concert halls, entrance areas Areas in retail shops and department stores Areas in factories and workshops with light operations (stationary loads)	5	5

Note	Knauf systems may only be used for the applications specified in the Knauf documents. If third-party products or components are used, they must be recommended or approved by Knauf. The correct application of the products/systems requires proper transport, storage, installation, assembly and maintenance.

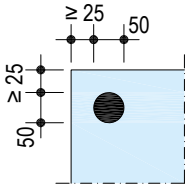
Determination of the permissible working loads

The basis for the load capacities stated on page 2 are real load tests according to the following test regulations:

Single load (point load)

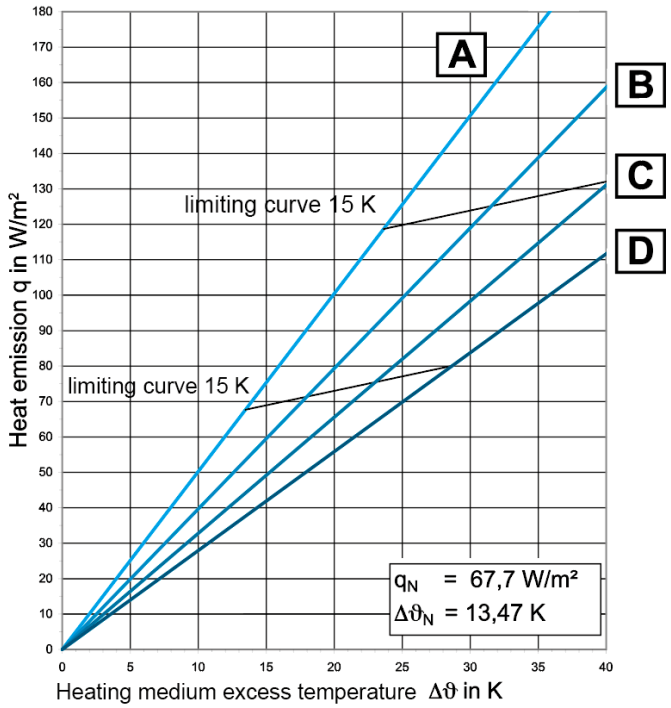
The information on the permissible concentrated loads is based on:

- Load area Ø 50 mm
- Distance to edge ≥ 25 mm
- Deflectio ≤ 3 mm

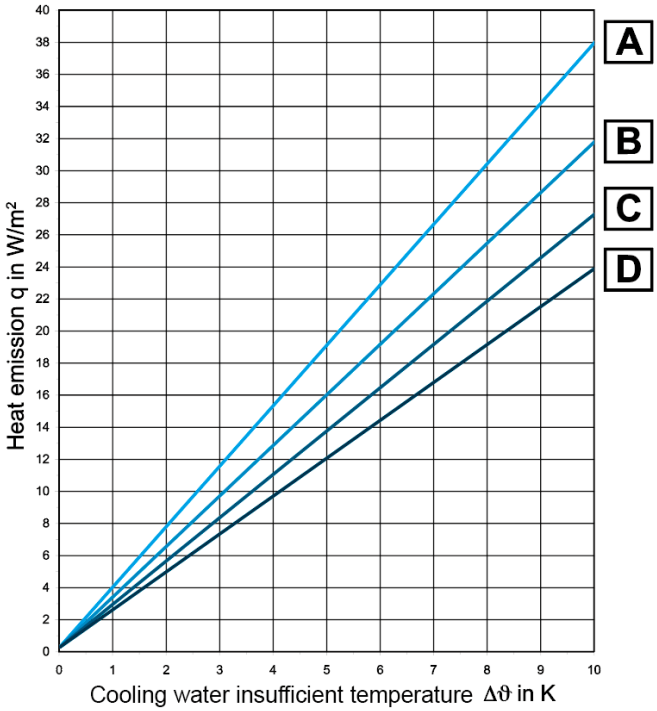


Heat flux densities of the GIFAfloor Klima 25

Heat output of the underfloor heating



Cooling capacity of the underfloor heating



A: $R_{\lambda,B}$ = 0,00 (without floor finishing) B: $R_{\lambda,B}$ = 0.05 (with e.g. porcelain stoneware) C: $R_{\lambda,B}$ = 0.10 (with e.g. laminate flooring) D: $R_{\lambda,B}$ = 0.15 (with e.g. carpet) The higher the thermal resistance $R_{\lambda,B}$ of a covering laid on the GIFAfloor, the lower the heat flux density *q*. The indicated values are based on PE-X 14x2 mm pipes with a grid of 125 mm. When cooling components, ensure that there is no condensation.

Hygrothermal characteristic values

Description	Value	Unit
Calculated value of the thermal conductivity λ_R	0.44	W/(mK)
For the dimensioning of underfloor heating systems λ_{10}	0.30	W/(mK)
Water vapour diffusion resistance coefficient μ	30 / 50	–
Specific heat capacity *c*	> 1000	J/(kgK)
Coefficient of thermal expansion α	$12.9*10^{-6}$	1/K
Length change with temperature change	≤ 0.02	mm/(mK)
Length change with change in rel. humidity by 30 % at 20 °C	≤ 0.6	mm/m
Hygrothermal installation conditions (stationary)	+10 ° bis +35 °C	Approx. 45-75% r.F.
Hygrothermal conditions of use (stationary)	-10 ° bis +35 °C	Approx. 35-75% r.F.
Surface water absorption capacity according to EN 20535 (Cobb-Test)	< 300	g/m²

Height compensation of the unfinished floor

Wooden subfloors

- In case of minor unevenness, worn out old planking and direct laying of the prefabricated screed without insulation layer, use corrugated cardboard or felt board as levelling.
- Wood substrates can be filled with N 410 Flex. Close joints and knotholes beforehand. Priming with Knauf Spezialgrund is required.

Larger unevenness

- Install Knauf Heavy Fill according to detail sheet F475.en, fill height 15 to 150 mm. To facilitate work, cover the dry fill with a Knauf Wood Fibre Insulation Board WF; this covering is required under mineral wool insulation layers or underfloor heating, recommended under EPS insulation layers. On wooden beam ceilings, trickle protection with Knauf Schrenzlage is required.Do not use dry fill on board stack ceilings. Do not use dry fill in rooms with high dynamic loads (e.g. washing machines, spin dryers).
- EPO-Leicht is a fast-setting, water-free levelling mortar that can be walked on after 24 hours for layer thicknesses of 15 to 800 mm with a weight per unit area of approx. 2 kg/m². EPO-Leicht is used for levelling uneven unfinished floors, for filling cavities and for height levelling, especially with high dynamic loads (e.g. washing machines, spin dryers). EPO-Leicht can also be used underneath any necessary waterproofing for concrete slabs.

Substrate

- Check the subfloor and any levelling layer (unevenness, height difference, load-bearing capacity).
- In the case of wooden beam ceilings, pay special attention to a load-bearing substrate made of floorboards or wood-based panels (deflection max. l/300). Do not lay prefabricated screed directly on wooden joists (only possible with Knauf GIFAfloor LBS F191/F192 system). Laying over a false floor and levelling with fill or EPO-Licht only if sufficient load-bearing capacity of the false floor is guaranteed.
- Insulation layers: For proof of suitability, the technical specifications of the respective manufacturer apply.

For direct installation of GIFAfloor Klima 25 elements without insulation layer, lay on the level or smoothed raw floor or on EPO-Leicht painter's fleece (foil side up) to avoid clicking/rattling noises between GIFAfloor Klima 25 and solid ceiling.

Assembly note

Board joints

If necessary, fill board joints with Uniflott. For fire protection from above always fill joints with Uniflott.

Fill the heating pipes:

Fill Knauf GIFAfloor Klima 25 elements exclusively with Knauf Uniflott gypsum filler (K467.de) according to manufacturer's instructions.

Repairs

Close smaller holes and break-outs with Uniflott. Larger holes and break-outs in GIFAfloor Klima 25 can be repaired with Knauf Stretto. For this purpose, the screed flanks are pre-coated with FE-Imprägnierung.
Then Stretto is applied fresh in fresh.

Moisture protection in damp rooms

For surfaces exposed to water in domestic bathrooms and kitchens, seal the entire surface with Knauf Flächendicht, wall connections with Knauf Flächendichtband.

Chair castor resistance

Knauf GIFAfloor Klima 25 is resistant to castor wheels without additional measures.

Priming

Prime GIFAfloor Klima 25 with Knauf Screed Primer (diluted 1:1 with water) or Knauf Quick Primer (undiluted) before laying the covering and before full-surface levelling. When laying parquet, apply a system-related primer to the adhesive.

Elastic thin coverings

For elastic thin coverings (e.g. PVC, linoleum), apply GIFAfloor Klima 25 over the entire surface, at least 2 mm thick with N 410. Fill board joints beforehand with Uniflott and then prime the entire surface with Knauf screed primer (1:1) or Knauf Schnellgrund (undiluted).

Finished parquet or mosaic parquet

Multi-layer ready-made parquet or mosaic parquet (mosaic cubes) are suitable for full-surface bonding on GIFAfloor Klima 25. Recommendations from different adhesive manufacturers, which can also be used to lay other types of parquet, are available after consultation with Knauf.
In principle, other types of parquet can also be used on a separating layer or with bracket installation.
If Knauf GIFAfloor Klima 25 is filled with N 410 before laying parquet, proceed as described under "Elastic thin coverings".

Ceramic tiles and natural stone

Use flexible adhesive systems. The processing instructions of the adhesive The processing instructions of the adhesive system manufacturer for the covering formats used, in particular the specified minimum adhesive bed thicknesses, must be observed; if necessary, associated fabrics or fleeces must be installed. Lay fine porcelain stoneware and natural stone using the buttering-floating method, pushing the tiles sideways into the adhesive bed and pressing them down. Lay floor tiles with an edge length of max. 33 cm in a thin bed.
Large format floor tiles and natural stone can be laid on Knauf GIFAfloor Klima 25 up to 120 cm edge length. For installation recommendations of different adhesive manufacturers, please contact Knauf.

GIFAfloor Klima 25

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Building biology

Knauf GIFAfloor has been regularly tested by the IBR (Institut für Baubiologie Rosenheim) since 2003 and has since then been uninterruptedly certified by the Building Biology Recommendation Certificate. Knauf GIFAfloor meets the requirements of the French VOC class A+. Eurofins Product Testing A/S, Galten (DK) certifies that GIFAfloor complies with the required values for VOC emissions in Europe. GIFAfloor meets the requirements of Indoor Air Comfort Gold.

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