EN / FR / DE

STAENIS

CIRCOFLOOR
circular dry floor system

Height adjustable: ± 9–22 cm + cladding



CIRCOFLOOR - CIRCULAR DRY FLOOR SYSTEM

For years, Staenis has been developing innovative flooring systems that make building and renovating simpler, more efficient, and more sustainable. With CircoFloor, we bring that experience together in **one complete dry flooring system.**
for new construction and renovation.

CircoFloor offers a stable and perfectly flat floor structure, without wet installation or long drying times.
The system combines a lightweight, adjustable structure with performance in terms of **acoustics, insulation, and load-bearing capacity** that can compete with traditional screed floors.

Thanks to its dry and modular construction, CircoFloor is flexible in use, easily adaptable, and ready for circular construction. This creates a flooring solution that works not only today but also in the long term.
remains relevant.

Developed with an eye on the future

The construction sector is evolving towards stricter energy requirements, lower environmental impact, and greater flexibility in renovation. CircoFloor responds to this with a system that is demountable and reusable, and that leaves room for technical systems, insulation, and future modifications.

What sets CircoFloor apart

- Dry and immediately walkable
- Lightweight with very high load capacity
- Height adjustable (± 9–22 cm + cladding)
- Excellent acoustic and thermal performance
- Fully demountable and reusable

Dry floor system without waiting times

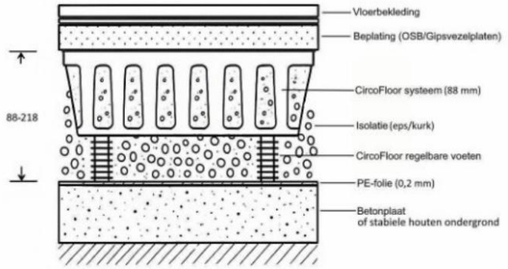
Immediately walkable and suitable for rapid execution.

Technical alternative to screed & insulation

High load capacity, stability, and reproducible performance.

Designed for circular construction

Dismountable, reusable, and future-oriented.



ACOUSTICS

Controlled damping by decoupling

Acoustic comfort is an essential focus in contemporary construction and renovation projects, especially in multi-family dwellings and lightweight structures.

CircoFloor is designed to limit impact sound and vibrations through a controlled, mechanically decoupled floor structure.

How CircoFloor controls acoustics

Decoupled load-bearing structure

The floor structure is mechanically isolated from the underlying structure. As a result, direct transfer is greatly reduced of contact noise and vibrations.

Dampened support principle

The adjustment screws and support points function as controlled transfer zones, preventing vibrations from being transmitted unfiltered to the load-bearing floor.

Alignment per configuration

The acoustic performance is determined by the chosen structure, support point distribution, and finish, allowing the system to be specifically tailored to the project requirements.

Acoustic performance was evaluated in various configurations, with measurable differences depending on construction and finish.

INSULATION

"Thermal performance due to build-up height"

Thermal insulation is a determining factor in energy-efficient building and renovation.

CircoFloor has been developed to enable maximum insulation performance by creating extra build-up height and utilizing it efficiently.

How CircoFloor optimizes thermal insulation

Extra insulation space

The elimination of the traditional screed creates extra space in the floor structure, allowing more insulation to be integrated within the same total height.

Free choice of materials

CircoFloor allows the application of various insulation materials, tailored to the desired thermal performance and project requirements.

Continuous insulation surface

Thanks to the modular, dry construction, the insulation material extends continuously to the floor-wall connection, where CircoFloor does not touch the walls, thus avoiding thermal bridges.

Thermal performance depends on insulation thickness and material, in accordance with common building physics principles.

ENVIRONMENTAL IMPACT • • • • • • • • • Design choices with long-term impact • • • • • • • •

The environmental impact of floor structures is becoming increasingly important in design and execution choices.

CircoFloor has been developed according to the principles of circular construction, with a focus on reusability, flexibility, and avoiding permanent materials.

Design choices with lasting impact

Reusability across life cycles

CircoFloor consists of dry, mechanically connected components that can be easily disassembled and reused without material loss.

Fewer waste streams

By avoiding screed, cement-based leveling compounds, and sprayed PUR, waste, emissions, and irreversible structures are limited.

Flexibility during renovation and adaptation

The modular construction allows floors to be adapted or reconfigured without complete demolition, which extends the lifespan of buildings.

The circular structure aligns with current guidelines on sustainable and adaptive building.








VEELZIJDIGE VLOEROPBOUWEN

	Zonder beplating	OSB Enkel	OSB Dubbel
Geschikte vloerafwerkingen			
Staenis click tiles	✓	✓	✓
Multilayer parquet	✗	✓	✓
DryTile	✗	✓	✓
Laminate	✗	✓	✓
Click vinyl/PVC	✗	✓	✓
Carpet	✗	✓	✓
Glued cork	✗	✗	✓
Flexible floor covering	✗	✗	✗
Ceramic tiles	✗	✗	✗
Natural stone	✗	✗	✗
Load capacity	+	++	++
Acoustic comfort	+	++	++
Span *	-	+++	+++

* Bij OSB-beplating mag CircoFloor onderbroken worden: 18 mm OSB overspant probleemloos tot 40 cm.

	Fermacell 2E11 / 2E22	Fermacell 2E11 / 2E22 + tax-spreading layer	Fermacell Therm25™
Suitable floor finishes			
Staenis click tiles	✓	✓	✓
Multilayer parquet	✓	✓	✓
DryTile	✓	✓	✓
Laminate	✓	✓	✓
Click vinyl/PVC	✓	✓	✓
Carpet	✓	✓	✓
Glued cork	✓	✓	✓
Flexible floor covering	✓	✓	✓
Ceramic tiles	✓	✓	✓
Natural stone	✓	✓	✓
Load capacity	+++	+++	+++
Acoustic comfort	+++	+++	+++
Span *	-	-	-

* Fermacell vereist volledige ondersteuning: doorlopend CircoFloor, met extra OSB laag of aangevuld met egalisatiekorrels.

SYSTEEMOPBOUW & HOOGTES

Structuurplaten

Afmeting: **39 × 39 cm**

Structuurhoogte: **7,8 cm**

In elkaar geklikte structuren: **8,8 cm**

Instelbare hoogte

Minimale systeemhoogte: **8,8 cm**

Maximale systeemhoogte: **21,8 cm**

Regelbaar via instelschroeven

Nutsvoorzieningen

Ideaal te plaatsen boven leidingen en technieken

Lokale uitsparingen mogelijk door aangepaste beplating

Flexibele integratie zonder structurele ingrepen

BELASTING & VERANKERING

Verankering

Bevestiging via kozijnschroeven

Maximale uittrekkracht per schroef: **145 kg**

Zorgt voor fixatie van het systeem aan de ondergrond

Draagkracht structuurplaten

Draagkracht per element: **125 kg**

Aantal torens per m²: **144**

Totale draagkracht per m²: **18 ton**

Inclusief boven- en onderstructuur: **36 ton/m²**

Draagkracht instelschroeven

Draagkracht per instelschroef: **200 kg (max 260 kg)**

Aantal per m²: **7** of **14**

Totale veilige draagkracht per m²: **1,4 of 2,8 ton**

De opgegeven draagkrachtwaarden gelden bij plaatsing op een vlakke en stabiele ondergrond, conform de plaatsingsvoorschriften.

SCAN MIJ
All specifications

MANUAL

Before you start

- Assemble as much as possible on a workbench. That works faster and prevents back strain.
- Check the substrate, build-up height, techniques, and chosen top plate before you begin.
- Install 0.2 mm PE film in case of residual moisture, rising damp, or flooring on solid ground without a reliable damp-proof course.
- Use a power screwdriver with a torque limiter or slip clutch. Adjust the final millimeters by hand.

Words we use

These parts reappear in the installation steps. Use them as a reference during assembly.

White textured board

Forms the top and bottom structure of the CircoFloor system.

Black adjustment screw

Adjusts the height and pulls the white structural panels firmly together.

Green fixing screw

Secures the top structural plate to the underlying structure.

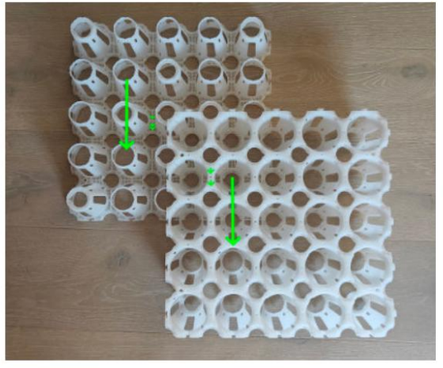
Mushroom

Support point with four bottom plates, a top plate, and a black adjustment screw.

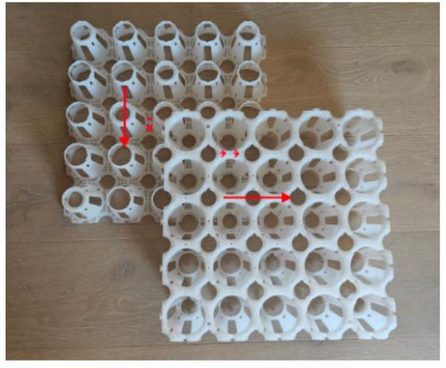
Check at each black adjustment screw whether the white structural plates effectively interlock. Loosening and trying again is better than forcing it.

DIRECTION OF INSTALLATION

Place all white textured plates in the same direction. Look at the arrows on the top and the fins or ribs on the bottom. This ensures the threaded openings remain properly aligned.



Good: same direction.

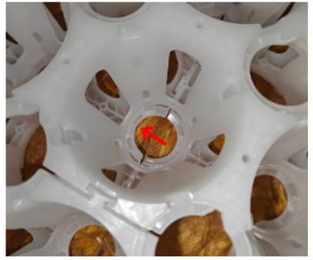


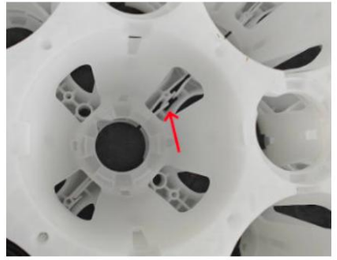
Wrong: rotated a quarter turn.

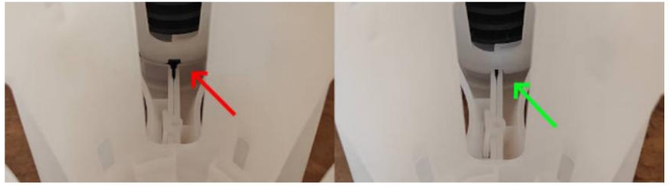
Does a plate not close properly or is the screw difficult to turn? Check the direction first. Do not force the screw.

CLICK TOGETHER

The strength is only achieved when the white structural plates are fully pulled together. A black adjustment screw must not secure the plates in a half-open position.







Is the panel not clicking fully into place? Gently lift one side, slide the structural panels together correctly, and press them until the click connection locks or slides into place.

First, bring the white textured panels as close together as possible by hand. Use the double threaded holes to push the panels towards each other with your fingers while screwing.

ADJUSTMENT SCREWS

Tips

1. Let the adjustment screw pull the upper and lower structures towards each other.
2. Start slightly too low and then turn it up to the correct height. This way, the system remains under tension and you can adjust it in a controlled manner.
3. Install the green fixing screws as soon as possible after inspection. Do not walk on parts that are not yet secured.
4. Adjust the height immediately for each zone you install. Do not wait to adjust the height until everything is installed.
5. Provide 7 black adjustment screws per m² as standard. For tile construction, high point loads, or when the chosen top plate requires extra support, increase this to 14 black adjustment screws per m².

Screwdriver

- Always use the torque limiter or slip clutch so that the head of the black or green screw is not damaged.
- A ground-down flathead screwdriver can serve as a bit. Preferably perform the final fine adjustment with a hand screwdriver.
- Is the screw stiff or does the plate stay open? Loosen it, check the direction, and start again.

Use the short adjustment screw for low build-ups and the long adjustment screw for higher build-ups. Check the adjustment range of the floor build-up beforehand.

Only fill the system after the white structural plates are correctly assembled, the black adjustment screws are at the correct height, and the green fixing screws have been installed.

STEP BY STEP: ON THE TABLE

1

Start on a workbench

Assemble as much as possible on the table: this works faster, more accurately, and prevents back strain. Lay out the first white structure board in the direction in which you will continue building. Preferably with the arrows pointing in your working direction.

2

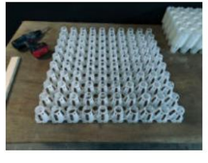
Click the second plate into place

Click the second white textured plate sideways into the first. Keep the arrows and fins in the same direction and allow the click connection to close completely.

3

Check arrows and fins

The arrows at the top and the fins at the bottom must follow the same direction. If a propeller turns with difficulty later, check this point first.

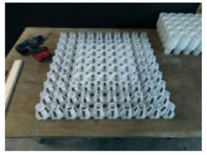


4

Complete the substructure

Place the fourth white textured plate and check that the double threaded holes align properly. Do not force a plate rotated a quarter turn.

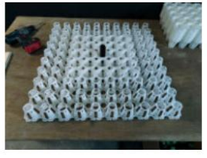
MAKING A MUSHROOM



5

Place the top plate upside down

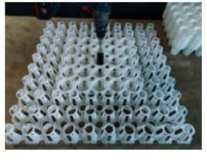
Place the top white textured plate upside down on the four bottom plates, but again in the same direction. This forms a mushroom.



6 6

Pull the plates together

Tighten the black adjustment screw in the center. The thread must pull the top and bottom white structure plates towards each other.



7 7

Use the torque limiter

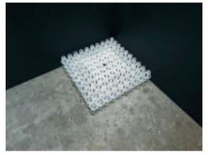
Use a slip clutch or torque limiter to prevent damage to the screw head. Adjust the final millimeters later with a hand screwdriver.

8

Set almost correctly

It is better to work directly at the correct height or just slightly too low. Fine-tuning upwards is easier than turning down an entire field afterwards.

PLACE ON THE SUBSTRATE



9

Put the first part in place

Place the assembled part (mushroom) on a stable, clean surface. Check the technical systems, pipes, and the chosen top plate beforehand.

10

Check foil or vapor barrier

Lay PE film or a vapor barrier before continuing construction if residual moisture, solid ground, or a cold subsoil requires it.
Avoid two vapor-proof layers without inspection. More information can be found on page 15.

11

Make a second mushroom

Assemble multiple mushrooms in the same direction. Lift them gently so that the white structure plates do not unclip again.

12

Use a reference height

Take a fixed reference point or a ruler with a pencil line. Set the first black adjustment screws as close as possible to the final height.

CONNECT ROWS

13

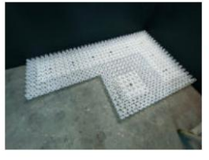
Connect laterally first

First, connect the mushrooms laterally across the 39 cm module. Only then fill in the central top plate between the four mushrooms.

14

Screw through converging corners

Turn the black adjustment screw through the meeting corners. The threads must allow the top and bottom plates to interlock.



15

Push the plates together

Use the double threaded holes to pull the plates closer with your fingers. A temporary adjustment screw next to the hole can provide additional downward pressure.

16

Continue building in rows

Work row by row in the same direction. As soon as an L-shape forms, the whole structure becomes more stable and you can build on it faster.

CORRECT GUARANTEE

17 Click systems completely closed

If a side click system remains open, release it and click it again. Screwing it tight while the plates are open creates a weak point.

18 The top and bottom plates must hook.

Check at each black adjustment screw whether the white structural plates interlock effectively. A gap of a few millimeters is unacceptable.

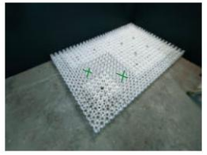
19 Further develop the surface

Build the system according to the shape of the room. Keep zones with pipes, cables, or obstacles free until you can select the correct support.

20 Connect pieces in advance if necessary.

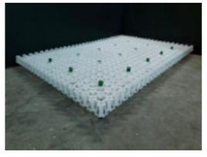
You can pre-connect multiple parts for faster installation. Always recheck the direction, height, and click connection when laying.

GREEN LOCKING SCREWS



21 Place top plates and fix

First place the side top plates and then the central top plates. Tighten them with the black adjustment screws that lock the plates.



22 Install the green fixing screws as soon as possible

Insert the green fixing screws as soon as the direction, alignment, and height are correct. This prevents the top plates from unclicking while being walked on.

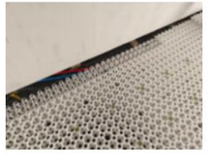
23 Do not walk on unsecured parts

Avoid tolls on zones that are not yet secured with green measures. Prefer walking on controlled, closed, and secured areas.
zones.

24 Cut pieces to size slowly

Use a saw or grinding disc at a low speed so that the plastic does not melt. Also recheck the direction on fittings.

EDGES AND FASTENING

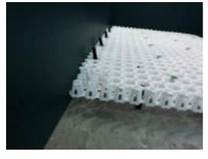


25 Finish edges with fitting pieces

Use cut-to-size pieces at edges and corners. Ensure that the top plate receives sufficient support everywhere.
In acoustic constructions, the top plate must not fit tightly against walls or fixed building components.
If necessary, use an edge strip and avoid sound bridges at the edges.

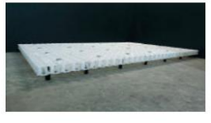
26 Direction remains important

Even small edge pieces must be aligned in the same direction with arrows and fins. Otherwise, threaded openings will remain poorly aligned.



27 Extra support at the wall

Position black adjustment screws close to walls, edges, and obstacles. Cantilevers are only supported when the top plate can run continuously in a controlled manner.



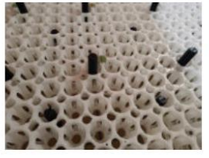
28 Screw in the remaining green screws

Secure the top plates where necessary with green fixing screws. Do not overtighten: tight is tight.

EXTRA SUPPORT AND FLATNESS

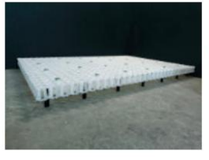
29 Anchor where necessary

Frame screws can provide extra fixation for the system in the subfloor. Do not pull the structure downwards; as soon as the screw grips, it is secured. Frame screws are not mandatory for a floating floor finish, but they can help hold the system better in place.
For glued multi-layer parquet, install at least 4 frame screws per m^2.



30 Extra adjustment screws for tiles

For tile construction or high point loads, limit deflection with additional black adjustment screws next to the green positions. Follow the selected top plate.



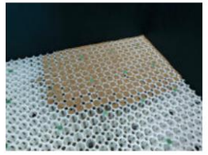
31 Check flatness and firmness

Check the entire surface, all joints, and the edges before filling. Loosening and adjusting is still simple at this stage.

32 Fill only after verification

Only fill when direction, height, green locking, and pipes have been checked. A small correction now prevents problems under the finished floor.

APPLY INSULATION



33

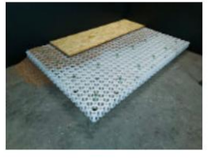
Distribute the insulation beads

Use a brush or slat to distribute the insulation beads until the system and the spaces underneath are completely filled.

34

Press light

Press the loose insulation down evenly with a loose white textured board. Do not tamp hard; the filling must fit together evenly.



35

Cladding according to construction

Next, install OSB, Fermacell, Knauf Brio, or a dry underfloor heating board according to the chosen floor structure and technical data sheet.

36

Screw OSB onto flat zones

Use wood screws with full thread. Screw on the flat areas approximately every 40 cm and at least 13 screws per m².

MOLD, TUBES AND FINISHING

37

Determine safe screw positions

Use the white structural plate or CircoFloor screw template to see where you can safely screw. Avoid areas with pipes or insufficient support.

38

Click the plastic mold in

The plastic screw template clicks into the white textured plates and quickly shows the correct zones for wood screws.

39

Leave pipes free

A black adjustment screw must never rest on a pipe, cable, or duct. Move them to another hole or place supports on the left and right.

40

Bridge obstacles with support

If a pipe is positioned too high, treat it as an obstacle. Allow the top plate to bridge the gap in a controlled manner and add extra adjustment screws next to the obstacle.

PIPES AND OBSTACLES

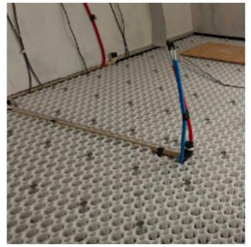
Never place a black adjustment screw directly on a pipe or tube. The adjustment screws must always rest on the subfloor, next to the pipe.

Is the pipe positioned too high?

If CircoFloor cannot be installed neatly over the pipe, treat that zone as a break in the floor.

- Place CircoFloor right up against the pipe zone.
- Install CircoFloor on the other side again.
- Bridge the pipe zone with a sturdy OSB board.
- Preferably use 22 mm OSB for this.
- Place additional adjustment screws next to the piping zone for sufficient support.
- Allow the top plate to span a maximum of 39 cm. Only with suitable OSB and additional support can this be slightly larger locally.

Please note: bridging with Fermacell or gypsum fiber board is not suitable. Use OSB for this purpose.



For larger spans or deviating loads, always check the technical data sheet of the selected top plate.

EDGES AND OVERHANGING

Sometimes CircoFloor cannot be placed fully against the wall or under an obstacle. The top plate may only overhang when it ends on a sturdy edge support.

Principle

- Let the CircoFloor system stop slightly before the overhang.
- Place a sturdy support strip or edge support against the wall or obstacle.
- Let the OSB or gypsum fiber board extend across CircoFloor up to the batten.
- Attach the top plate according to the plate manufacturer's instructions.
- Be careful with acoustic floors: a hard edge connection can transmit flanking sound.

FILM AND VAPOR BARRIER FOR CIRCOFLOOR

The foil is not always in the same place. First, distinguish between moisture from below and condensation caused by warm indoor air.
If in doubt, use a dew point calculation or have the floor structure checked from a building physics perspective.

Warm surface / heated space underneath

Normally, a vapor barrier is not required to prevent condensation. A foil is only necessary if the floor finish or subfloor specifically requires it.

Structure: floor finish ÿ optional subfloor ÿ OSB/Fermacell ÿ CircoFloor ÿ existing load-bearing floor

Damp concrete slab or floor on solid ground

Place a PE film on the concrete slab, underneath CircoFloor. Allow the film to overlap, tape the seams, and fold them up at the edges.

Structure: floor finish ÿ OSB/Fermacell ÿ CircoFloor ÿ PE foil against rising damp ÿ concrete slab

Cold space under the floor

For a basement, crawl space, garage, or outdoors, place the vapor barrier on the warm side of the insulation.

With OSB: vapor barrier on top of the OSB, under the floor finish or subfloor. Not between CircoFloor and OSB, because it would be pierced when screwing.

With Fermacell: vapor barrier under the Fermacell, so on top of CircoFloor and the insulating filling.

Cold and damp surface

In that case, two layers may be necessary: a PE film at the bottom to prevent rising damp and a vapor barrier at the top to prevent condensation.

Please note: do not simply completely seal a floor structure with two foils. If in doubt, have this checked from a building physics perspective.

PLATING AND FINAL INSPECTION

OSB, Fermacell or underfloor heating

- Screw OSB boards onto the flat parts of the system. Use the black screw template for the screw positions.
- Place 3 screws across the width of the OSB board and repeat every approx. 40 cm. Count on at least 13 wood screws per m².
- For glued multilayer parquet: anchor CircoFloor to the subfloor with at least 4 frame screws per m² and fasten the OSB 3 or OSB 4 sheathing with at least 13 wood screws per m².
- For Fermacell, Knauf Brio, and underfloor heating, always follow the manufacturer's technical data sheet.

Before delivery

- Check the entire surface for loose or open connections.
- Check height, flatness, and support along edges.
- Fill only after verification and securing of the system.

CIRCOFLOOR DROGE VLOERVERWARMINGSSYSTEMEN

CircoFloor vormt een volledig droge, regelbare vloeropbouw die compatibel is met verschillende vloerverwarmingssystemen.

Afhankelijk van de projectvereisten kan gekozen worden voor een droog vloerverwarmingssysteem of voor een systeem waarbij de verwarming wordt afgewerkt met een egalisatielaag, zonder dat de basisopbouw van CircoFloor zijn droge karakter verliest.

Het CircoFloor-systeem is compatibel met verschillende droge vloerverwarmingssystemen. Afhankelijk van de gekozen opbouw, isolatiedikte en gebouwsituatie kan dit bijdragen aan een lagere energievraag en een efficiënte warmteafgifte.

Hoe kies je het juiste systeem?

Vloerverwarming met droge afwerkingsplaten

- Volledig droge plaatsing
- Geen wachttijden
- Direct beloopbaar
- Ideaal voor renovatie en snelle uitvoering

Vloerverwarming met egalisatielaag als afwerking

- Lage opbouwhoogte
- Snelle en gelijkmatige warmteafgifte
- Vlakke ondergrond voor specifieke vloerafwerkingen

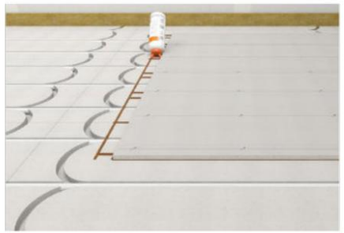
Uniwarm

Principle

Gypsum fiber board with pre-formed grooves for underfloor heating pipes, finished with a dry cover plate.

Features

Completely dry installation
Stable and even structure
Suitable for renovation and fast execution



Fermacell Therm25™

Principle

Gypsum fiber floor board with integrated pipe guides and dry top layer for a robust floor construction.

Features

Dry and load-bearing construction
Even heat distribution
Suitable for higher technical requirements

WARP System

Principle

Underfloor heating pipes installed on CircoFloor and finished with a mineral leveling layer.

Features

Flat surface for finishing
Low build height
Rapid heat dissipation

SCAN MIJ
Meer informatie

OUR CALCULATOR TOOL

Staenis offers a calculator tool to quickly and accurately calculate the required material quantities.
to be calculated per floor structure.

The tool is compatible with the Staenis screed grid, dry floor grid, leveling grid, and CircoFloor, and supports proper preparation by efficiently aligning material consumption with the chosen system and the site situation.

WEBSHOP

Discover an extensive range of products and materials for your floor construction projects, conveniently gathered under one roof.

Order a trial – Test the installation and comfort with a 2 m² trial set. Ideal for experiencing the setup in your specific situation.

CircoFloor per 2 m² - met korte schroeven (8,8-

CircoFloor per 12 m² - met korte schroeven (8,8-

CircoFloor per pallet - 48 m² - met korte schroeven

Kozijnschroeven 100 mm

SCAN ME
Go to the Calculator Tool

SCAN ME
To the Webshop

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→ Also check out our YouTube channel for the installation of your specific floor structure.

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