

Piping systems

TECEfloor – UNDERFLOOR HEATING FOR PROFESSIONALS





TECE

“A wide range of components often means a wide range of different manufacturing tolerances. Parts that are not one hundred percent compatible can not only make assembly more difficult, but also endanger the safety of the system.”



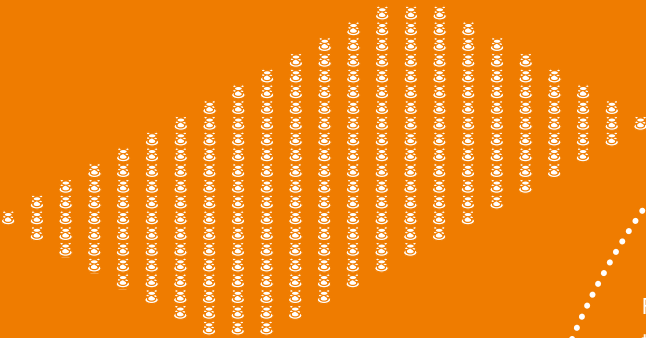
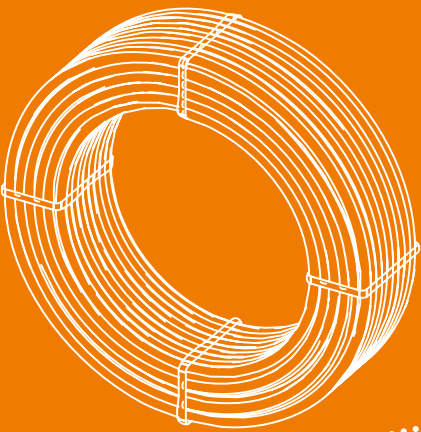
SAFETY IN THE SYSTEM

Underfloor heating is an equation with many variables – and the products and providers on the market are just as numerous. The advantage of a complete system? The certainty that every single part is of the highest quality and that everything fits together. And not just today, but also tomorrow.

That's why the TECEfloor range offers heating pipes, manifolds, controls and installation accessories from a single source – optimally coordinated and one hundred percent compatible. And with the “Silver Line Quality” label, it has its own quality standard that guarantees just that.

QUALITY FROM A SINGLE SOURCE

High-quality components, optimally coordinated:
The TECEfloor professional system for underfloor heating.

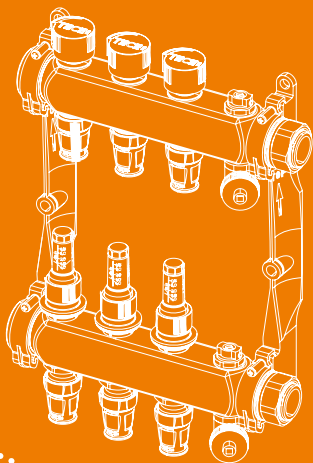


Always the right pipe: at its own production facilities, TECE manufactures composite and plastic pipes for domestic installation on state-of-the-art machinery.

From dimpled sheet to the special solution for industrial surfaces: TECEfloor offers the right fastening system for every application.

Our standard for all water-bearing and functional parts: the SLQ seal stands for consistently high quality and the guaranteed compatibility of all components.





Innovation at the heart of the system: the TECEfloor heating circuit manifold range features innovative connection systems and modular solutions.



Function for the eye: TECEfloor control elements and covers are created in an appealing design that doesn't have to hide.

All round perfect

From the tacking pin to the design thermostat – the TECEfloor complete system reflects more than 30 years of experience and the constant demand to make the tried and tested even better, simpler and more beautiful.



CONTENTS

- 04 **Run by professionals
for professionals**
Completely reliable and always better –
for over 30 years
- 10 **TECEfloor manifolds
and accessories**
Warmth that satisfies
- 16 **TECEfloor heating pipes**
Flexible, safe, dimensionally stable
- 24 **TECEfloor fastening systems**
Always the perfect basis
- 32 **TECEfloor controls and covers**
Function at its best
- 36 **TECEsmartfloor**
Digital planning makes the difference

TECE PIPING SYSTEMS

RUN BY PROFESSIONALS FOR PROFESSIONALS

Completely reliable and always better – for over 30 years

Better from experience

The history of TECE in the world of underfloor heating begins as early as 1986. This was when founders Gerd and Thomas Fehlings brought the first diffusion-tight aluminium multilayer pipe onto the market. From the very beginning, the safety and optimisation of products for house installation have been the driving force behind every product development at TECE.

The result is its own quality standard that guarantees the quality and compatibility of all water-bearing parts of the TECEfloor system. And a whole range of products that not only work better, but also make assembly and operation a bit simpler and more attractive. Better, simpler, more beautiful – for more than 30 years.



Better products

Robust, flexible, reliable: that's how modern installation systems should be. Even better: when each individual component impresses with well thought-out solutions on the construction site.

Easier assembly

To ensure that assembly is quick and safe, TECE is constantly finding ways to make products even easier to install. Saving not only time, but also money.



A better look

Much of what makes TECE underfloor heating special remains invisible to the client. For everything else, TECEfloor offers solutions that not only impress with their ease of use and perfect function, but also with a stunning look.

INNOVATION MEETS EXPERIENCE

From aluminium multilayer pipe to a full range: the TECEfloor complete range features radiant heating elements of the highest quality. Thanks to 30 years of experience – and the constant desire to keep this complete range innovatively at the top.

1986

How it all started:
the first aluminium
multilayer pipe from
TC-Thermconcept.



Full of ideas since day 1

Founded in 1986, TECE – at that time still under the name TC-Thermconcept – was the first company at the time to bring aluminium multilayer pipes onto the market. The company's founders Gerd and Thomas Fehlings were therefore among the pioneers in the field of plastic pipe installation systems from the start. A pioneering spirit that TECE has maintained to this day.

Today, with the TECEfloor complete range, TECE supplies a large number of composite pipes from its own production. For example here in the plant founded in south-west Poland in 1997.



today

The highest demands all round

More than 30 years on, with TECEfloor, TECE offers a complete range for a technically demanding and visually appealing implementation of radiant heating and cooling in almost all new build and modernisation projects. From fastening systems to pipes and heating circuit manifolds to design-oriented individual room controls and design thermostats for modern living areas. The high quality demands placed on our own product have become our own label, "Silver Line Quality" (SLQ), which stands for tested quality and guaranteed compatibility of all components of the underfloor heating system.



QUALITY DOWN TO THE LAST DETAIL

Even minor deviations in manufacturing tolerances can quickly cause the tightness of the overall system to falter. That's why all components for TECEfloor are carefully selected and tested for 100% compatibility.



Silver Line Quality

"Silver Line Quality" is the TECE quality standard for underfloor heating. The SLQ quality seal for water-bearing and functional parts ensures that all components are coordinated with one another and that operability is guaranteed for all individual combinations. All SLQ-marked components of the TECEfloor system are subjected to rigorous testing in the in-house test laboratory. Here, for example, the behaviour of over 150 clamped joints with all pipe types is tested in 5,000 runs for temperature changes.



DIN tested

Independent testing gives security: that's why TECE and TECEfloor participate in the certification program for plastic pipe and composite pipe management systems for hot water radiant heating and radiator connections. Pipes and fittings are certified by an independent institute and tested individually and in the system every six months. You can find all DIN CERTCO certificates at www.dincertco.tuv.com.

Perfectly coordinated

Up to 150,000 locking cycles in a working life put the heating system through a tough test. The tested compatibility of all components not only protects against failure, but also increases the service life of the overall system.

If the valve opens and closes, deposits on the valve tappet can permanently damage the seal under the lift spring. A possible consequence could be water leakage. In the TECEfloor heating circuit manifold, two O-ring seals ensure double safety.

The strict production tolerances of the heating pipes are perfectly tailored to the support and clamping ring of the clamped joint.



Some manifolds on the market have razor-sharp threads. With a plastic screw connection, a new thread is quickly cut and the drive will be wrongly seated. The metal union nut offers reliable protection here.



Perfect fit: the optimal coordination of the stroke and closing dimension of the valve on the servomotor ensures a long service life and prevents insufficient closure of the heating circuit if the stroke is lost.



DIN EN 16313 regulates the Eurocone contour on the manifold. The O-ring of the clamped joint is matched to the manufacturing tolerances specified in this norm, thereby sealing accurately.



The standardisation for plastic pipes allows a wide dimensional tolerance. A "16 x 2 dimension" can differ by tenths of a millimetre in the inner diameter of different manufacturers! Leaks can occur if unfavourable manufacturer pairings of compression fitting and pipe meet. In the TECEfloor system, the pipe and fitting are perfectly coordinated.

TECE PIPING SYSTEMS

TECEfloor MANIFOLDS AND ACCESSORIES

Warmth that satisfies

Everything in flow

Efficient heating with underfloor or radiant heating is also a question of correct distribution. TECEfloor heating circuit manifolds reliably ensure even distribution of the heat energy provided – from small rooms to industrial halls. Modular

systems and innovative ideas ensure that there is no shortage of storage or compliance with assembly times. Another reason to relax: all manifolds undergo a 100% functional and tightness test in production.



PUSH TOGETHER. DONE!

It couldn't be easier: thanks to outlets with pre-assembled push fittings, TECElogo-Push pipes can be quickly connected without twisting the TECEfloor heating circuit manifold.

“Connecting the heating pipes can soon become tedious, detailed work – and lead to errors, especially for inexperienced fitters.”



Product Highlights

- Twist-free push-fit connection with TECElogo-Push connections
- Sight glasses can be exchanged under system pressure, default settings are retained
- Each manifold is 100% tested for leaks and functionality
- Version with TECElogo-Push or Eurocone connection



It's that easy:
experience the
Logo manifold type
in the video.



Efficient and economical: pre-assembled push-in fittings allow for quick and twist-free connection. The plug connection can be loosened again later with a special key and the fitting can then be used again.



FOR EVERY REQUIREMENT

From small surfaces to industrial surface heating –
TECEfloor heating circuit manifolds distribute heat reliably.
With extra convenience for installers and customers.

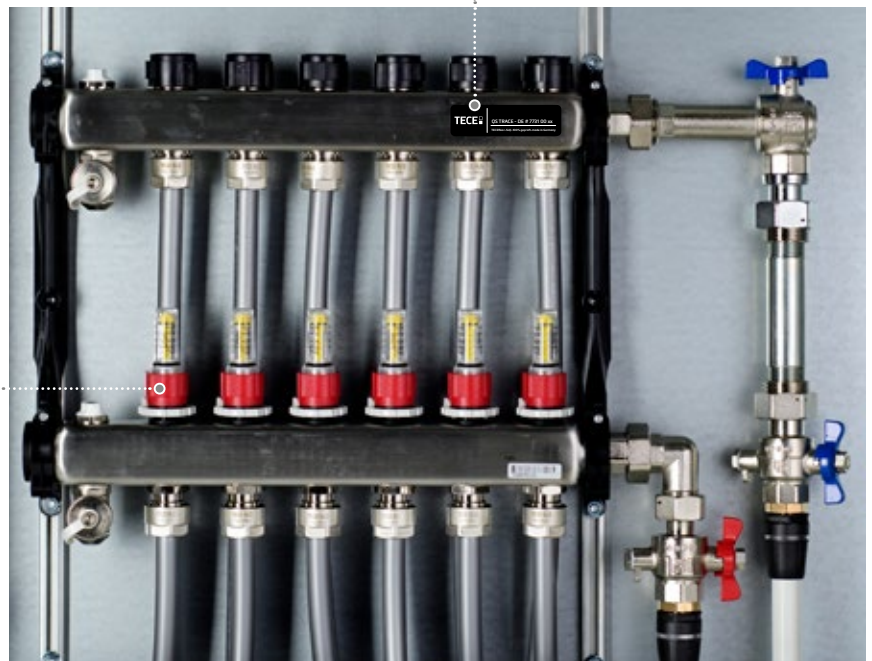
At a glance

With the QS code, the manifold can be
precisely identified even years later, for
example for ordering spare parts.



In no time

The integrated flow control makes
setting the calculated volume flow
easy, quick and safe.



Equipped for big tasks: the TECEfloor stainless steel heating circuit manifold

The particularly large chamber volume of the TECEfloor stainless steel heating
circuit manifold ensures extremely low pressure losses. As a result, this manifold
can also be used for many industrial heating surfaces with 20 mm pipes.



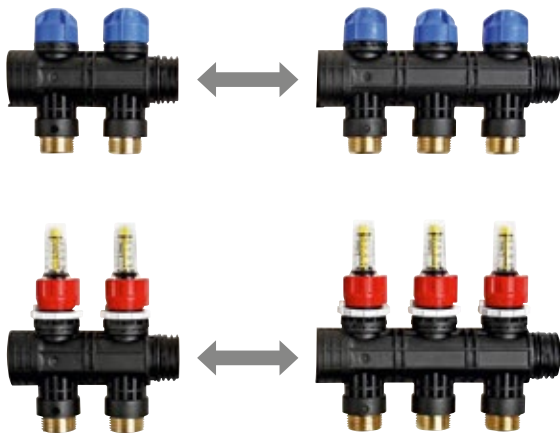
Overall better

The independent shape of the manifold and the special valves offer a number of
advantages in practice: the return valve with its conical valve seat provides a
hydraulically more favourable flow regulation with constant regulation from 0 to 10 V.
The presettable and lockable flow meter works in a regulation range of 0.5 to 4 l
according to DIN EN 1264-4, which means that large volume flows, e.g. for industrial
surfaces, can be easily regulated.

**Modularly expandable:
the TECEfloor heating circuit manifold
made of plastic**

2-way, 3-way – easy! The SLQ plastic heating circuit manifold consists of a base module and one or more 2-way or 3-way connection modules with integrated valve technology. The modules are simply connected with two turns and combined as required – up to a 12-way manifold. This simplifies storage and increases flexibility on site:

if an additional heating circuit is required, two 2-way modules are used instead of a 3-way module.



Combine!

Quickly and securely connected with two turns: with the TECEfloor heating circuit manifold modules, various connections up to 12-way connections can be made.



**Constantly reliable:
the TECEfloor fixed
value control**

The TECEfloor fixed value control ensures a constant room temperature. The return valve and balance valve enable hydraulic balancing with the adjacent heat distribution system. The special design of the pump chamber prevents rotor blockages caused by deposits, for example after long periods of inactivity.

TECE PIPING SYSTEMS

TECEfloor HEATING PIPES

Flexible, safe, dimensionally stable

Every challenge under control

Heating pipes have to withstand a lot in the tough everyday construction site, with a service life of several decades. Nevertheless, perfect heat conduction and a long service life are a must. The TECEfloor complete system provides SLQ-

certified security and guarantees that building owners can enjoy their underfloor heating for a long time. The inspiration: product properties that make even laying a real pleasure.



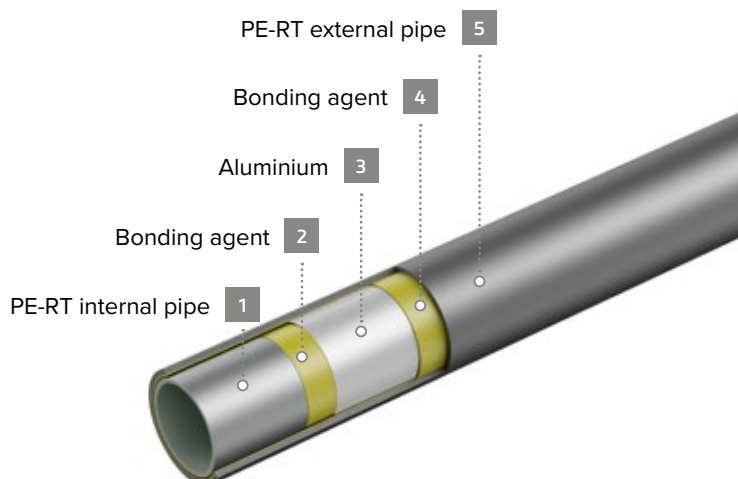
A REAL PARTNER

Where others cause trouble, the aluminium multilayer pipe specially developed for TECEfloor is particularly cooperative. The reason: its soft core, which makes it extremely maleable.



It works with you – not against you

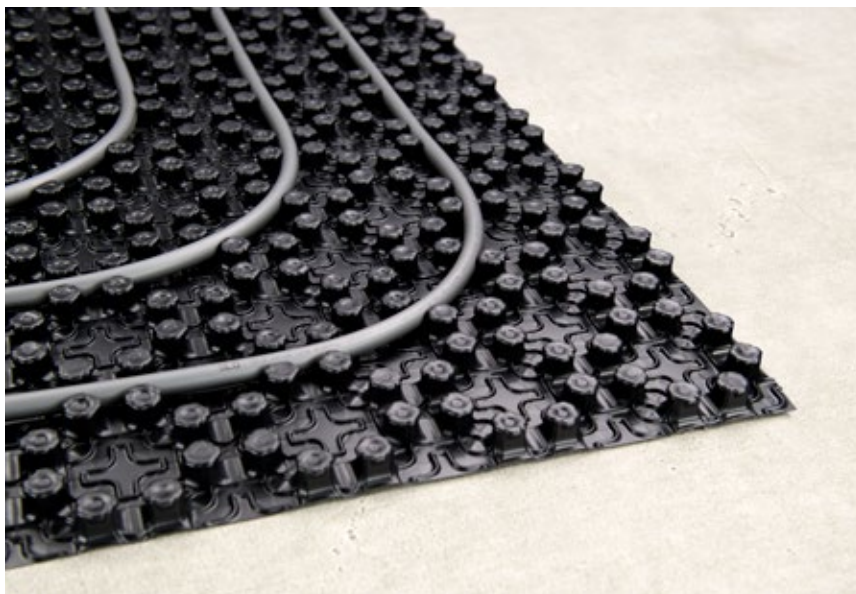
As soon as you open the roll, you realise that the TECEfloor composite pipe is a new type of heating pipe. Because where others lose their shape, thanks to its soft aluminium casing it remains pliable and relaxed on the roll dispenser. It adapts just as smoothly to any shape you fit it into when laying. This makes it a cooperative partner, especially for lightweight carrier materials.



Always in top form

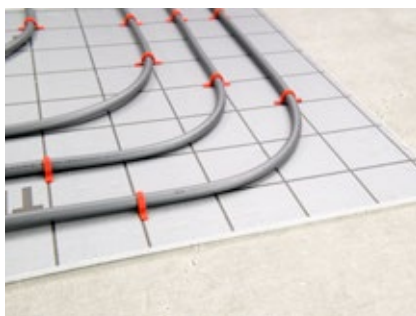
The tendency to self-curvature and creating a twist when rolling often lead to problems when laying conventional PE-RT or PE-X pipes. Waving or bending can be the result, particularly where thin substrates and light insulation do not offer strong resistance. This shows the advantage of the soft

TECEfloor aluminium multilayer pipe: because the pipe can be flexibly brought into the desired shape without twisting or rolling. And it remains – once laid – flat and in shape. Intractable laying, waves and bent corners are a thing of the past.



No twist, no curvature: with the soft TECEfloor aluminium multilayer pipe, waves or bent corners are a thing of the past.

The tendency to self-curvature and twist formation when rolling: a common problem when laying conventional PE-RT or PE-X pipes.



1



2

- 1 Laying with PE-RT/Al/PE-RT pipe and 10plus tacking system
- 2 Laying with PE-RT/Al/PE-RT pipe and 30/16 dry-wall system

The advantage of the special flexibility of the soft TECEfloor PE-RT/Al/PE-RT pipe is also evident in the particularly light 10plus tacking system for limited installation heights and with specified pipe layouts, such as here with the TECEfloor 30/16 dry-wall system.

SECURITY IN 5 LAYERS

With their innovative structure, TECEfloor five-layer pipes for radiant heating can withstand even the toughest construction site conditions.



Double checked

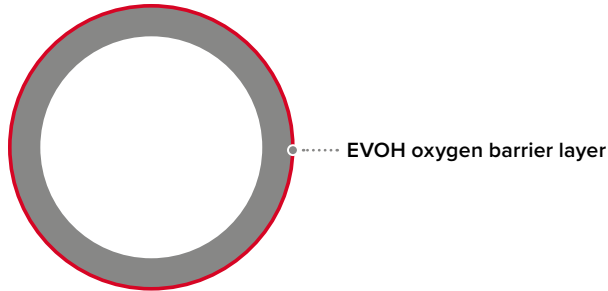
All TECEfloor heating pipes are manufactured in-house, using state-of-the-art processes. To ensure product quality and compatibility, all pipes and connections are tested in our own test laboratory and in independent testing in a multi-stage process.



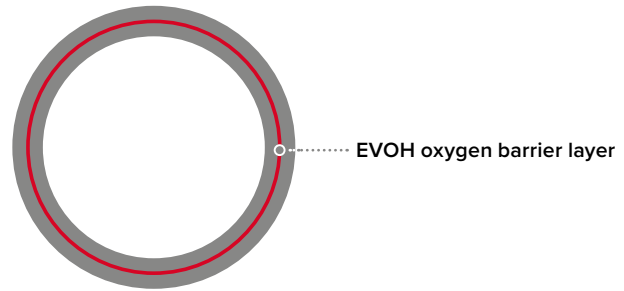
The location makes the difference

The rough everyday conditions of the construction site mean the outer layer of a pipe can quickly be damaged by scratches and abrasion, particularly where large surfaces are laid with pipes. With the TECEfloor five-layer pipe, the sensitive EVOH

oxygen barrier layer is therefore in the middle and hence optimally protected against external influences. This makes TECEfloor five-layer pipes particularly well suited for use over large surfaces, such as industrial floor heating.



Cross-section of a conventional pipe with an external EVOH oxygen barrier layer.



Cross-section of a TECEfloor PE-RT-5S pipe with central EVOH oxygen barrier layer.

TECEfloor 5S pipes at a glance

TECEfloor SLQ PE-RT 5S

The EVOH oxygen protection layer has been deliberately placed at the centre of the pipe where it stays protected against outside stress, scratches and abrasion.



TECEfloor SLQ PE-MDXc 5S

Five-layer plastic pipe made of cross-linked polyethylene in medium thickness. Highly flexible, specially for radiant heating.



TECEfloor SLQ PE-RT/Al/PE-RT





Aluminium plastic composite pipe made of high-density polyethylene with increased temperature resistance. With soft aluminium core specially for radiant heating.



STICKING TOGETHER

Tested security in every connection: in our own laboratory TECEfloor heating pipes and connections are independently checked for leaks in the system.

An overview of radiant heating pipes and matching transitions

Connection technology		SLQ PE-RT type 2 5S Radiant heating pipe 7711 xx xx	SLQ MDXc 5S Radiant heating pipe 7714 xx xx	SLQ AI/PE-RT Radiant heating pipe 7715 xx xx
SLQ Eurocone Clamping ring joint		●	●	●
SLQ pressure sleeve coupling		●	●	
PPSU pressure sleeve coupling				●
TECElogo-Push coupling		●	●	●



No more stressing, use axial pressing!

All dimensions of the TECEfloor five-layer pipes can be achieved with the proven axial, O-ring-free TECEflex sliding sleeve system. Cut to length, expand, press – and the

connection is ready. Expansion of the pipe keeps narrowing in the connection area low and the pressure losses stay minimal.



Always easy, fast and safe:

The TECEfloor plug-in coupling type TECElogo-Push has been tested and approved for use with all TECEfloor five-layer pipes with dimensions of 16 x 2.

TECE PIPING SYSTEMS

TECEfloor FASTENING SYSTEMS

Always the perfect basis

Right from the ground up

Radiant heating and cooling for new builds and modernisation – in every dimension and under almost all circumstances.

For this purpose, TECE offers a reliable range of proven standard solutions with dimpled panels, tacking systems and

dry construction elements that excel in practice. And innovative solutions for special requirements such as limited installation heights and large surfaces that make almost any plan feasible.



SOLID FOUNDATIONS

With the classics among fastening systems, radiant heating and cooling can be installed quickly and safely in standard situations.



Structure provider: the TECEfloor dimple system

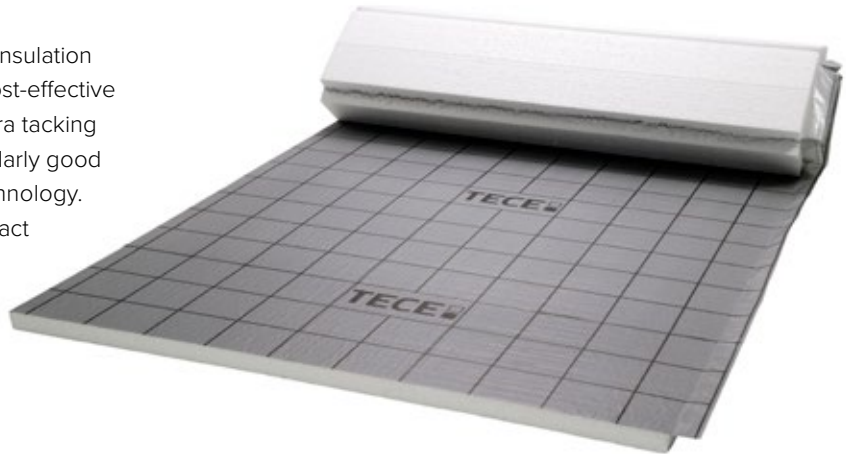
The dimple structure guarantees reliable pipe fixation and allows axial and diagonal laying of pipes in a 6 cm laying pattern. The TECEfloor dimple system is available with or without insulation and comes in a total of three versions.



The dimple system is suitable for 14, 16 and 17 mm pipe dimensions and is available as a dimpled sheet or as a dimpled panel in the 30-2 and 11 mm insulation variants.

Secure seating: thanks to the TECEfloor tacking system

TECEfloor roll insulation offers impact noise insulation with a highly tear-resistant fabric sheet for cost-effective installation. The extra-wide TECEfloor T8 extra tacking pin provides the heating pipes with a particularly good hold thanks to the special tilting anchor technology. TECEfloor roll insulation is available with impact sound insulation 30-2 or 30-3.



1 Standard tacking pin

2 TECEfloor T8 extra tacking pin

The bracket with tilting anchor guarantees very good sheet penetration with minimal damage to the ribbon fabric sheet and thus ensures a greater holding force under 45° pulling direction – for improved fixation and guidance of the pipes, especially in the bend area.



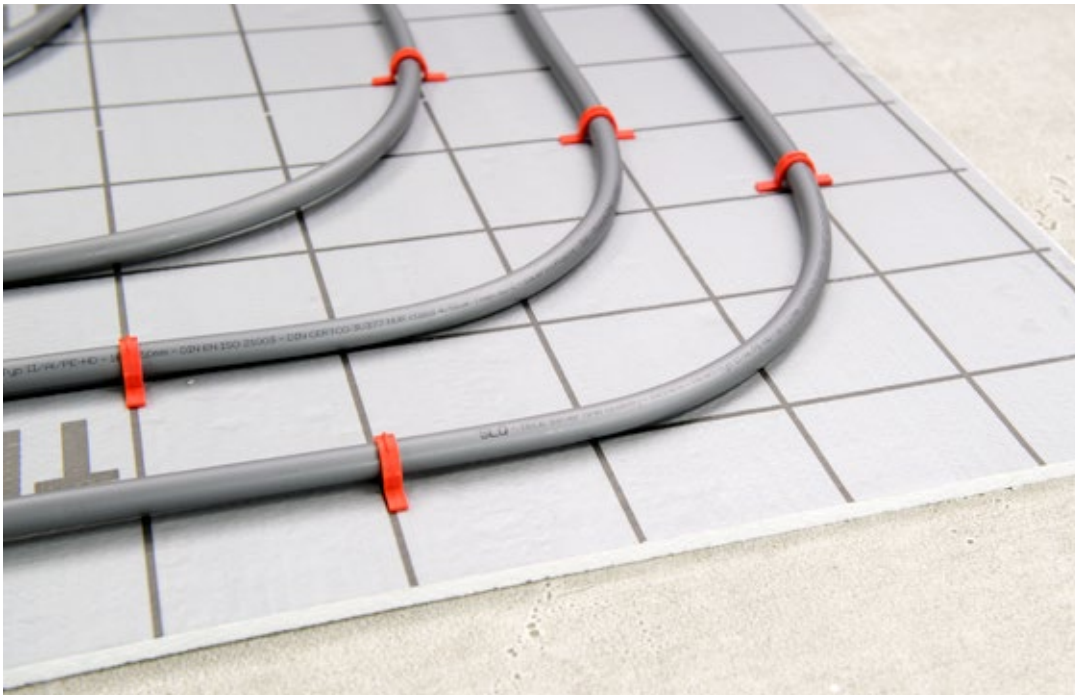
Easy assembly, short construction time: the TECEfloor dry-wall system 30/16

The TECEfloor dry-wall system 30/16 is the ideal solution for short construction times and light floor constructions. Consisting of only two components, it is easy to handle and offers space-saving storage. Single or double meander installations are also possible – with guaranteed uniform surface temperature and heat emission.



OPTIMISED FOR SPECIAL CHALLENGES

When it comes to ideas that make life on the construction site better and difficult projects easier to implement, we are not short of solutions. This also applies to our fastening systems.

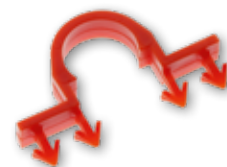


Ensuring clear conditions: the 10plus tacking sheet

Cables and conduits are often randomly distributed on unfinished floors. Laying the insulation is not only a challenge here, it's also a warranty risk. The 10plus tacking sheet is simply laid on the on-site insulation. Installers and screed layers work quickly, cleanly and independently. Warranty risks and construction time extensions are a thing of the past.



Only 10 mm thick: the 10plus tacking sheet for universal support on on-site insulation.

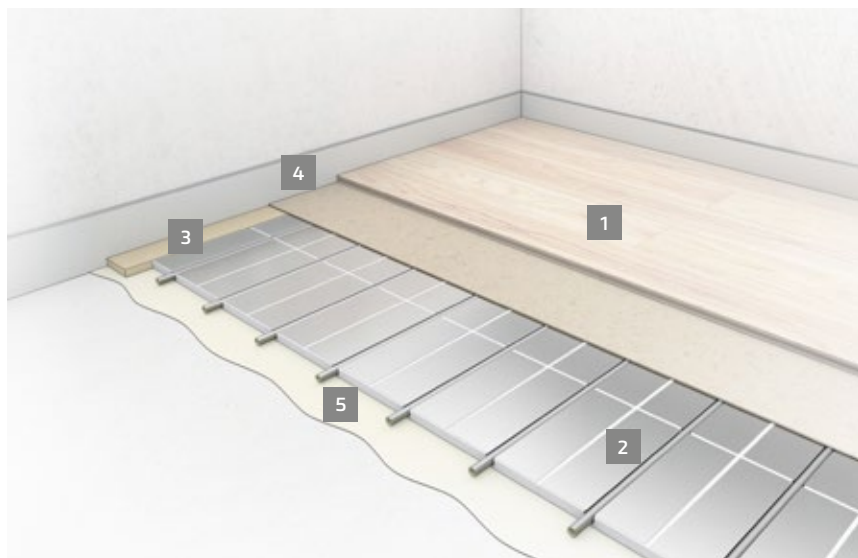


Four short retaining anchors and a wide supporting surface ensure high retaining forces and standard-compliant pipe fixation with the TECEfloor 10plus tacking pin.

Ideal for restricted installation heights: TECEfloor 16/12 universal panel

The 16/12 universal panel is the wet and dry-wall construction panel with limited installation heights for integration in the floor, on the wall and under the ceiling. This is possible thanks

to the low element height of just 16 mm and using a 12 x 1.5 mm heating pipe. Thanks to the extremely small structure, the system can be optimally regulated.



TECEfloor 16/12 universal panel with prefabricated parquet laid floating. Overall structure including floor covering: 33 mm.

- 1 Prefabricated parquet ≥ 15 mm
- 2 Universal panel + system pipe
- 3 Edge board
- 4 Edge insulation strips
- 5 System adhesive

TECEfloor 16/12 universal panel: super-flat EPS element with fully glued aluminium guide plates with predetermined breaking points for width and length adjustment.



Perfectly complemented: the TECEfloor SLQ PE-RT 5S radiant heating pipe, with dimensions of 12 x 1.5 mm, is ideal for use with restricted installation heights.

TOP PERFORMANCE FOR BIG GOALS

Big projects and special requirements?
For us, it's an opportunity to put our skills to the test.



The robust partner: the TECEfloor five-layer pipe with a central oxygen barrier layer

Over 16,000 m of TECEfloor heating pipe over an area of more than 4,000 m² – these are quite normal dimensions when installing radiant heating or cooling in the industrial sector. There is no question that with dimensions of this order, protecting the pipes is critical.

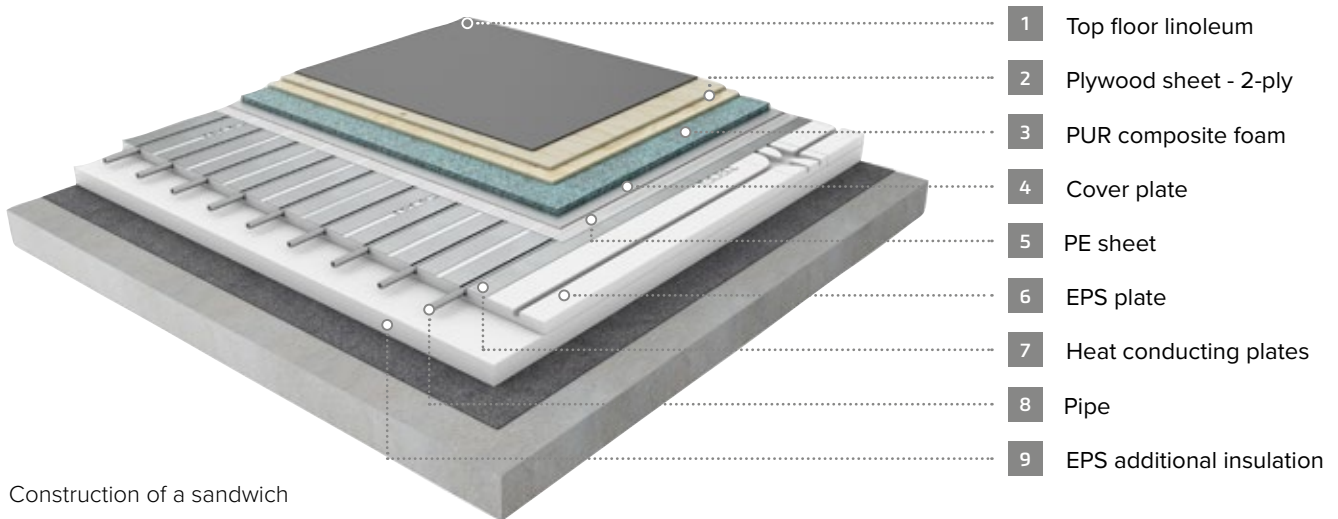
Robust and flexible

Sports hall floors have to withstand a lot. It's not just about durability, but also about a certain swing behaviour, for example, which makes it possible for balls to rebound correctly. If underfloor heating is to be installed here,

special substructures are required: as can be seen here, the construction of an area-elastic sports floor in sandwich construction with TECEfloor type 30/16 dry construction elements.



31



Construction of a sandwich designed area-elastic sports floor.

TECE PIPING SYSTEMS

TECEfloor CONTROLS AND COVERS

Function at its best

Always a nice twist

Does underfloor heating contribute to the design of a room? Usually only because it gives architecture and furnishings maximum space – remaining well hidden itself. TECEfloor goes a nice step further and makes all visible elements so attractive that they can be seen. Form follows function –

and vice versa. The fact that control elements such as an RTL valve no longer have to be hidden, but can be conveniently installed at light switch height, is also noticeable during operation.



BEAUTIFULLY CONSISTENT

While most of the underfloor heating system remains unseen: some things just stay in the room. To ensure they don't interfere, we have simply made them more attractive. Beautiful, isn't it?



Functional design reinterpreted

Conventional return temperature limiters are mostly designed purely for the purpose and are therefore often installed hidden near the floor. Which impacts negatively on ease of use. The TECEfloor RTL box impresses with its small external

dimensions, flat wall structure and high-quality materials in an elegant design – and can therefore be conveniently installed at light switch height.



The real glass surface with ceramic screen printing is optionally available in black or white.

Nice and flat

Thanks to the mounting plate with a special depth adjustment system, the TECEfloor Design-RTL box only builds up 2.5 cm – regardless of the wall.



Focussed on design

As the classic among the TECEfloor control elements, the TECEfloor design thermostat fits naturally into almost any architectural environment. And thanks to a generous outer

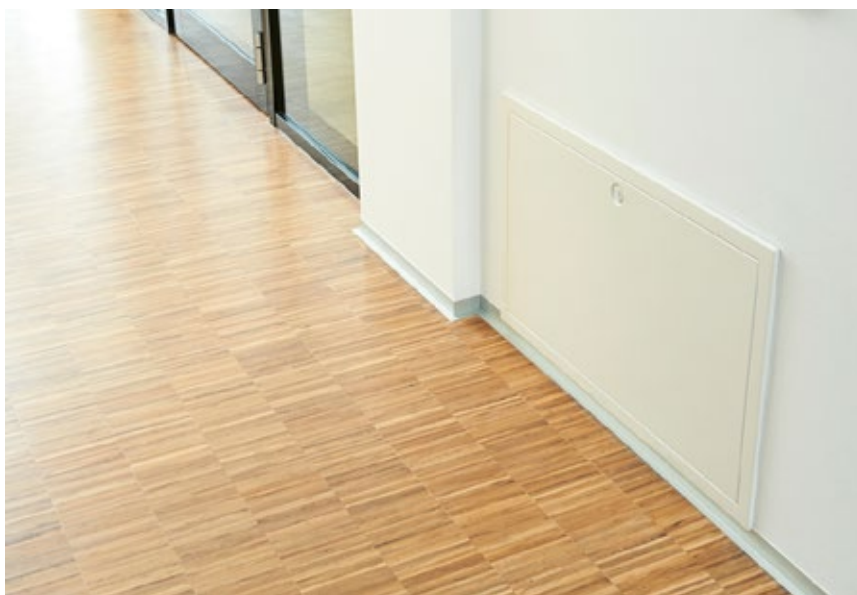
diameter of 104 mm, the thermostat also completely covers the flush-mounted boxes of standard thermostats.



The TECEfloor design thermostat also scores highly from a visual aspect in three colour variants.



35



Attractive alternative

Left: white lacquered frame and metal door characterise the look of the classic flush-mounted manifold housing. Right: the 6 mm thick TECEfloor design glass door for retrofitting fits elegantly into any ambience and skilfully hides not only the inside of the manifold housing, but also the sheet metal edge, wallpaper cuts or painted edges, thanks to double ceramic screen printing and an overlapping frame.

DIGITAL PLANNING MAKES THE DIFFERENCE

TECEfloor even smarter: with the free online calculator TECEsmartfloor, all underfloor heating parameters can be calculated with just a few clicks.



Planning underfloor heating can be this easy: the TECEsmartfloor online calculator aids needs-based design of underfloor heating for smaller construction projects with up to six manifolds. Free of charge, online and without additional software installation. Tailor-made solutions can be calculated directly on site and discussed with the customer – in just a few minutes. The effects, for example, of a larger or smaller installation distance on the flow temperature and what this means for the material list, can be shown quickly and easily. On request, you will receive a binding offer for the calculated project within 24 hours.



Request your personal access code now at smartfloor.tece.com

