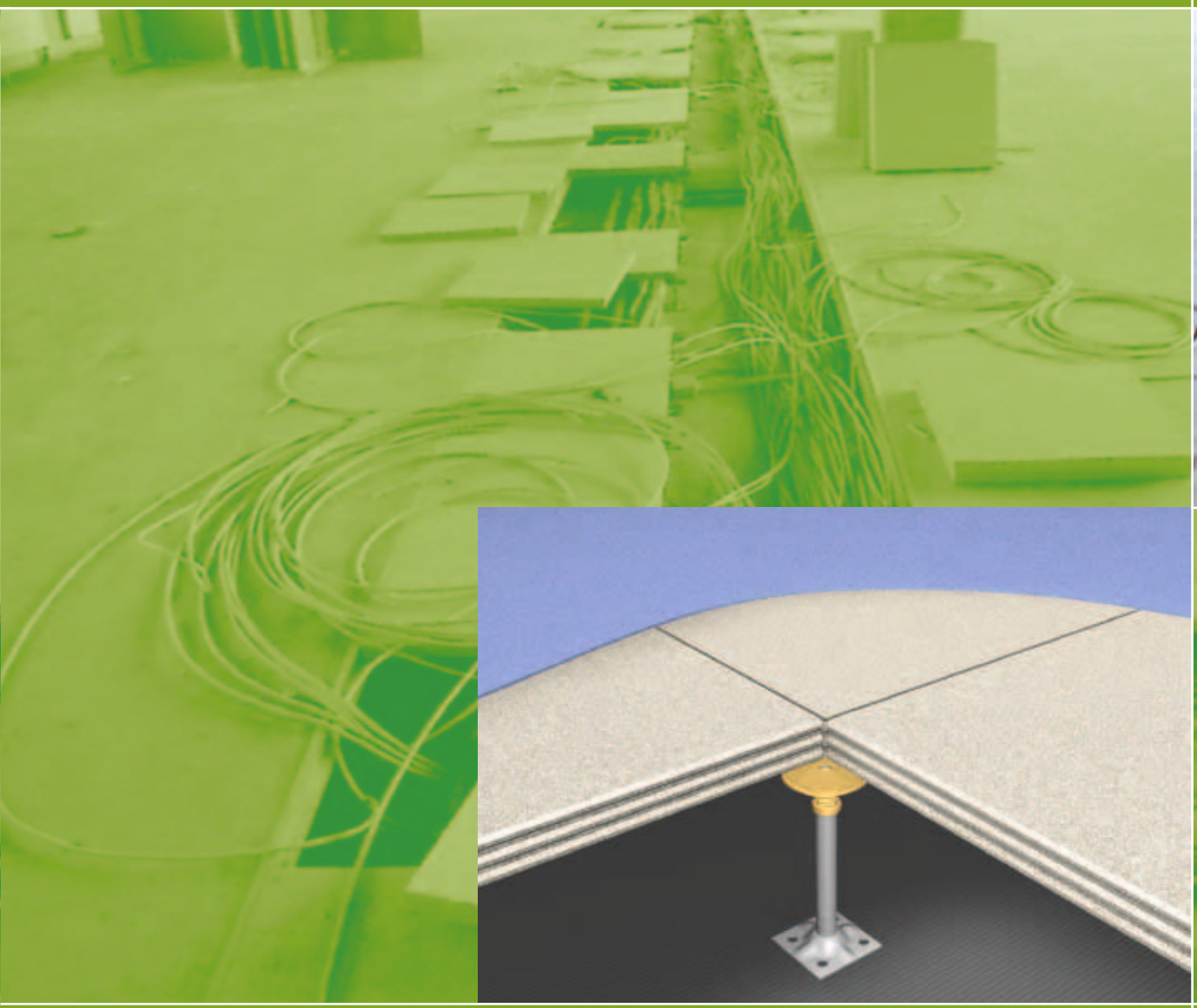
MERO Hollow Floor Combi T

Innovative solutions from one source

Development
Consulting
Planning
Manufacturing
Installation

Access floor
Hollow floor
Floor covering and
Installation
Services



MERO TSK
MERO-TSK International GmbH & Co. KG

Floor systems

Gain space by the multifunctional hollow floor

Not only refurbished old buildings but also new buildings require more and more quick and efficient work flow. In order to save time and energy it is useful to bring as little moisture as possible into a building. With the dry floor MERO Combi T you can start applying the floor covering even one day later. The non-combustible system offers solutions from standard office buildings to heavy duty areas in production plants or airport terminals.

Application

- standard offices
- offices with increased static loads like lecture and assembly halls, treatment rooms and construction offices, libraries
- in storerooms and work-shops with light operation as industrial floor
- airport terminals

Advantages

- comfortable to walk on, high load bearing capacity
- high fire protection properties
- non-combustible panel material
- huge installation plenum
- easy installation of pipe and supply line systems due to variable pedestal grid
- height adjustable pedestals level uneveness of the concrete slab
- even surface
- adaption to height possible
- installation of inclined areas possible
- adaption to all floor systems possible

The MERO hollow floor systems are tested according to DIN EN 13213 and certified by independant institutes.

Advantages compared to wet systems

- dry construction
- immediate installation of floor covering and utilization without drying time avoid shrinking cracks

Construction principle

Floor panel

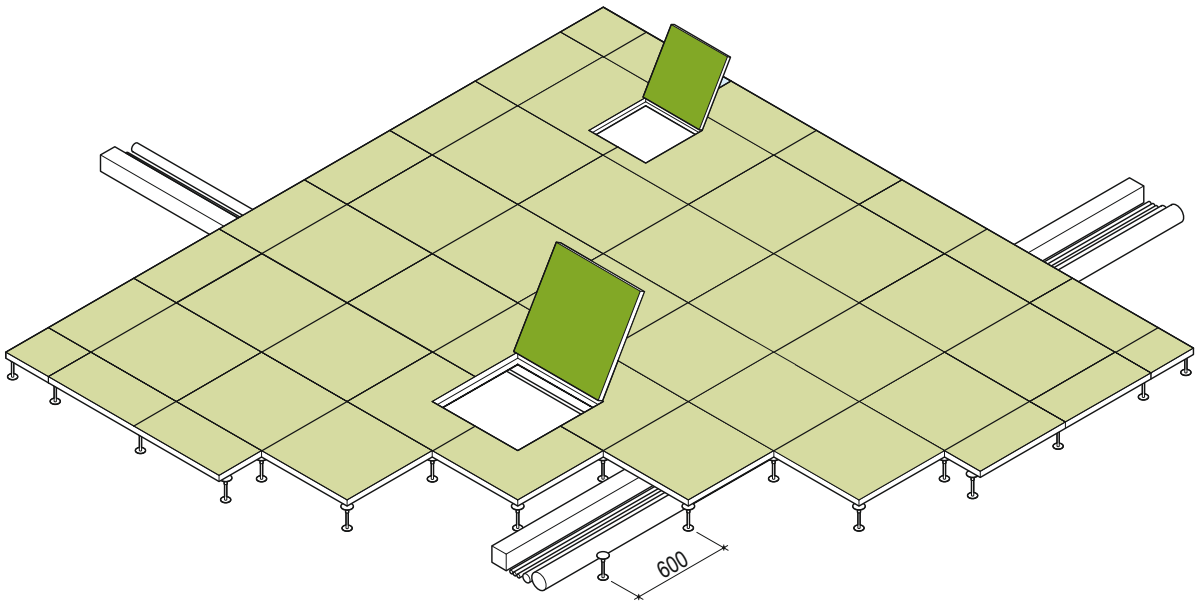
The MERO hollow floor Combi T consists of one or two-layer reinforced calcium sulfate panels, module 600 x 600 mm. The panels are provided all round with a tooth milling. Panel edges are glued together due to structural reasons.
The installation of an underfloor heating or cooling is possible (see MERO brochure Combi T Thermo).

Substructure

The MERO substructure consists of precision steel pedestals which are continuously height adjustable. All pedestals are protected against corrosion by galvanization and passivation. The pedestal base and head plates are securely glued to the concrete slab and the panel.
The pedestal grid of 600 x 600 mm offers a huge plenum for installation systems in any direction.
Higher load classes can be achieved by additional measures.

Planning instructions

Flexibility
For the installation of any kind of equipment in the hollow floor cavity sufficient inspection openings of 600 x 600 mm should be foreseen, especially there, where the main house wiring cables are running.
The distance of 5 m between each opening should not be exceeded. Additional removable access floor panel rows simplify new and later installation of supply lines considerably. MERO hollow and access floors are structurally compatible. Increased floor height allows greater flexibility for an increase of future under floor services.



Partition walls
For an unlimited use of the cavity under the hollow and access floor partition walls should always be installed on the system floor. Only fire section walls or walls between the different working areas should stand directly on the subfloor.

Floor coverings
MERO dry hollow floors can be provided with many different floor coverings. However, if hard coverings as natural or artificial stone or highly active coverings such as glued parquet are applied floor covering and hollow floor must be structurally considered.
In the inspection zones, e.g. in the corridors it is recommended to use self-laying heavily coated carpet tiles which make the difference between the floor systems nearly unseen without affecting the inspection works.

Mounting units
Cutouts for mounting units like sockets, air outlets etc. whether round, square or rectangular can either be done at factory or on site. However, we recommend to use round cutouts as it is more complicated to cut square openings afterwards.

Wall connections
The hollow floor is connected to the wall and rising building parts by means of a round PE cord which avoids the impact sound transmission of the building and serves similarly as expansion joint. All lines/pipes running parellel to the walls should be installed at a distance of approx. 10 cm to the wall.

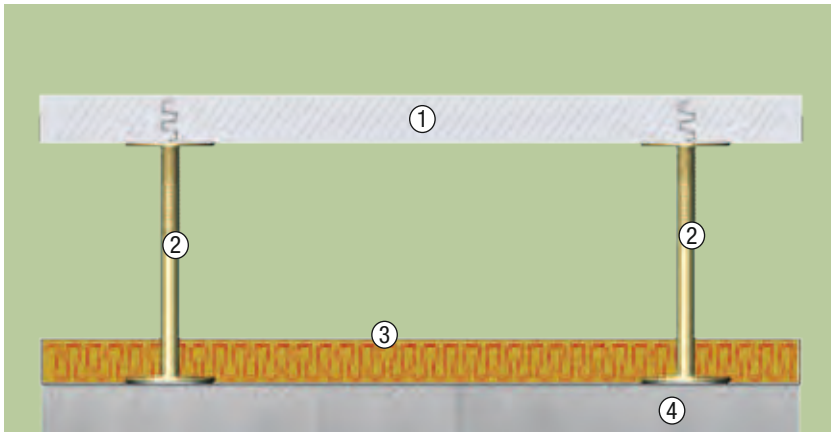
Junction hollow floor-access floor
The junctions between MERO hollow floor and access floor are carried out by angle profiles or double pedestal rows. For junctions in zones with strict fire protecting requirements a test certificate covering the junction and both systems must be available. MERO-TSK can provide these test certificates for different all-in solutions.

Installation conditions, room climate
Mineral building materials are sensitive to changing thermal conditions. Therefore, it is important that the thermal conditions during the time of installation and the later usage are similar. Optimal conditions are a relative humidity of 40-60% at a temperature of 20°C. During the planning stage necessary expansion joints should be considered.

Heavy load area, also for dynamic loads
The variable substructure (depending on the floor height) and the double-layer fully glued supporting panel construction makes it possible that today even a standard system can provide concentrated loads of 13.000 N (ultimate load 26.000 N).
On request, MERO-TSK can work out special solutions to meet higher requirements.

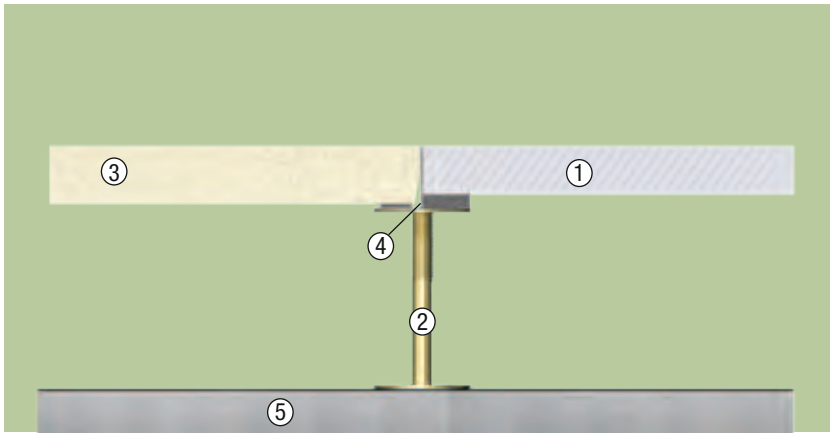
Barmenia Office Building - MERO hollow floor Combi T

Details



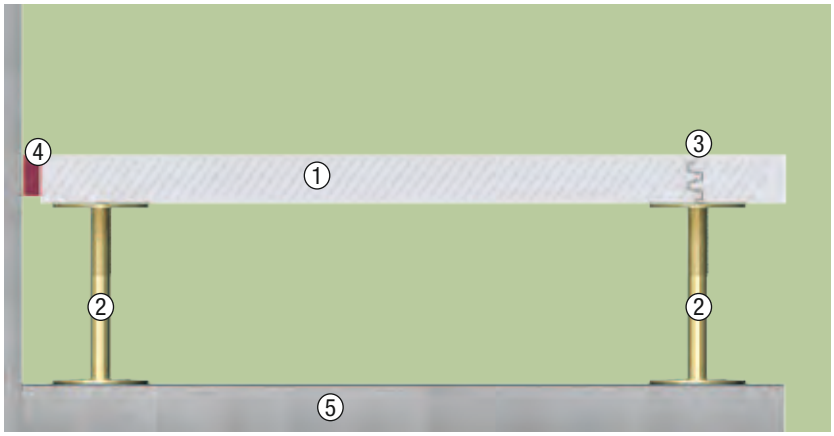
Thermal insulation

1 panel
2 pedestal
3 insulation
4 concrete slab



Junction to the access floor

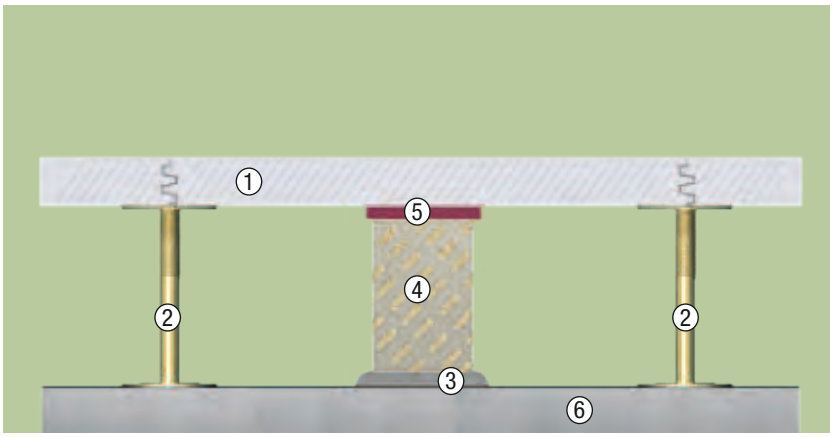
1 panel
2 pedestal
3 access floor panel
4 channel rail
5 concrete slab



Wall connection

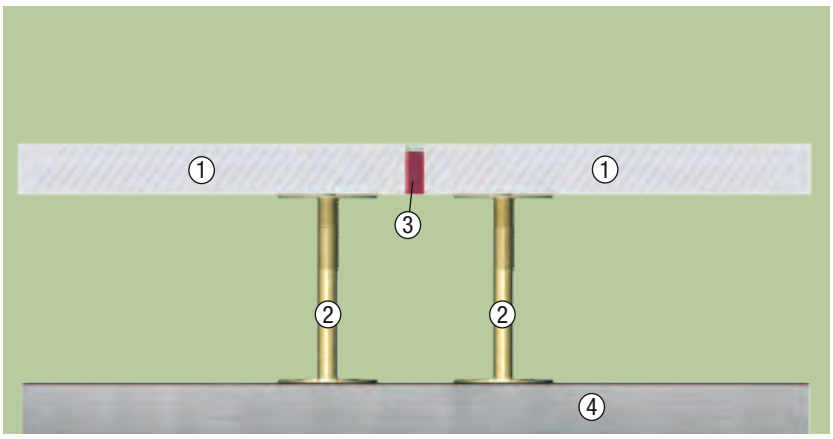
1 panel
2 pedestal
3 joint glue
4 perimeter strip
5 concrete slab

Details



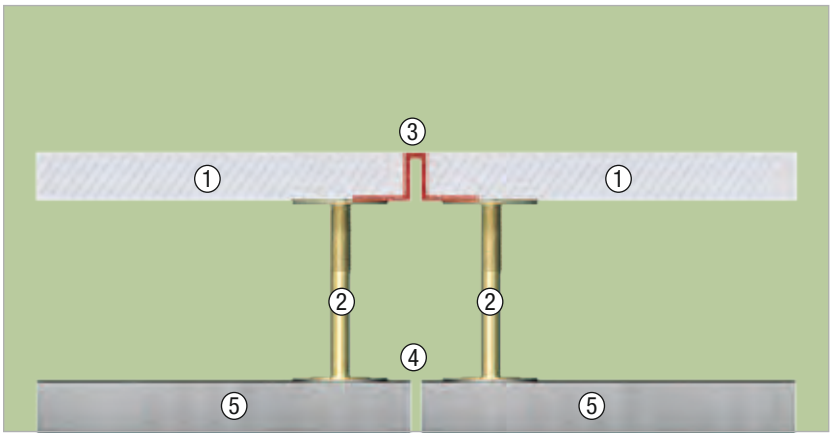
Fire barrier

1 panel
2 pedestal
3 mortar bed
4 fascia
5 mineral wool (compressed)
6 concrete slab



Sound decoupling/joint

1 panel
2 pedestal
3 mineral wool
4 concrete slab



Expansion joint

1 panel
2 pedestal
3 expansion joint
4 building expansion joint
5 concrete slab

Technical data*: **Hollow Floor Combi T**

Accessories:
Bores for sockets or air outlets at factory or on site
Expansion joints
Inspection openings
Removable access floor panel row
Cutouts
Special wall connections
Fascias
Bridgings
Thermal or impact sound insulation
Stairs, ramps

*For further technical data please ask for our product data sheets.

Panels

Dimensions:	600 x 600 mm (tooth milling edge)
System weight:	~ 36 kg/m² – 87 kg/m²
Panel material:	fibre-reinforced calcium sulfate panel 22 - 56 mm
Glue:	toothing glued together with premium solvent-free adhesive

Substructure

Module:	600 x 600 mm
Pedestal material:	galvanized steel
Construction height:	from 85 mm
Pedestal fixing:	glued to subfloor and panel; continously adjustable in height

Floor coverings

textile and elastic floor coverings, parquet, natural stone, artificial stone, liquid coatings

Load values

Concentrated load:	2.000 – 15.000 N
acc. to DIN EN 13213:	Class 1– 6
Ultimate load:	> 4.000 – 30.000 N

Fire protection

Building material class of panel acc. to EN 13501 T1:	A1
Fire resistance class acc. to DIN 4102 T2:	F30

essential elements (panels, pedestals) are non-combustible

- at the clearance of ≤ 200 mm F30 proof is not nessecary (acc. to MBO)
- can also be installed in corridors up to ffh ≤ 1150 mm, as non-combustible
- F30 including access floor elements and junctions

Acoustic values

(depending on system and floor covering)

		New denomination acc. to DIN EN
Sound reduction index $R_{L,w,P}$	39 – 54 dB	Normalized flank level difference $D_{n,f,w,P}$
Normalized impact sound pressure level $L_{n,w,P}$	42 – 91 dB	Normalized flank impact sound pressure level $L_{n,f,w,P}$
Improvement of sound pressure level red. $\Delta L_{w,P}$	10 – 29 dB	Improvement of sound pressure level reduction $L_{w,P}$

TÜV certified since 1997

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Subject to technical changes without prior notice