BUILDING
COMMON GROUND

MAX FRANK®

Egcovoid®

Former for load activation

Edition International

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BUILDING
COMMON GROUND

MAX FRANK®

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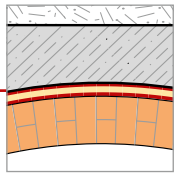
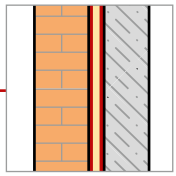
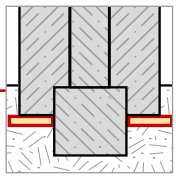
Content



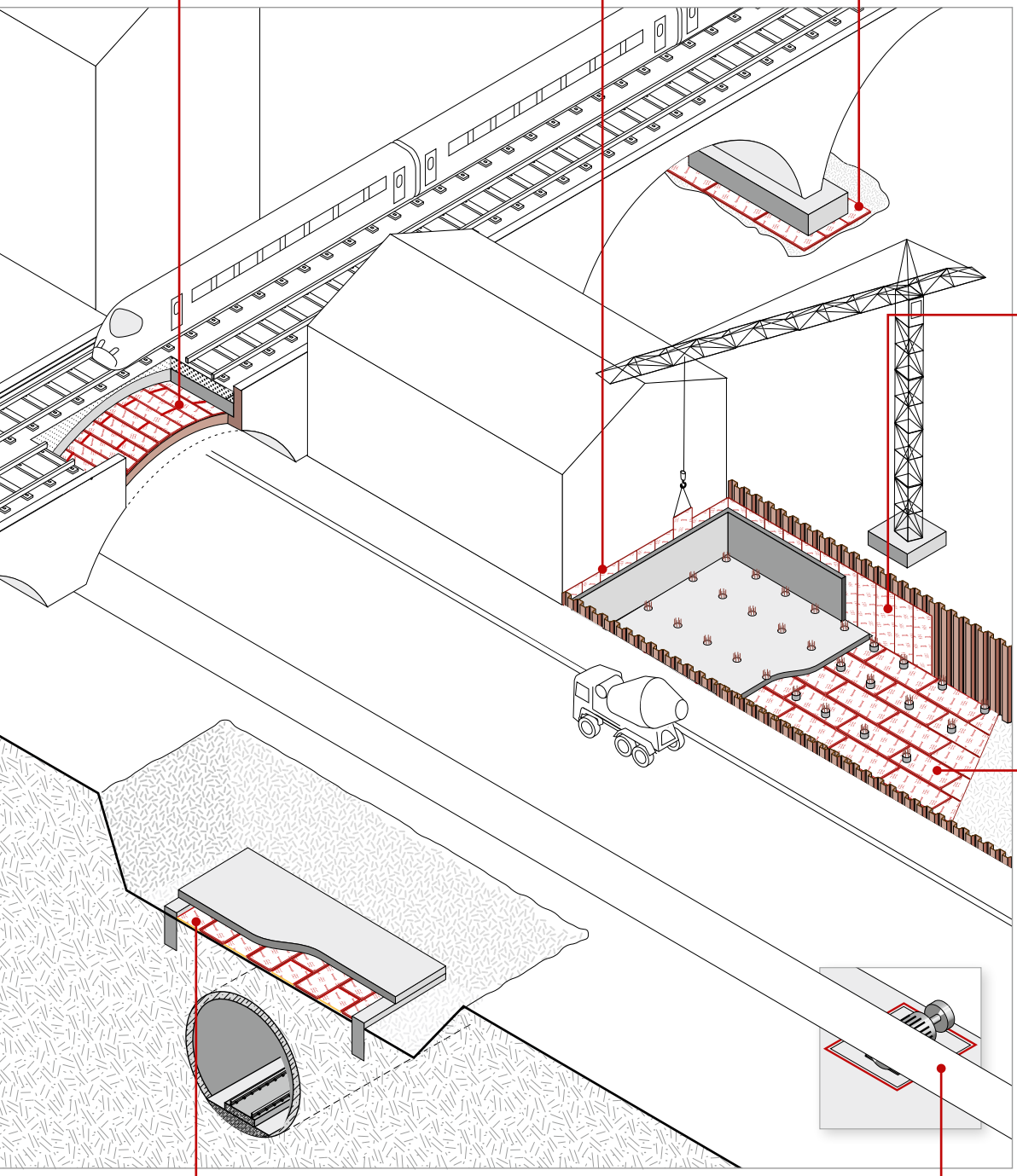
Relief of existing constructions

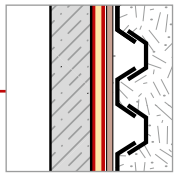


Acoustic decoupling of common walls

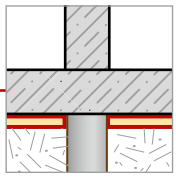


Foundation repair with void formation

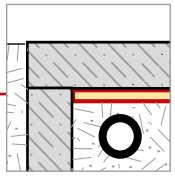




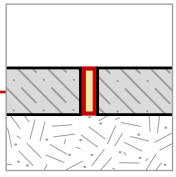
Sheet piling relief joint



Targeted load induction with bored pile



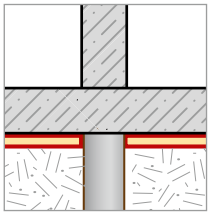
Load release on underground structural elements



Machine foundation sound insulation joint

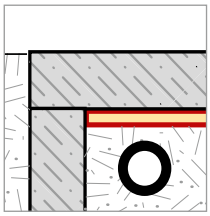
Targeted load induction with bored pile

To ensure the transfer of all imposed building loads into piled foundations, the void created between the foundation slab and the ground using Egcovoid® ensures the desired result. Soils prone to moderate swelling may cause unpredictable loads to the ground plate and/or entire building structure. Using Egcovoid® a gap between soil and ground plate can be created which avoids the transmission of these unpredictable loads.



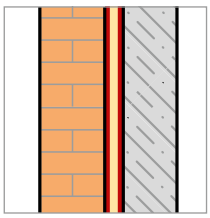
Load release on underground structural elements

In order to protect existing underground structures (e.g. tunnels, drainage channels, etc.) from any superimposed loads from new structures, a void can be created using Egcovoid®. By this means, the old and new structures are statically separated.



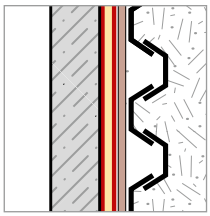
Acoustic decoupling of common walls

To ensure an acoustic and static separation of a new wall from an existing wall, a void can be generated using Egcovoid®. To achieve this desired result, a gap is created by watering and removing the void formers. Contrary to lost formwork with perimeter insulation the existence of acoustic bridges and static interference can be avoided by using Egcovoid®.



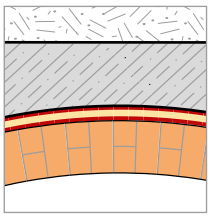
Sheet piling relief joint

Using Egcovoid® ensures that a vertical gap is maintained between a sheet-pile wall and the new structure. Any potential extraneous loads are thus prevented from acting on the recently created wall.



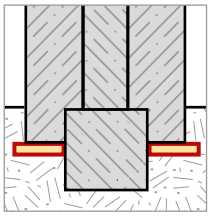
Relief of existing constructions

For new structures, there is often a requirement that no new loads should be transferred to any existing structure. Gaps created using Egcovoid® ensure a static separation of both old and new constructions and targeted load application onto the intended construction.



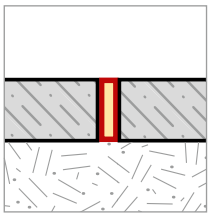
Foundation repair with void formation

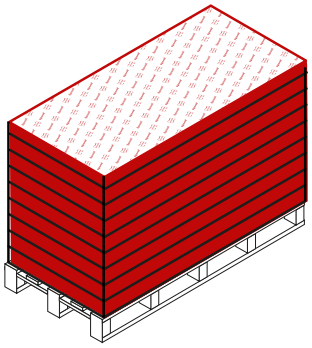
When redeveloping old structures it is often required to strengthen the existing foundation. In order to ensure that the bearing surface is not increased, Egcovoid® can be used to achieve targeted static separation of the foundation soil from the additional superimposed loads.



Machine foundation sound insulation joint

Machines often generate high levels of vibration, which can be transferred to the entire building. Using Egcovoid® as vertical shuttering (lost formwork), the creation of a void is easily achieved. By separating the building structure from the machine foundation, the transfer of vibrations is minimized.





Egcovoid® former

35 mm:
Art.-Nr. EVSPL035FS

2.400 x 1.200 x 50 mm, with moisture protection.

Maximum permissible load for dry panels: 100 kN/m².
Void size after watering of Egcovoid®: 20 mm.

50 mm:
Art-Nr. EVSPL050FS

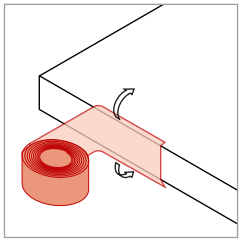
2.400 x 1.200 x 35 mm, with moisture protection.

Maximum permissible load for dry panels: 100 kN/m².
Void size after watering of Egcovoid®: 35 mm.

100 mm:
Art.-Nr. EVSPL100FS

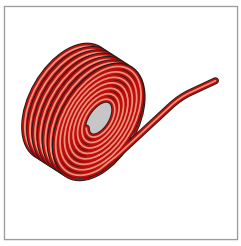
2.400 x 1.200 x 50 mm, with moisture protection.

Maximum permissible load for dry panels: 100 kN/m².
Void size after watering of Egcovoid®: 80 mm.



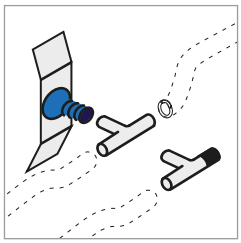
Sealing and repair tape
Art.-Nr. EVKB120

Tape for repair of damaged elements, sealing cut edges, sealing edges of incorporated holes and for securing and sealing of adjacent elements together.



Hose
Art.-Nr. YFXPSETZS

Hose, for connecting the individual void formers with each other and for supply of water into the hose system in the elements.



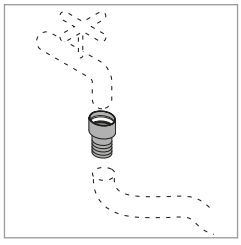
Valves

T-shape:
Art.-Nr. FXVENTILT

T-shape valves for secure connection of all Egcovoid® hose lines.

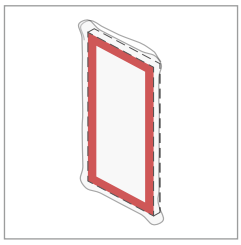
L-shape:
Art.-Nr. FXVENTILL

L-shape valves for end panel.



Couplers
Art.-Nr. FXKUPPLU

Couplers for safe connection of the Egcovoid® hose to the water supply.



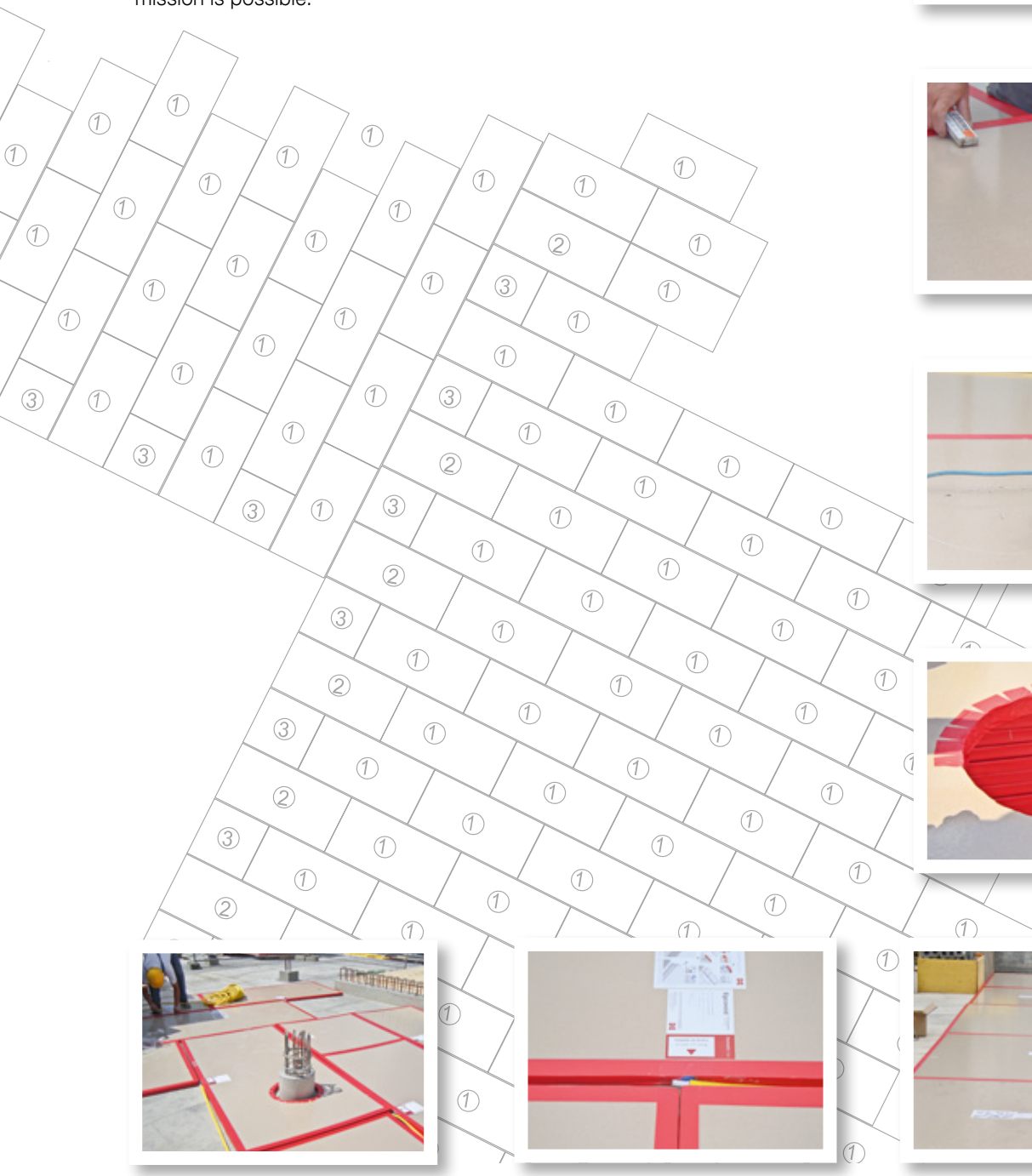
Foil hose
Art.-Nr. FXPFOLIE

For additional protection against moisture and as a dismantling aid for wall mounting.

Easy and fast processing on the construction site

Egcovoid® elements can be easily and quickly laid. The provided laying proposal will always ensure a smooth and successful installation process. Cutting the individual elements to size or incorporating holes, e.g. for drilled piles, can be easily realised by simple means, such as a jigsaw or a hand-held circular saw.

Subsequently, all cut edges must be sealed using the special Egcovoid® sealing and repair tape in order to prevent ingress of water at the installation stage and prior to the planned time for water injection into the panels. The installation of valves enables a sealed hose connection system between the individual Egcovoid® elements. In order to provide a good watering result we recommend a maximum of 17 m² for 50 mm thick panels and a maximum of 23 m² for 35 mm thick panels to be connected to one hose system. After the concrete has achieved its compressive strength, watering the hose system will destroy the bearing capacity of the panels. Therefore a targeted load transmission is possible.



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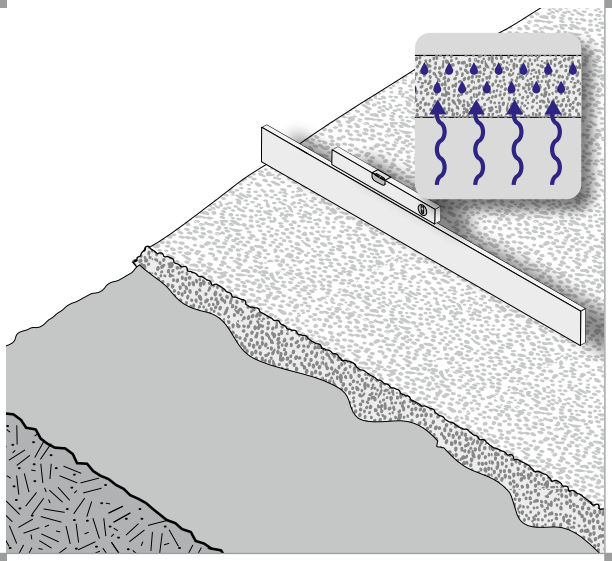

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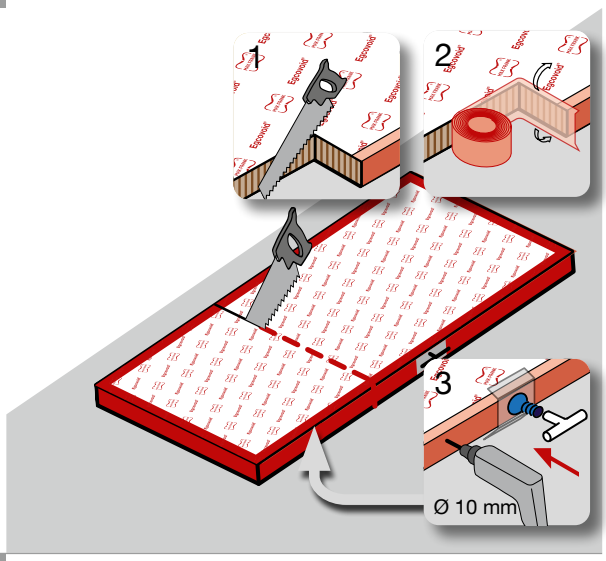

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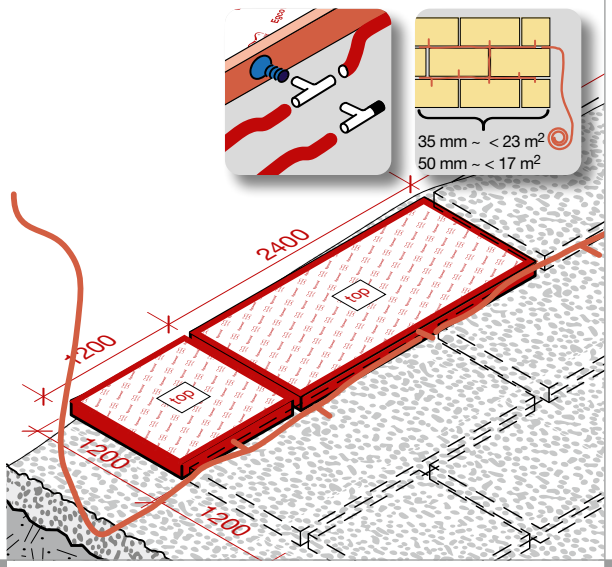

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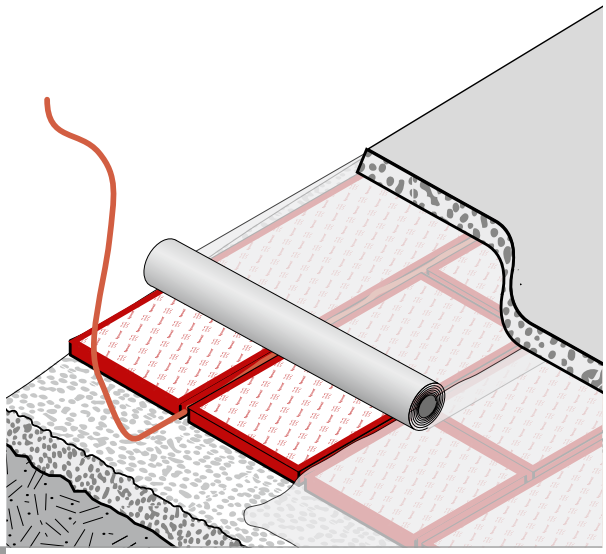

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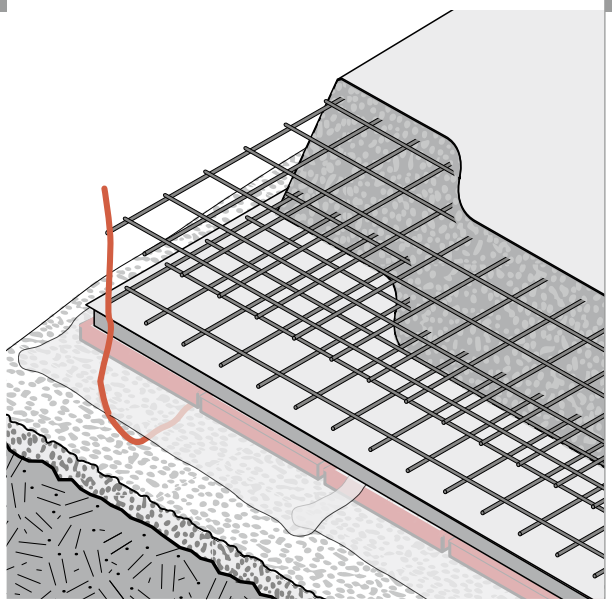

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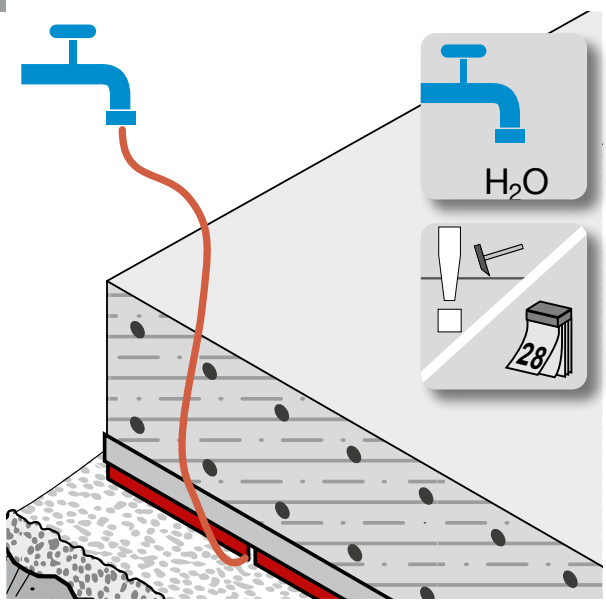


This Installation Guideline is exclusively regarded as a recommendation and does not replace any expert knowledge required for installation. The instructions are always state of the art and are constantly updated. It may be necessary to alter these recommendations, as more information becomes available. The currently updated and valid version is available from our homepage at **www.maxfrank.com**. In addition, our General Terms and Conditions shall apply.

1 Bearing surfaces must be kept level and free from surface water and impurities (levelling layer made of sand).

2 Lay Egcovoid® on the prepared ground or install with an accurate fit into the shuttering, adjusting for local conditions. Egcovoid® can be cut by means of conventional site tools (e.g. jigsaw). The cutting edge must be sealed off using sealing and repair tape (Art.-No. EVKB100 / EVKB150) to achieve water tightness. The valves are installed by the customer using a drill and a 10 mm drill bit. To do this, drill a hole at central point of the circumferential edge and affix the valve.

3 Install Egcovoid® without gaps. Connect them into a row with hose sections, valves and couplers (with the 35 mm-thick panel up to approx. 23 m² and with the 50 mm-thick panel up to approx. 17 m²). Large gaps/ faulty spots should be closed with polyurethane foam. Any damage to the void former must be sealed off using repair tape (Art.-No. EVKB100 / EVKB150). A connecting hose should lead outwards from each row.

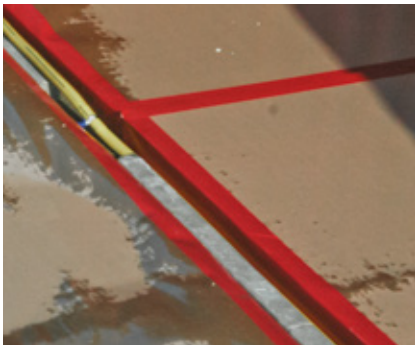
4 Before pouring the blinding layer PE foil must be installed onto the void formers. Prevent the foil and the void former from being damaged. Egcovoid® can withstand a maximum loading of 100 kN/m² in dry condition.

5 Concreting: Lay the lower and upper reinforcement layers of the slab onto the blinding layer. Designing the concrete element the size of the required static void has to be taken into account.

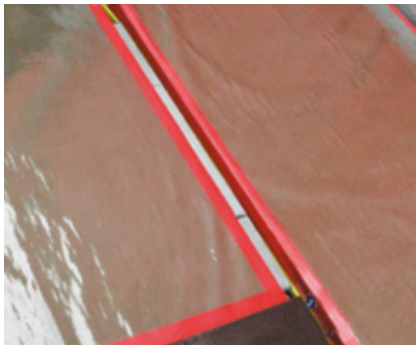
6 After the design compressive strength of the concrete has been achieved, water is injected via the connecting hoses of the Egcovoid®. The amount of water is approximately 15 to 20 liter/m² depending on panel thickness. The water has to be injected with low pressure. Begin with about 20% of the amount of water and after 30 minutes continue with about 30%. The rest of the water should be injected at the earliest after 2 hours also with low pressure. For each water injection about 20 minutes should be calculated that no backwater at the valve is created.

As additional moisture protection a panel section can be put into a foil hose. The endings of the foil hose will be sealed with the repair tape.

Images of the performance of Egcovoid® in laboratory experiments:



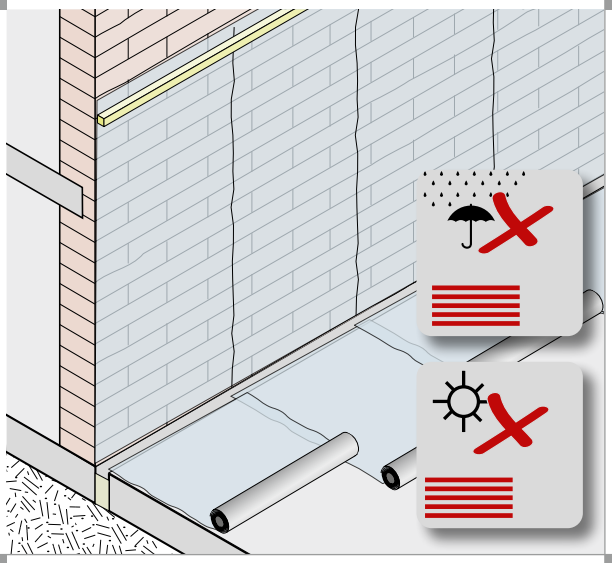
after short-term watering at low pressure and a reaction time of 30 min.



after 3 hours watering

after 24 hours the load-bearing capacity of Egcovoid® is eliminated

1



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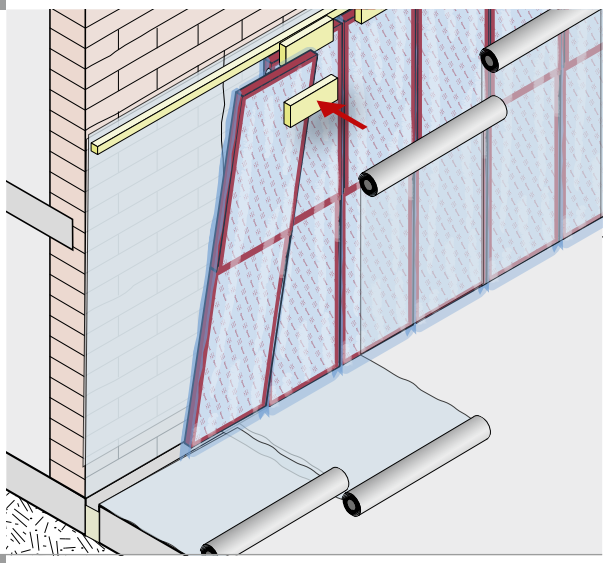

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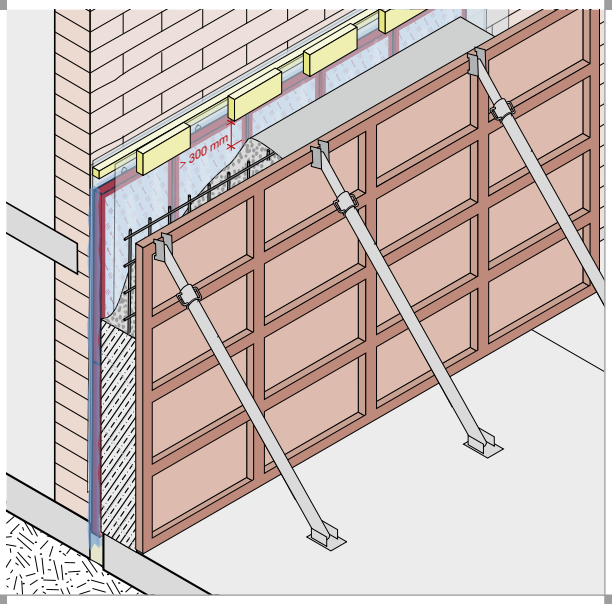

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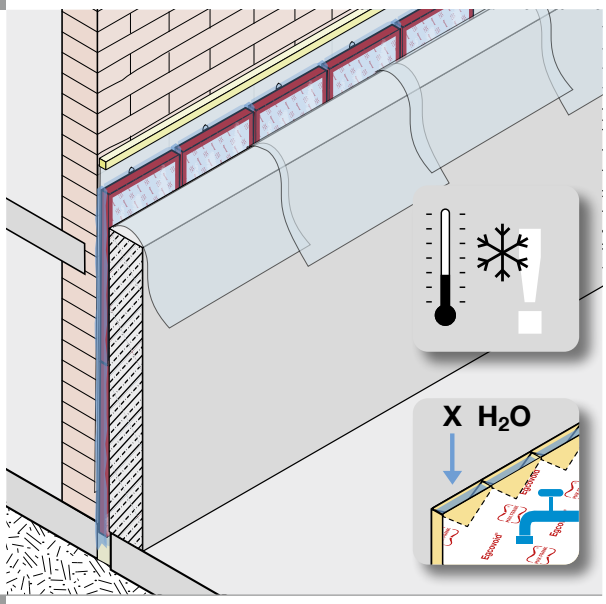

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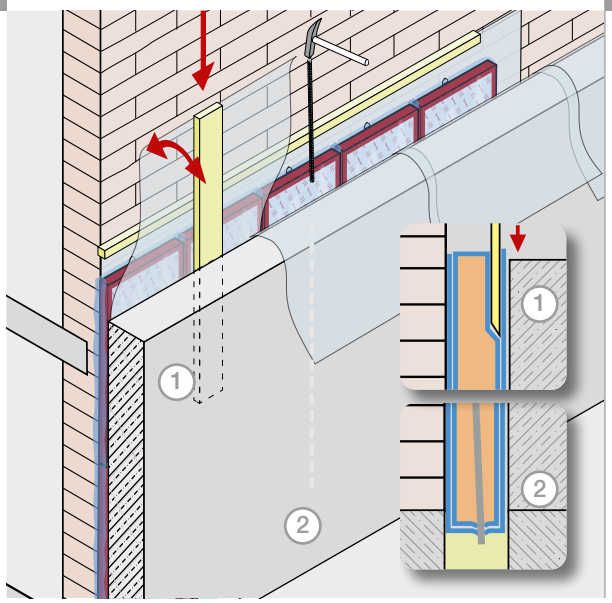

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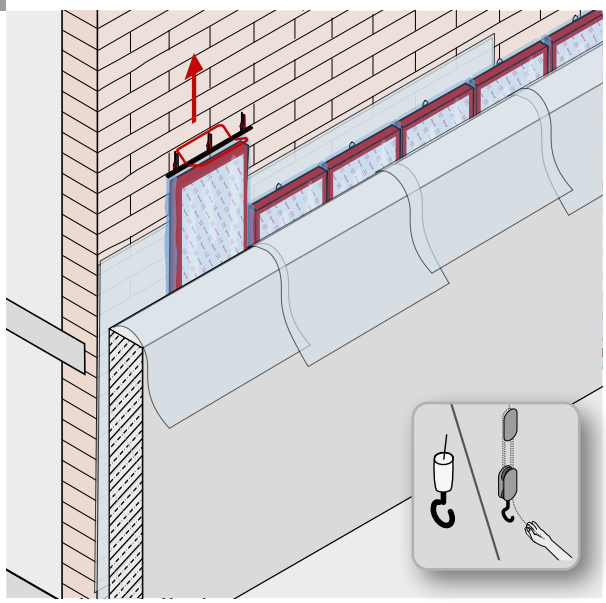
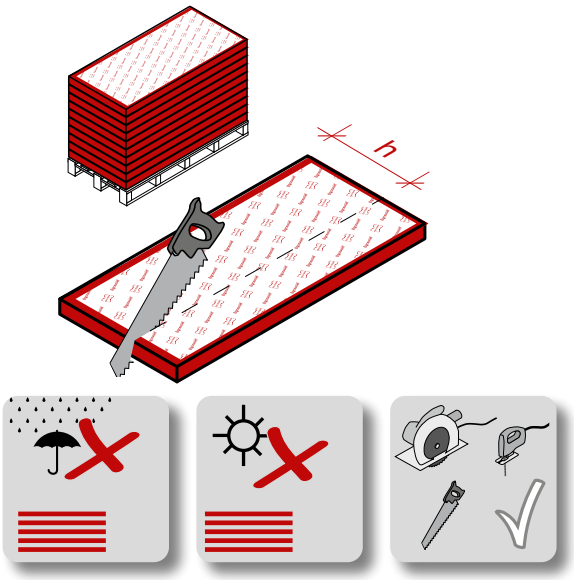


Diese Einbauhinweise können nur als Empfehlung gelten. Sie ersetzen nicht das für die Montage erforderliche Fachwissen. Die Hinweise werden stets auf dem neuesten Stand der Technik gehalten und werden ständig aktualisiert. Technische Änderungen sind daher – auch ohne vorherige Information des Kunden – ausdrücklich vorbehalten. Die jeweils gültige Version ist auf unserer Website unter: **www.maxfrank.com** zu finden. Ergänzend gelten unsere Allgemeinen Verkaufsbedingungen.

1



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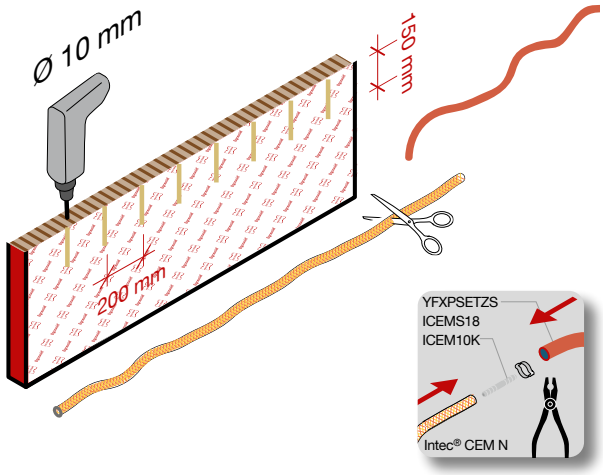

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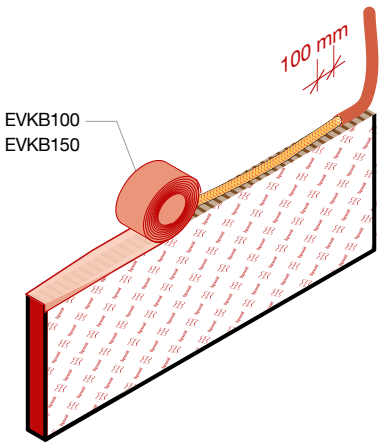

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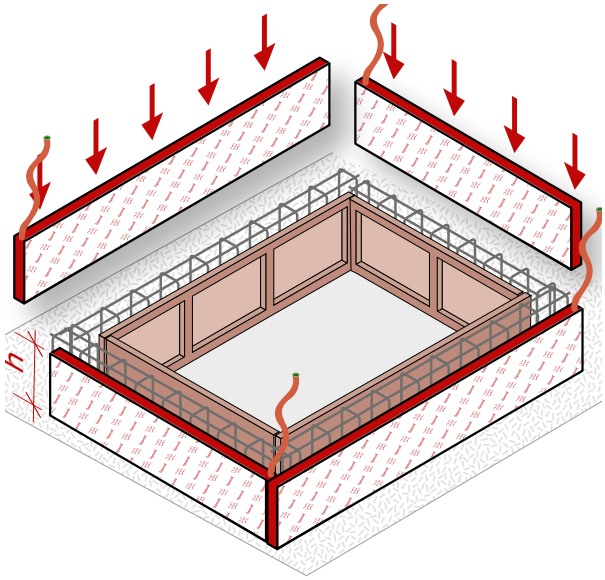

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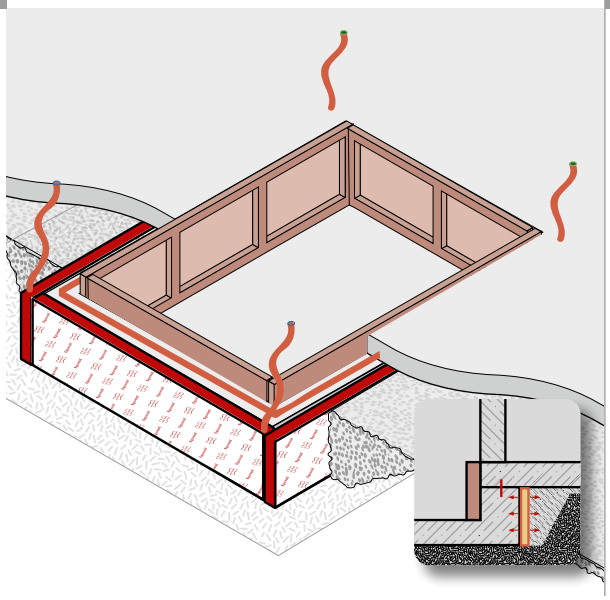

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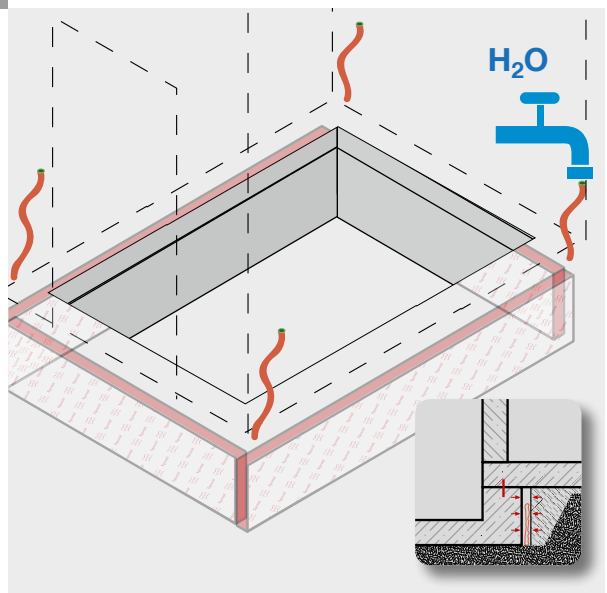

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Deutsche Rentenversicherung Nordbayern

Location: Würzburg, Germany

Building-type: Office building

Delivered quantity: 440 m² former Egcovoid® (35 mm)

Challenge: Load separation underground garage

Senior citizens‘ residence Webersgasse

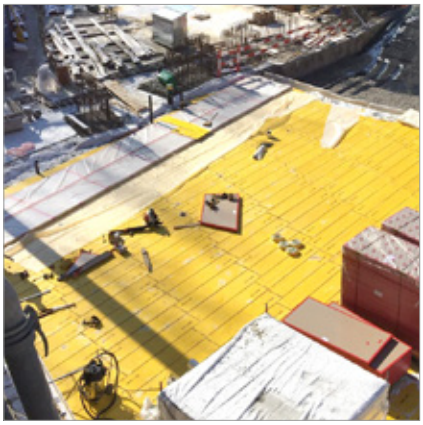
Location: Nürnberg, Germany

Building-type: Housing development

Delivered quantity: 500 m² former Egcovoid® (100 mm)

Challenge: The settlement slabs prevent the floor slab from acting as a load on the underground tunnel.

We would like to thank GS Schenk Bauunternehmung GmbH (Fürth) for providing these pictures and the illustration on pages 2 and 3.



The Circle at Zürich Airport

Location: Zürich, Switzerland

Building-type: Airport

Delivered quantity: 375 m² former Egcovoid® (50 mm)
1300 m² special size Egcovoid® (100 mm)

Challenge: load-free layer between tunnel and new building

ELI Extreme Light Infrastructure

Location: Dolní Břežany, Czech Republic

Building-type: Education facility/Laser center

Delivered quantity: 1200 m² former Egcovoid® (50 mm)
with foil tube

Challenge: Sound and static decoupling of new and existing structures

VISIT OUR NEW WEBSITE www.maxfrank.com

By using our new responsive webdesign, you will be led through the new MAX FRANK website and will conveniently be receiving all requested contents, despite which Smartphone you choose.

Our website offers both information regarding our products and a wide range of exceptional services. Therefore you will find interesting features that support you through every building phase.

MAX FRANK BUILDINGS

This welcomed tool has been integrated into the website and is now even better connected to the detailed product information. The virtual landscape has been expanded for several new building types and now offers a perfect product range to include hydropower plants, industrial warehouses and railway stations.

PRODUCT FINDER

Filter easily by the requested scope of applications and product properties and you will be led directly through to the appropriate products allowing any challenges you have, to be solved.

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BUILDING
COMMON GROUND

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