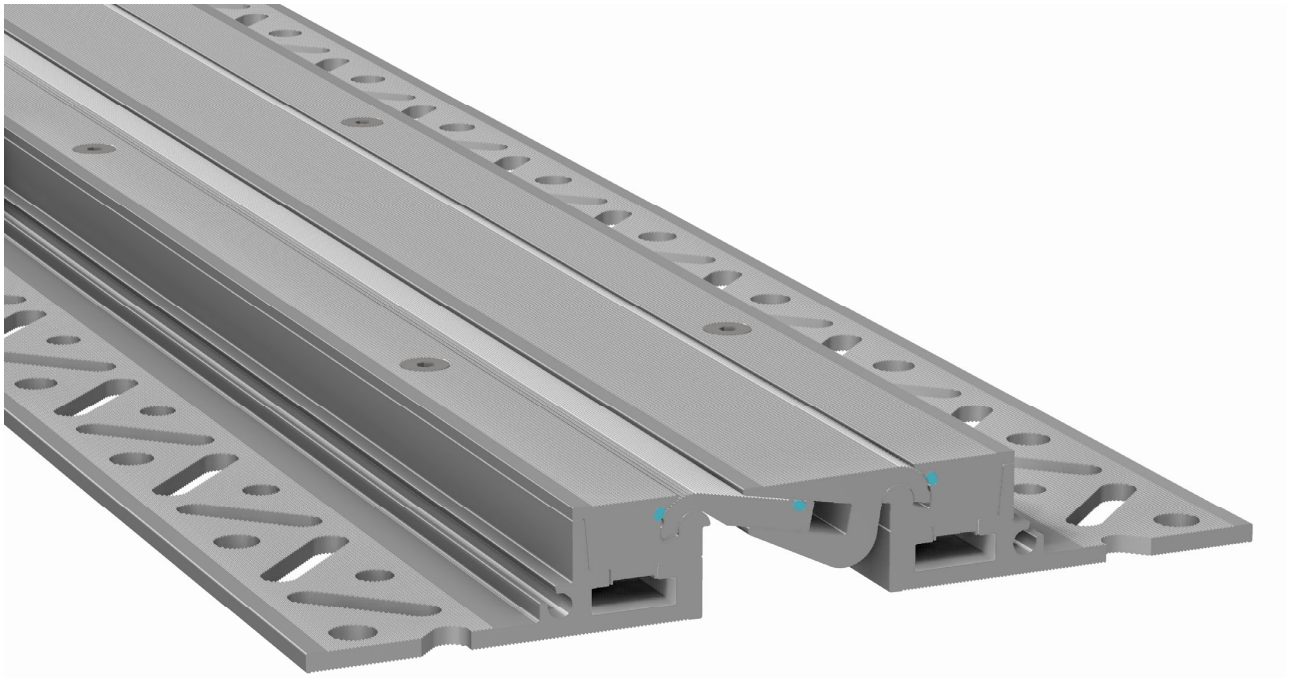
Installation Instructions

FSRX Expansion Joint Covers
Generation X, with reversible, exchangeable movement element



Example of an asymmetrical joint cover construction type FSRX 111

Scope of use

The FSRX expansion joint covers series consists of symmetrical and asymmetrical joint profiles with interchangeable movement elements.

The installation of the MIGUTRANS heavy duty expansion joint covers FSRX is, in principle, identical and will be shown using the joint cover FSRX 111 as an example.

This applies similarly to the following joint covers, too:

FSRX 111
FSRX 139 *
FSRX 144
FSRX 168
FSRX 180 *
FSRX 196

* symmetrical body of movement

Please read the following installation instructions thoroughly before starting the installation work.

In case of any queries, please do not hesitate to contact our MIGUA customer dialogue team at +49 (0)2058 / 774-0 or kundendialog@migua.de.

For further technical data please visit migua.com

The mounting of these joint covers is by default effected with screw anchors type MMS-plus of the company Heco. For alternative screw anchors, please refer to the list of standard mountings on our website.

1. General Information

Please check whether the supplied material is complete and undamaged prior to starting with the installation. Any damage or missing components must be reported to MIGUA without delay.

Please make sure that the material and the on-site characteristics correspond to the technical data provided in the datasheet. Pay particular attention to the existing joint width. It must not be larger than the maximum joint width specified in the technical data of the expansion joint cover.

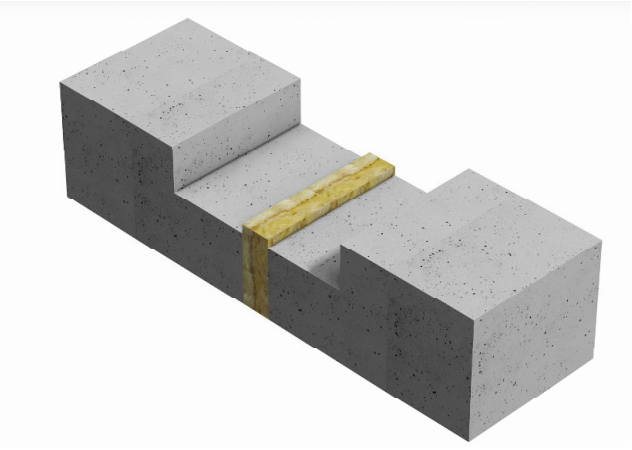
Check the previous work carried out by other workers to ensure correct and accurate execution. Please make sure, in particular, that the recess has the correct width, that the surface is capable of supporting the pay-load, that it is free of cracks and the that cover joint flanks show no signs of break-out. The maximum permitted joint width of the cover must not be exceeded, even when taking the deviation of the linearity of the joint into account.

The recess should be 100 mm wider than the overall cover width. For details, please see the technical data sheet of the respective cover.

Please coordinate the height of the installed cover (upper edge of cover) with the construction site management.

2. Preparation

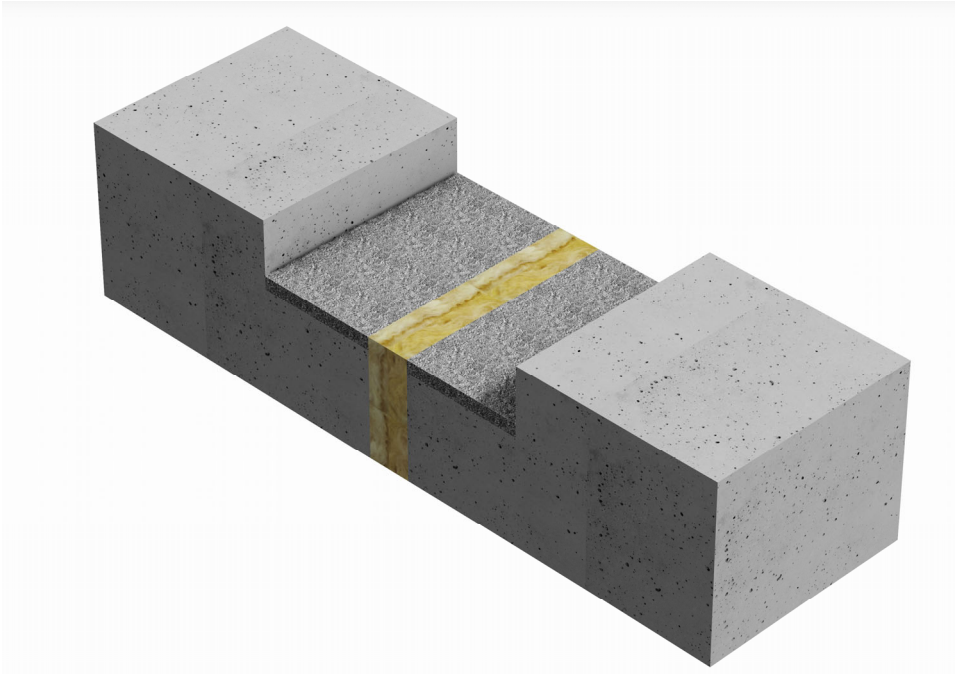
The concrete surface must be capable of carrying the payload and clean, dry as well as free of dust. The pressure resistance of the reinforced concrete must meet, at minimum, that of C20/25. Before installation, the cover is to be cleaned of dirt, oils and grease using a cleaning/solvent solution which leaves no residues. In order to ensure that the smoothing material does not enter the joint, the joint plate must protrude out of the joint by the same thickness as the smoothing material. Please place the MIGUTRANS expansion joint cover over the joint on the floor in order to familiarize yourself with the system and to check the correct dimensions. When using asymmetrical covers, please ensure that the covers are arranged in the same way. To make this clear, arrows are attached to the protective film on the covers. At cover joints, the cover on both sides of the joint must point in the same direction. Then store the covers alongside the joint.



Joint Profile	max. joint width	totale profile width
FSRX 111	50 mm	240 mm
FSRX 139	75 mm	268 mm
FSRX 144	75 mm	273 mm
FSRX 168	100 mm	297 mm
FSRX 180	116 mm	309 mm
FSRX 196	130 mm	329 mm

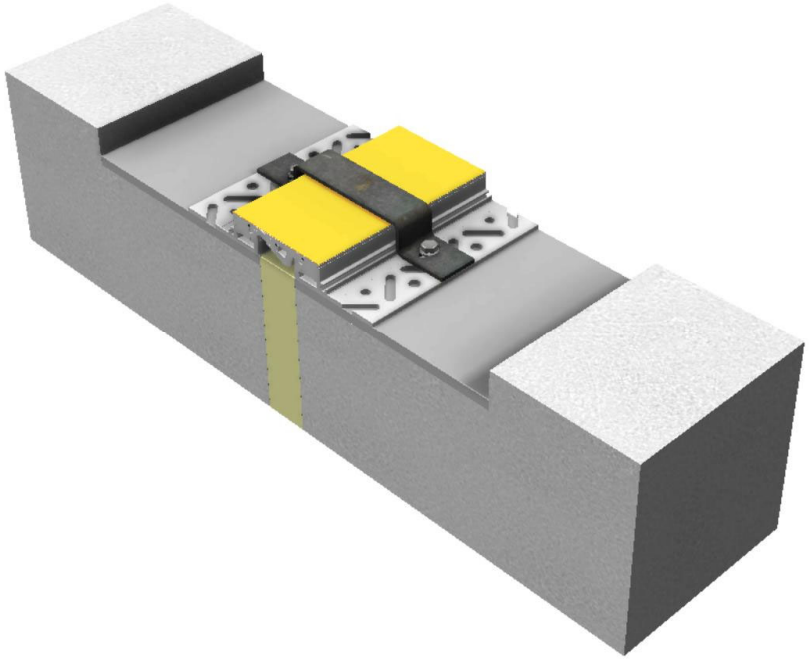
3. Creating the leveling layer

In order to level any unevenness in the raw concrete surface, smoothing material must be applied to both sides of the joint. The width of the material must at minimum be as wide as the cover flank. A highly durable and loss-free PCC mortar, epoxy resin mortar or similar material must be used. The selection of the mortar has to be carried out in accordance with the on-site situation. Please pay attention to the application instructions provided by the manufacturer.



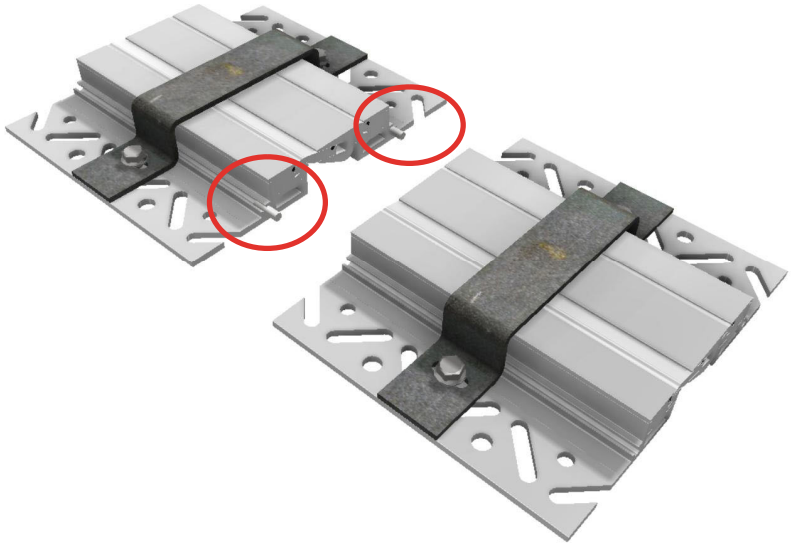
4. Setting the covers

In case of shaped elements, e.g. T-pieces or cross-pieces, laying should begin with these. Press the covers centrally arranged over the joint, to the right height, into the fresh mortar bed. Attention should be paid to ensure that the fixture flanks have no hollows and are fully lined. The fixture flanks must not reach into the joint.



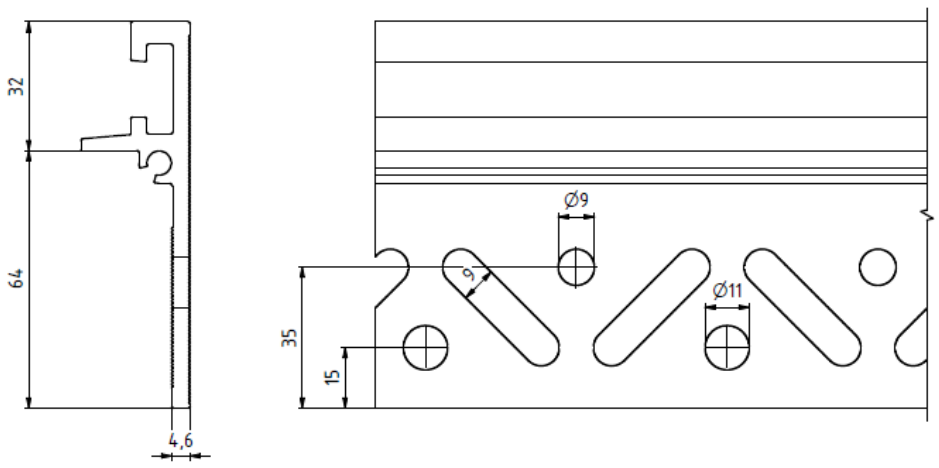
5. Connecting individual lenghts

For the majority of cover constructions, the correct height and flush connection of individual lengths is carried out using connecting pins which are fitted into the provided channels. For some cover constructions, the joint cover cap and basic construction are shifted against one another to ensure safe connection by pushing the individual lengths togehter.
While installing asymmetrical covers, please make sure that the covers are arranged alike. Protective films with respective arrows have been fixed to the covers for clarification.
At joint cover joints, both covers have to point in the same direction.



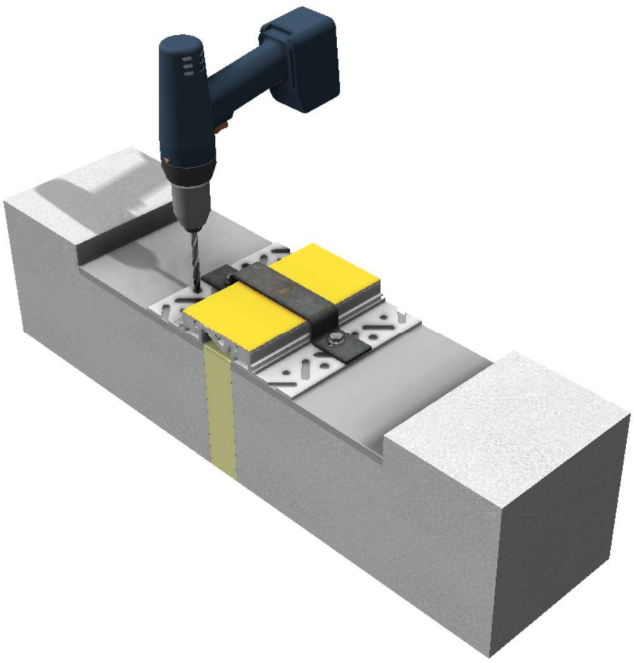
6. Anchoring in MIGUA mounting matrix©

The MIGUA mounting matrix provides variable positioning of anchoring, in order to be able to avoid disturbing reinforcement while setting anchors. For that purpose, please use the long bore holes with 9 mm diameter. The other bore holes (Ø 9mm on the inside, Ø 11mm on the outside) meet the requirements of the below mentioned anchor to ensure the minimum distance to the concrete edge. When using composite anchors, please use the outer mounting holes. In general, anchoring should be effected as far outside as possible. When using countersunk screws, the holes in the mounting brackets must be countersunk, too.



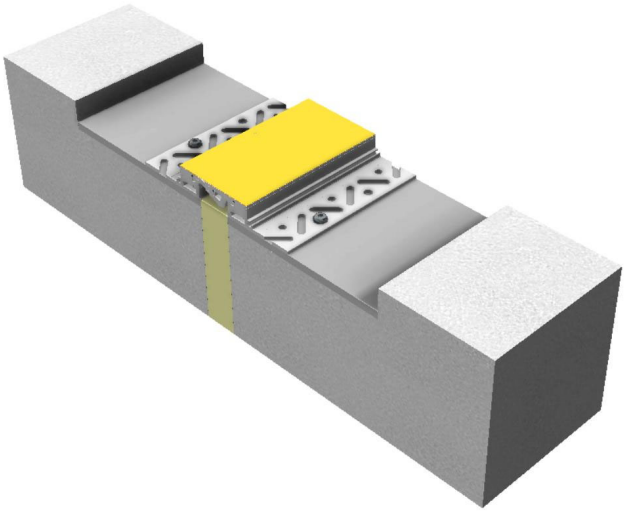
7. Anchoring of covers

After the mortar has hardened, the fixture flanks of the cover are anchored laterally to the expansion joint vibration-free into the raw concrete surface. For this, please use mortar screws Heco MMS-plus SS 10 X 90 vz or an alternative anchor as published in our standard mounting list on our website. The length of the anchor is based on the required strength (mortar layer plus cover flank strength). When using countersunk screws, the holes of the cover flank must be countersunk accordingly. The anchoring is carried out at intervals of 300 mm. Please ensure vertical application of the impact screwdriver. The regulations set out by the screw manufacturer are to be observed. The clamping strengths and installation depths of the anchor manufacturer must be maintained.



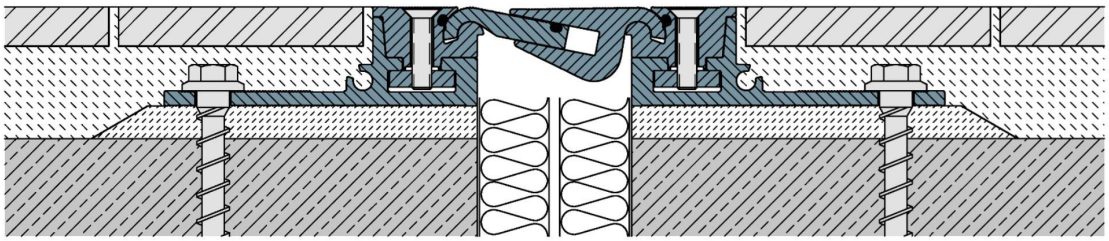
8. Removing the spacers

The factory-mounted spacers are to be removed immediately after the covers are attached. The spacers may look differently depending on the individual cover.



9. Replacement and inspection of the screws, moving element

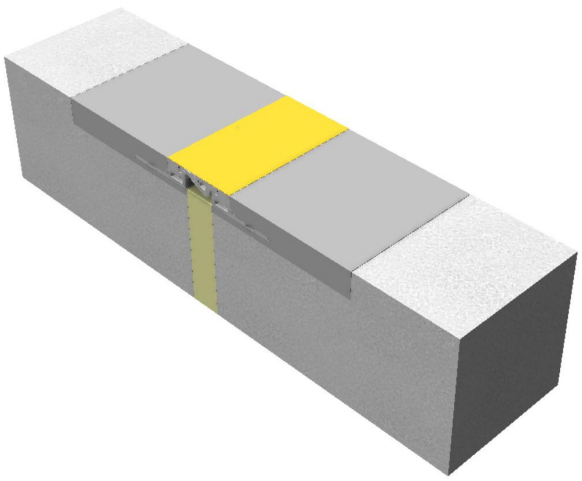
The screws with which the spacers were fixed must be disposed of or otherwise used.
The supplied screws type DIN 7991, A2 M6*25 are to be installed at these points. Thread the new screws carefully into the existing threaded plates.
Please note that the screws supplied have a hexagon socket internal thread (Allen) and must be tightened with a torque wrench to a value of 8.4 Nm. If the torque is too low, the elements will loosen, if the torque is too high, damage may occur.
Leave the protective film on the joint cover until removal/final cleaning.



10. Filling the cut / finishing the covering In case of installation in a recess: Fill the recess with suitable material
Here, the stress caused by subsequent use must be taken into account, such as load from forklift trucks, abrasion, chemical stress, etc. The backfill height is to be determined by the local site management, taking into account the later use of the pavement.

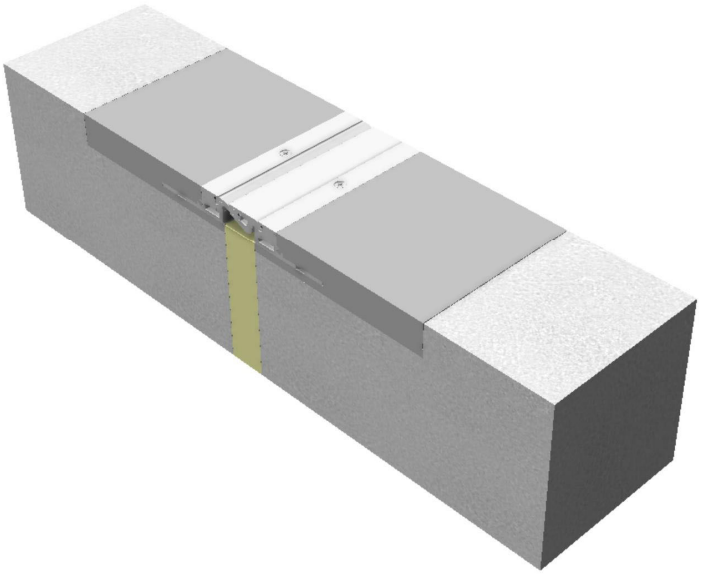
In case of installation without recess: finishing of the paving/top floor

In any case, attention is to be paid to ensure that the upper edge of the neighboring surface has the same height as the upper edge of the cover. The cover's upper edges must not protrude.



11. Removing the protective film

Shortly before acceptance of work by the client, please remove the protective film and clean the cover.



Given that qualitatively equivalent results are achieved otherwise, it is permitted to deviate from the described procedures.

For more information please visit migua.com

For more information, please see our brief video clip on YouTube

Instructions for replacing the moving element FSRX

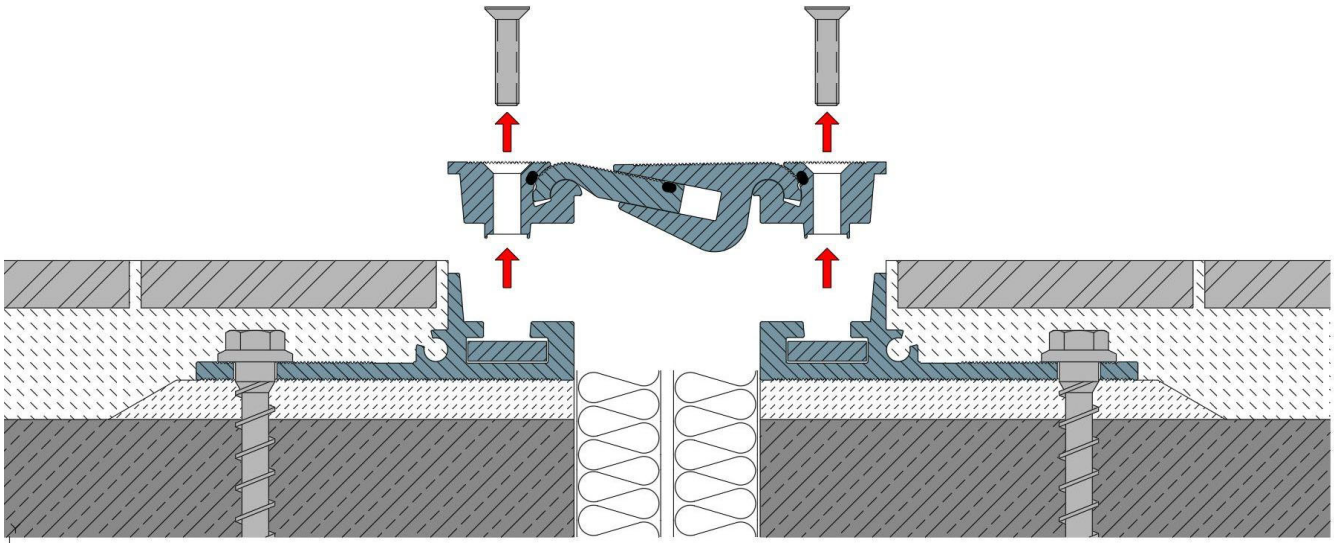
During renovations, refurbishments, and retrofit, the movement element of these expansion joint cover series can be adapted to the new situation without having to remove the entire expansion joint cover and the adjacent flooring.

A. Removing the built-in motion element

Carefully loosen all screws of the moving element on both sides with an Allen key. Then remove the two side parts and the moving elements. Remove the thread plates on both sides of the profile. Clean the grooves in which the threaded plates are guided.

Before inserting the new moving elements, check the distance between the profile legs and make sure that the intended moving elements fit according to the technical data in the data sheet. If the width of the joint has changed, a wider or narrower moving element may be used.
The replaced moving elements are available anodised, if desired.

.



B. **Inserting the new motion element**

Place the new threaded plates into the grooves at the distance of the screw holes of the side parts and turn them by 90°. Carefully place the sides assembled with the moving elements into the grooves on both sides and make sure that the elements on both sides fit exactly. Carefully thread the screws (M6 with hexagon socket) into the threaded plates, but do not tighten them yet.

Adjust the movement block prepared in this way to the correct position and now tighten the M6*25 A2 screws with a tightening torque of 8.4 Nm. The torque must be moninotred. Overtightening the screws can cause damage. Check the tightness over the entire length of the joint cover.