

Installation instructions

MIGUTAN-Systems with long AAS sheets



Please read these installation instructions completely before installation.

If you have any questions, please contact the Migua service team.

The joint covers are anchored as standard with concrete anchors of the type MMS-plus from the company Heco. Further anchor types can be found on the standard anchoring list on our website

<https://www.migua.com/de/produkte/migutan/>.

1.1 General Information

MIGUTAN systems will be fabricated according to a site measurement to ensure perfect fit.

The metal parts will be supplied in single length of max. 4 meter.

Rubber parts will be preferably supplied in one continuous length. Systems larger than approx. 20 m may be supplied in several parts, due to handling and transport. In such case site welding of the sealing insert and the side sealing sheets are necessary. We offer such work on request. We offer as well trainings in our workshop to enable you to do the welding on site.

The installation of the different MIGUTAN systems are similar in principle. The following instructions are based on MIGUTAN profile FP 90/45 Ni with long AAS sheets.

This product can only fulfil its design function if it has been correctly selected and correctly installed. This means that joint width (after allowance for concrete shrinkage), total joint movement and expected load must have been considered and accounted for.

1.2 Marking

For identification the order number is written on a white label on top of the capping.

Order no.: 123456

Each MIGUTAN system is marked with the system number, continuous numbering and the length of each system.

The system numbers are mentioned on the workshop drawings by coloured labels. The same labels stick on the capping and on the rubber parts.

A copy of the workshop drawings will be supplied with each order.

SYSTEM No. 1 2 3 4 5

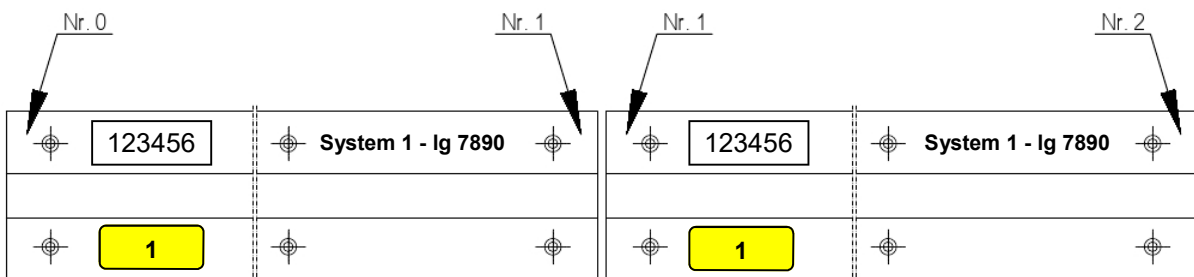
Each system has a continuous numbering which starts at one system end with nr. 0. The continuous numbering shall ensure that metal and rubber parts fit together. The beginning of the numbering (nr. 0) is shown on rubber parts, metal parts and on the drawings.

The continuous numbering is written on the yellow protection tape, but also punched with punching numbers into the aluminium angle.

The length of each system is written on the yellow protection tape, the fixing angle as well as the rubber parts.

Please see the following sample:

System no. 1 - Order no. 123456 with a total length of 7890 mm.



The yellow protection tape has to be removed after the work on-site is finished.

1.3 Pre-preparation

Lay out the MIGUTAN expansion joint cover onto the floor and over the joint gap so you can become acquainted with the system.

Each end of the metal parts is marked with a number that matches the number of the preceding length. Lay the lengths down, end-to-end, matching number to matching number.

It has to be considered that the rubber parts has some distance to walls, columns, etc., due to the bituminous layer. The distance is taken into account in our measurement and fabrication. In case of floor-to-wall connections, the distance is incorporated in the spacer, which has to be directly connected to the wall, column, etc..

At up- and downstands the distance has to be taken into account during installation.

The aluminium profile must be cleaned, degreased and primed.

1.4 General advice

When using materials supplied by third parties e.g. epoxy mortar, sealing material for connection joint, etc., the manufacturer's instructions have to be followed.

This refers in particular to temperature during installation and moisture.

If you need assistance, please feel free contact us.

2. Surface preparation

The concrete surface must be load-bearing, clean, dry, dust-free and must have the correct height below the upper edge of the finished floor level.

The compressive strength of the reinforced concrete must at least correspond to a C20/25.

Before installation, the joint cover must be cleaned of impurities, oil and grease using a residue-free cleaner/solvent. Broken edges must be reprofiled in advance with suitable repair mortar to ensure complete bearing surface.

The width of the blockout depends on the used type of insert. Details can be found on below mentioned table. The depth of the blockout depends on the height of the profile and the evenness, straight-ness and smoothness of the concrete surface. As an average you can consider the following: Height of profile + 10 mm for the levelling layer.



Description	Width of blockout
FP(G) 80	290 mm
FP(G) 90	300 mm
FP(G) 110	320 mm
FP 130	340 mm
FP 155	360 mm
FPL 85	300 mm

3. Laying of levelling layer

The concrete surface has to be primed in accordance with the processing guidelines for the material used. To compensate any unevenness of the unfinished concrete floor lay a mortar strip made of a compression-resistant and and shrinkage-free mortar (e.g. epoxy resin or PCC mortar) on both sides of the joint. Separate the strips in the joint area by means of a dry lining board and align it so that no mortar runs into the joint.

The width of the epoxy-mortar bed may vary depending on the size of the joint-gap as well as the width of fixing angle. The narrower the joint-gap, the wider the setting bed must be. The thickness of the epoxy-mortar bed may vary depending on irregularity of the concrete deck and the desired distance from the finished wearing surface (top of deck).

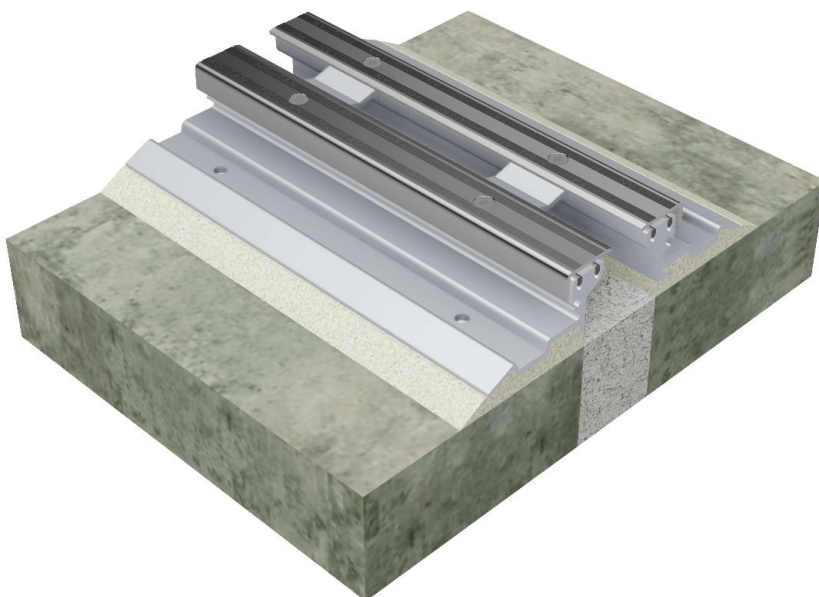


4. Installation of the first length of MIGUTAN system

Lower the first length of MIGUTAN system into the wet mortar setting bed.

Tap the system down into the setting bed until the upper surface is at the required level.

Ensure that the fixing angles are fully embedded and there are not cavities beneath the horizontal part of the fixing angles. This is absolutely necessary, as cavities under the fixing legs lead to damage.



5. Connection of each single length

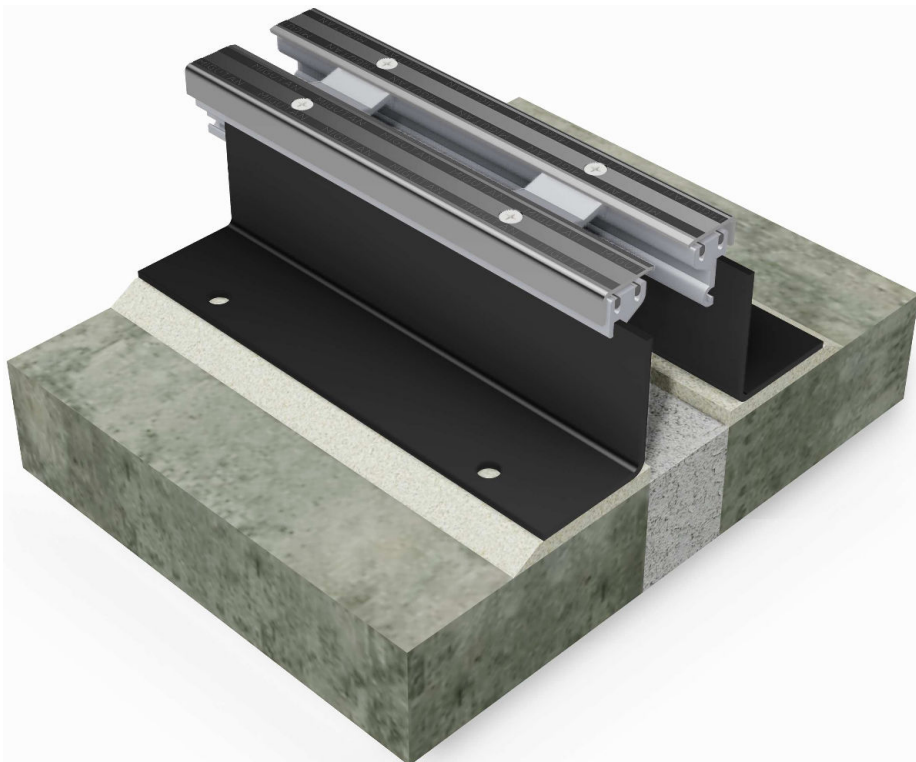
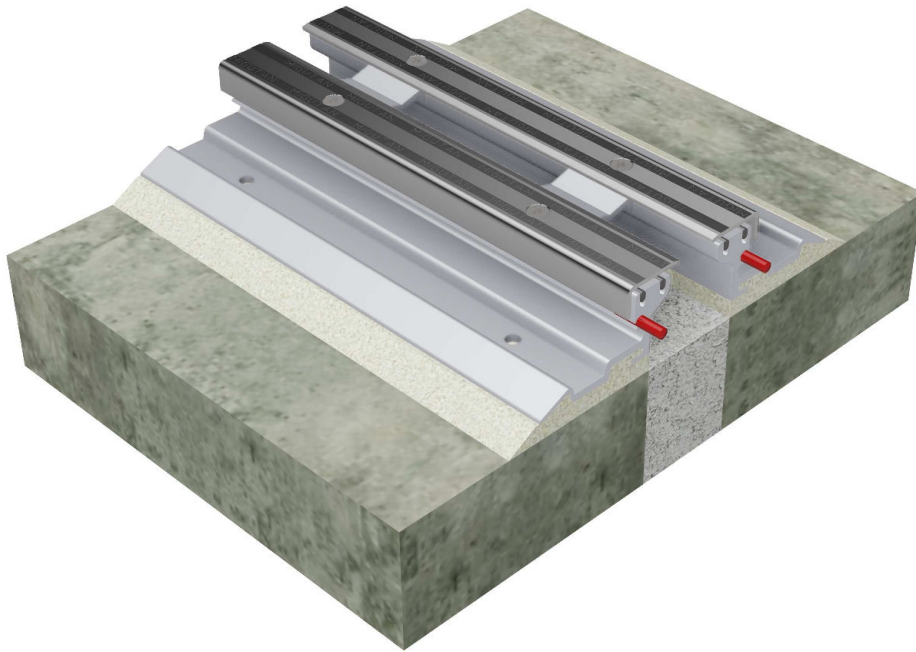
Lower the next length of the MIGUTAN system into the wet-epoxy leveling bed making sure it is interlocked with the previous section. Repeat procedure until final section is reached.

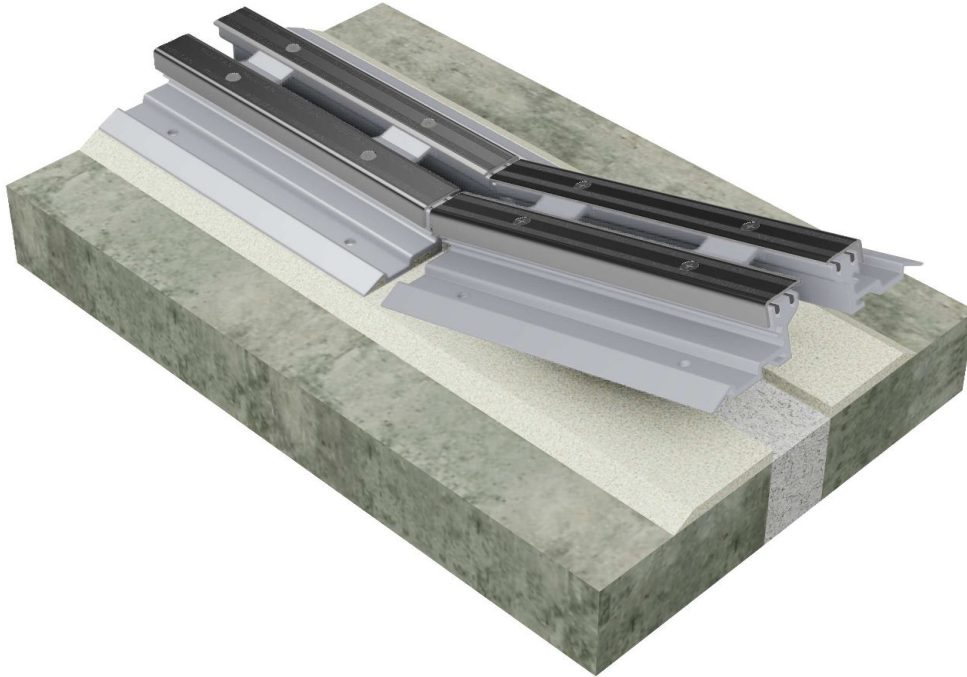
Note:

In case of the FP.../80, 95, and 115 NI, positive interlocking between abutting lengths is obtained by staggering the upper and lower parts of the aluminium parts at the joins between each length.

The FP .../35, 45 and 60 S NI have solid (not sliding) rails. Stainless steel pins factory-installed in the ends of each length join the lengths of these models.

Steel leg systems are joined by butting consecutive sections.

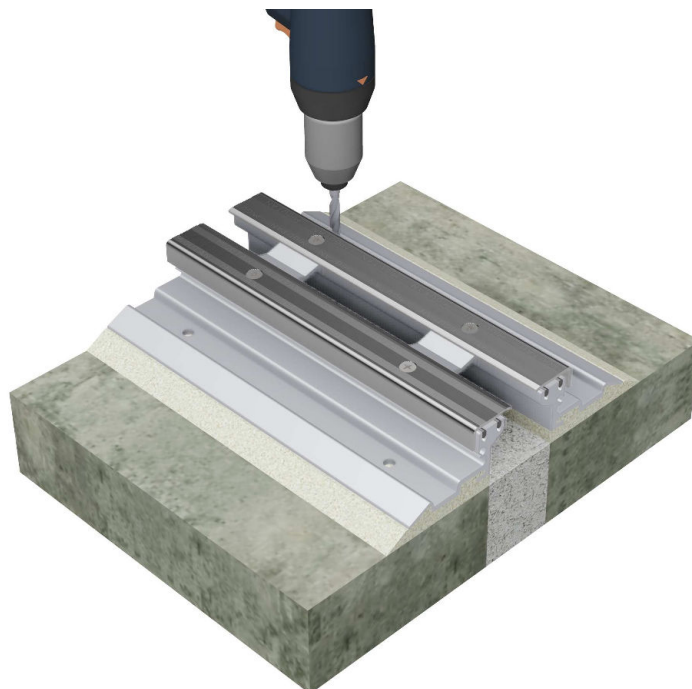




6. Anchoring the joint covers

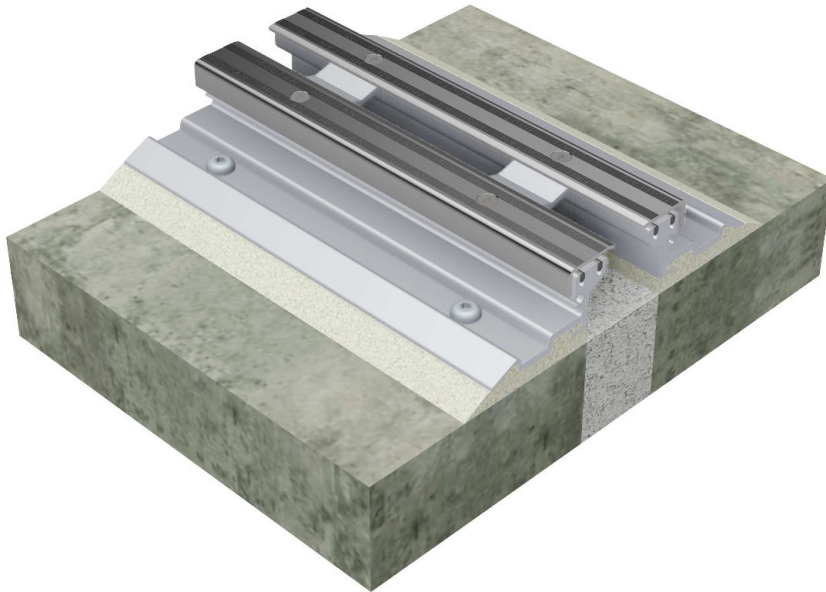
Immediately after the mortar has hardened, the fastening legs of the joint covers are to be anchored laterally from the movement joint in the raw concrete surface without any vibration. For this purpose, use the concrete screw Heco MMS-plus SS 10 X 90 vz. or another anchor from the standard anchoring list published on our website.

The length of the anchor depends on the required clamping thickness (mortar layer + profile leg thickness). When using countersunk screws the holes in the profile legs must be countersunk accordingly. Anchoring is carried out at a distance of 350 mm. Ensure that the impact wrench is applied vertically. The instructions of the screw manufacturer must be observed. In particular, the clamping thicknesses and installation depths of the anchor manufacturers must be complied with.



7. Fixing

Screw in the screws according to the manufacturer's instructions. Please use suitable screws that do not damage the sealing layer.



8. Cutting (or removing) of the spacer

You must now cut through the spacer between the two sides of the profile using an angle cutter with metal cut blade.

Alternatively, the spacer can be completely removed.

This is particularly important, as otherwise movement in the joint can cause damage to the construction.

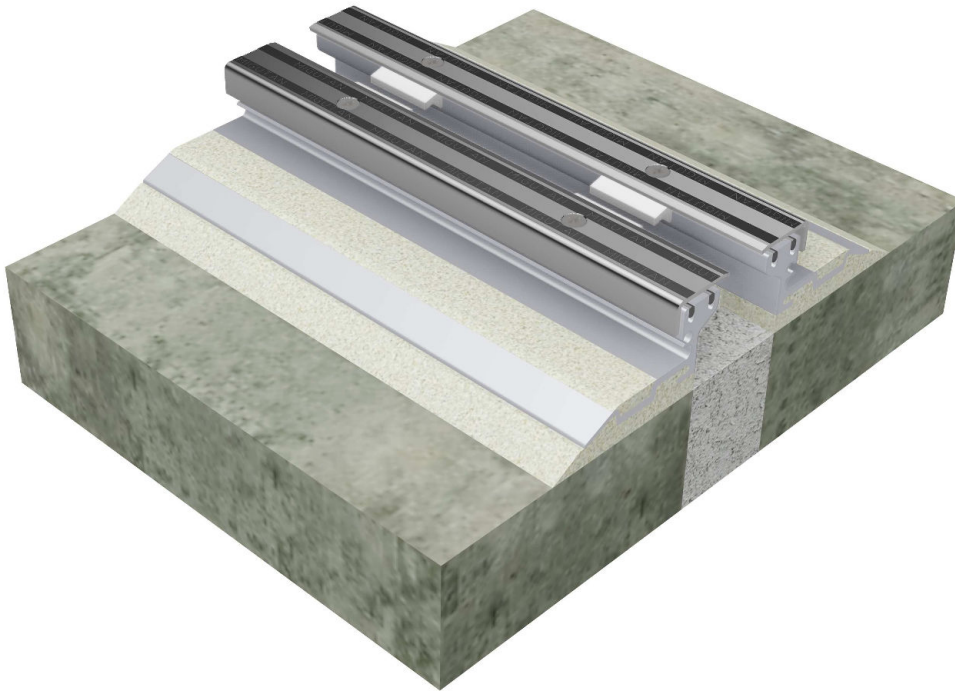


9. Filling of the groove (only if applicable)

MIGUTAN systems FP .../60, 80, 95 and 115 are supplied with a grooved fixing angle, which protects the screw head.

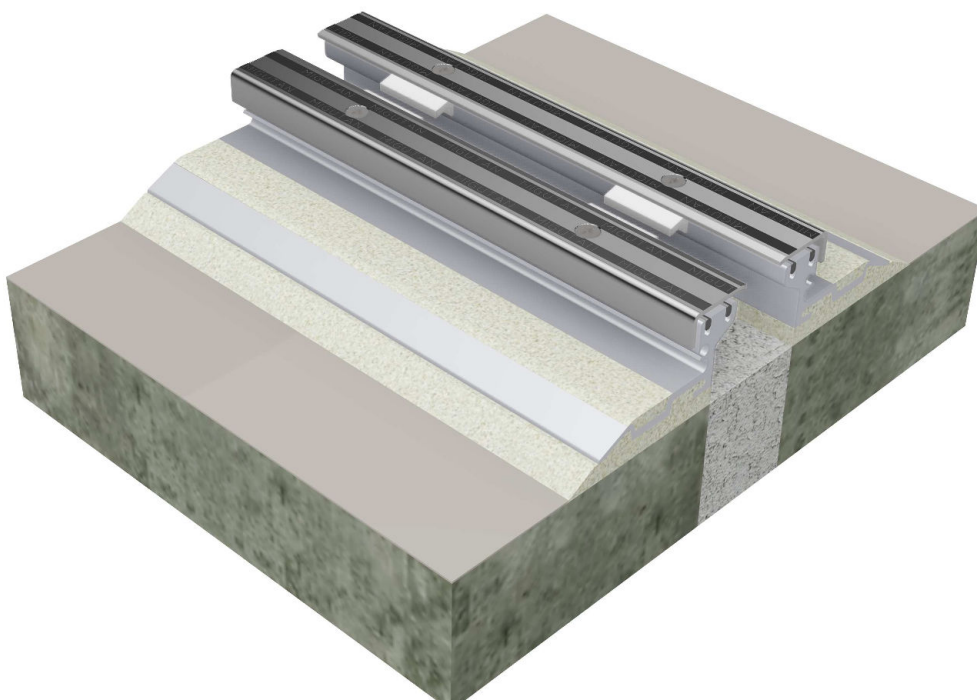
Fill recessed nut channel with sealant, hot rubberized asphalt or grout in order to create a smooth surface for the bituminous layer to lie on and to prevent damage to the membrane.

In cases where anchors protrude above the plane of the nut channel, cut off excessive anchor height and grind to remove any sharp edges that might damage waterproofing membrane.



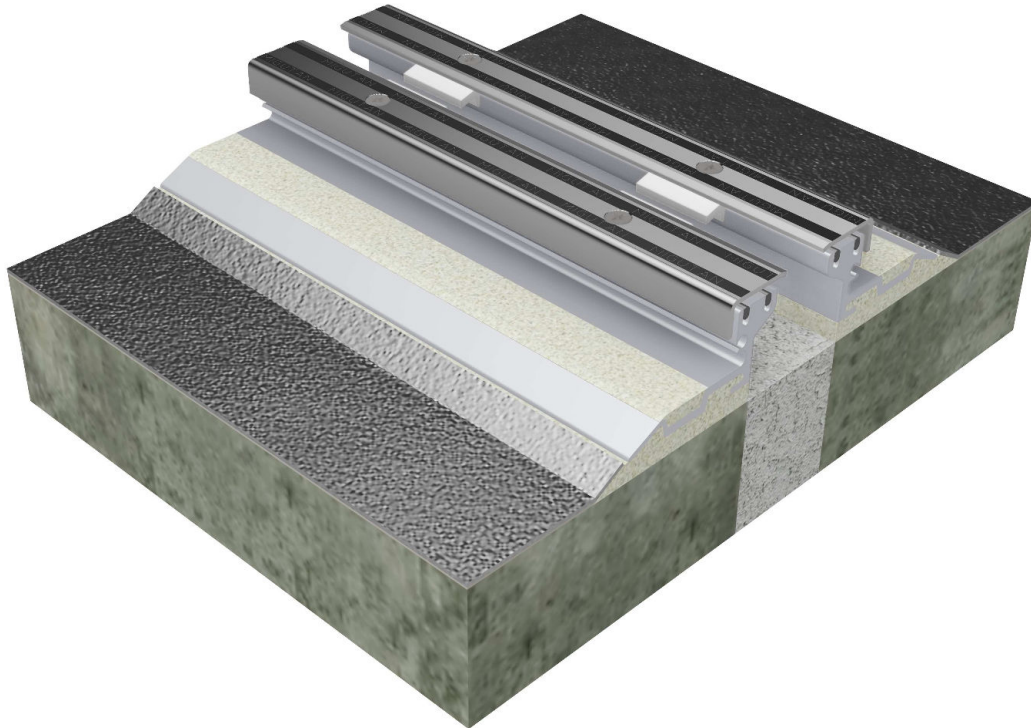
10. Preparing of the surface

Prime the concrete surface and the fixing angle with a suitable bitumen primer.



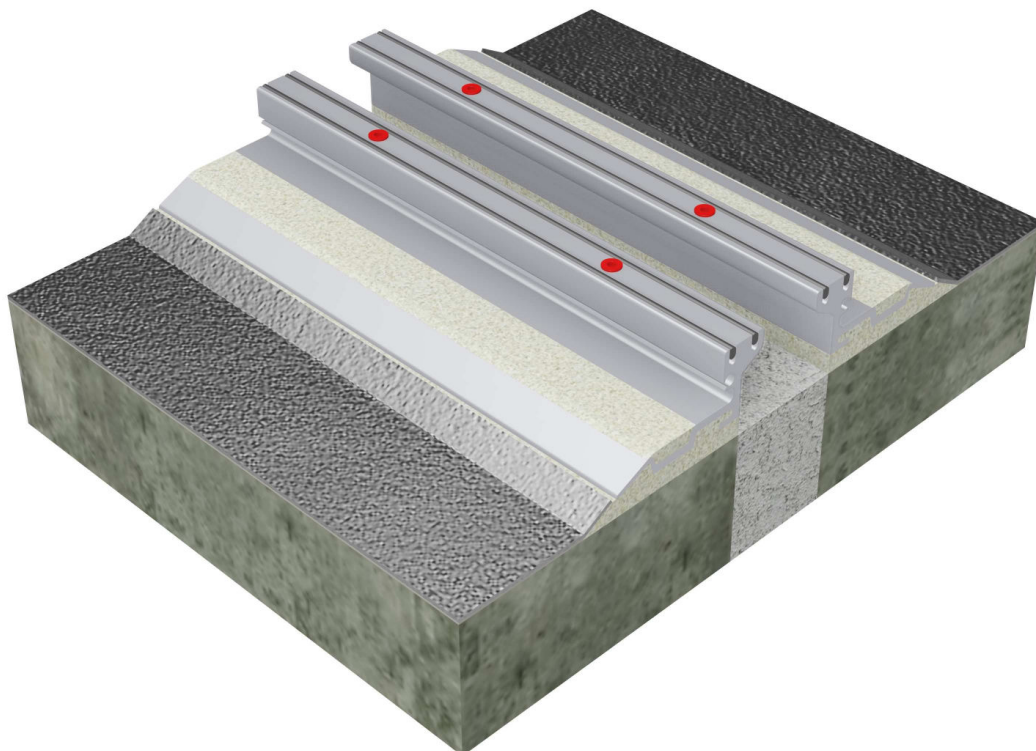
11. Applying of the first bituminous layer

The first bituminous layer has to be applied up to the fixing angle respectively the epoxy mortar. For details pls see item 13.1.



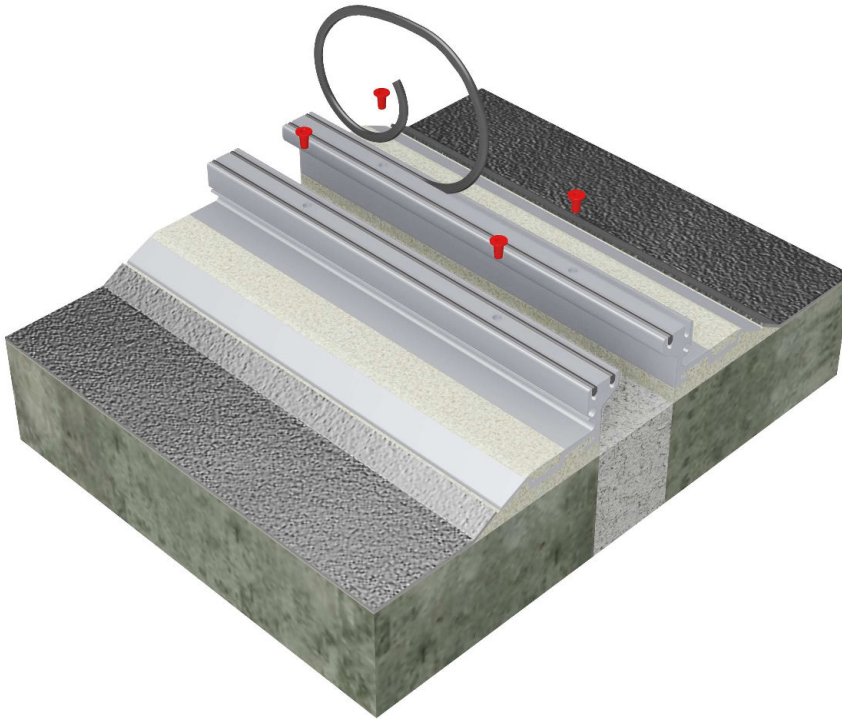
12.1 Application of rubber parts

Remove the capping strips. Please make sure that they are later on re-installed at the same place and are not mixed up.



12.2 Application of rubber parts

Remove the rubber filler cords and the plastic plugs



12.3 Application of rubber parts

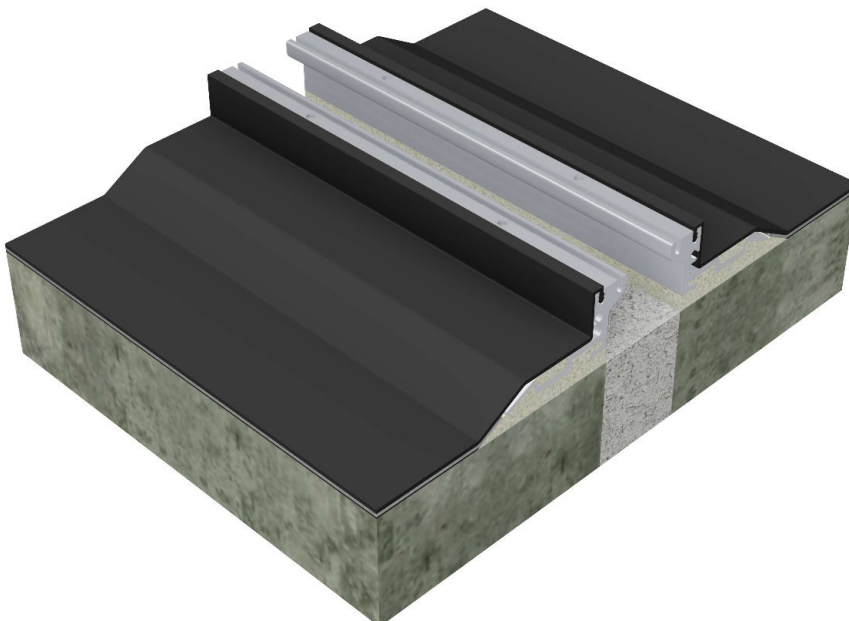
Roll out the long AAS sheets along the edges of the joint to enable the rubber to expand. The long AAS sheets need to be cleaned and degreased.

Tip-Spray locking dart with mild soapy water to make insert easier.

Insert the long AAS sheets into the outer grooves.

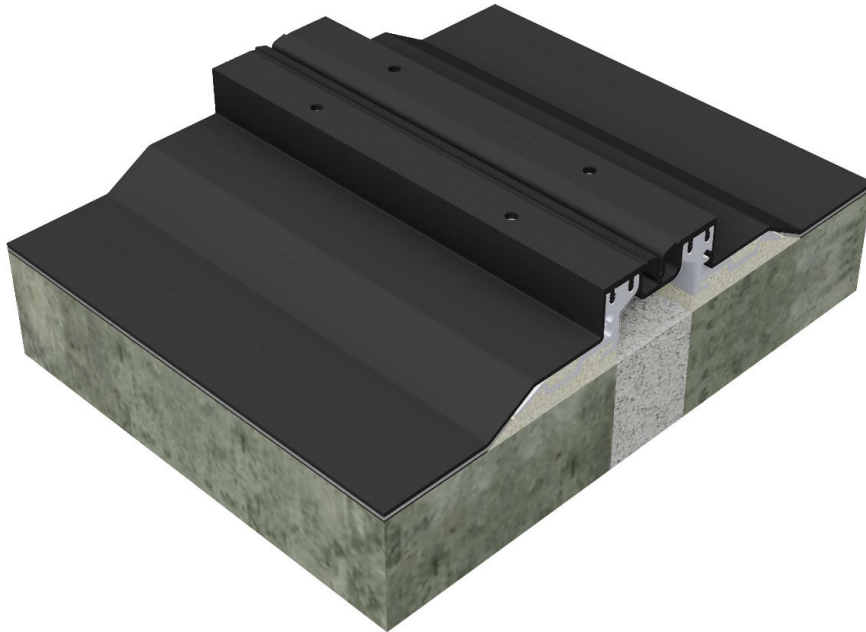
Important:

Please always start at an intersection (= moulded part as cross piece, t-piece, or upstands etc.) The sheets have to be pressed in from above and you must not pull at the sheets to avoid stretching.



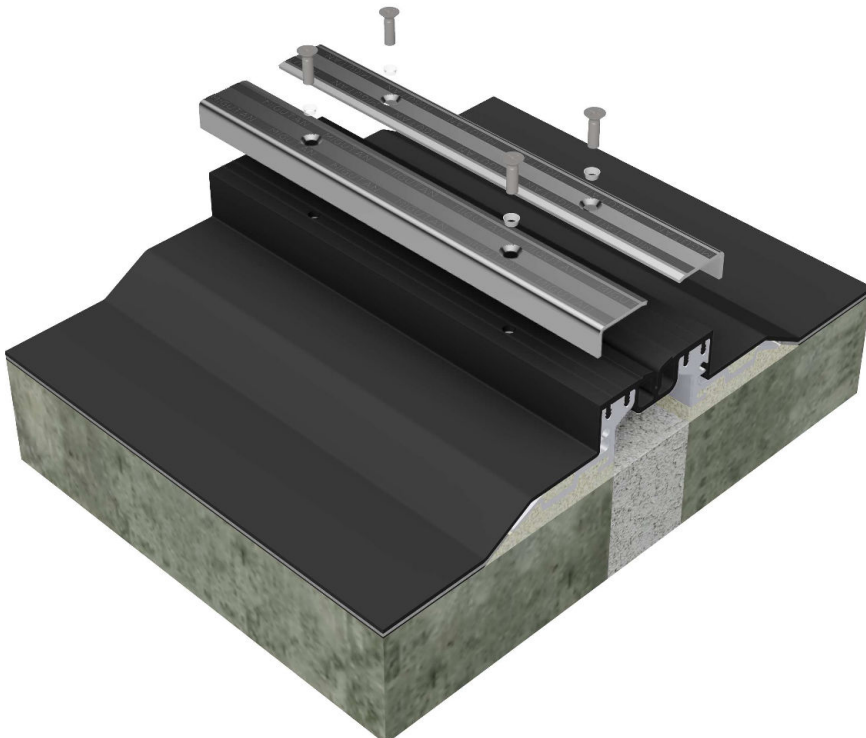
12.4 Application of rubber parts

Unroll the sealing insert and press its locking ribs into the inner grooves of the profile. Ensure that the punched holes in the sealing insert align with the drilled holes in the aluminium profile.



12.5 Application of rubber parts

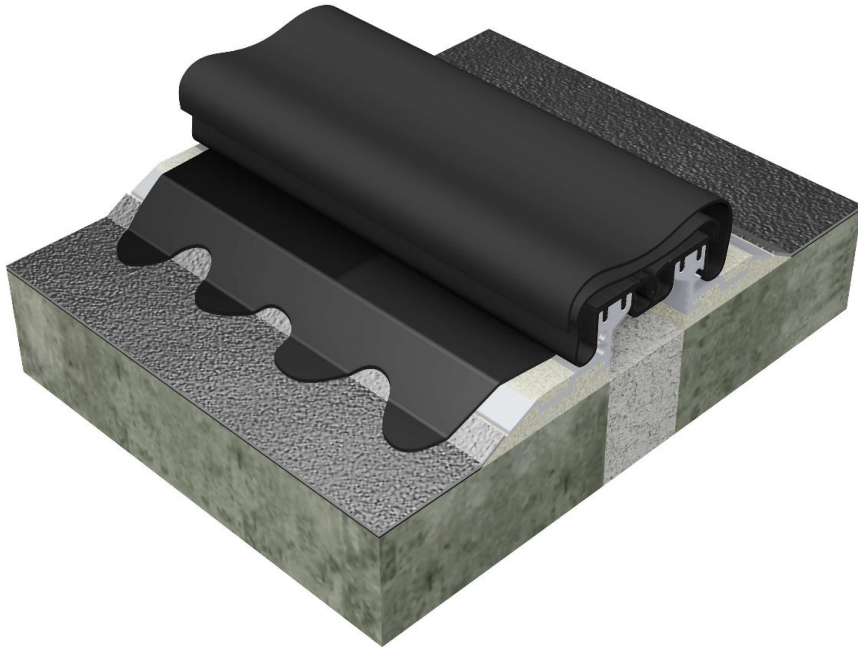
Finally, install the stainless steel cappings and secure them with the stainless steel screws supplied (screws DIN 965, size 3, Phillips system). Place the Nylon sealing ring between screw head and stainless steel capping. In order to ensure sufficient pressure the bolts should be tightened using a torque wrench (torque 7 Nm). Now tape the profile surface with the supplied yellow protective tape to protect it from contamination when installing the mastic asphalt.



13.1 Application of the first bituminous layer

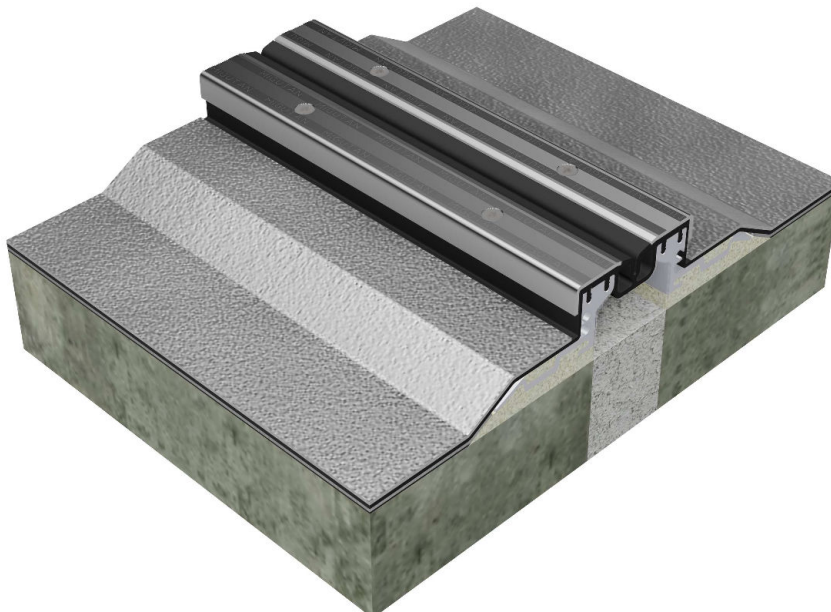
Wrap the long foils over the support profiles and pour hot liquid bitumen over the complete horizontal leg of the support profiles. Press the long sheets firmly into the hot bitumen up to the corners of the support profiles.

Alternatively, if you are using a welded bitumen sheet, you must ensure that the sheet is heated properly until it becomes liquid. The exact temperature is essential for a good bond. We recommend an elastomeric bitumen membrane with a high elastomer content, e.g.: PYE. Please ask your bitumen manufacturer for details.



13.2 Application of the second bituminous layer

Apply an additional layer of hot liquid bitumen over the long AAS sheets to fully encapsulate the long AAS sheets and finally apply the second bituminous layer while it is still hot.



13.3 Protection of the long AAS sheets

The long AAS sheets which are not protected in vertical areas by bitumen has to be protected with suitable measures. The space between asphalt and vertical part of the profile can be protected by means of e.g. edge bars (made of iron steel bars).

At profiles with a height > 60 mm the top bituminous layer need to be glued until bottom part of the stainless steel capping.

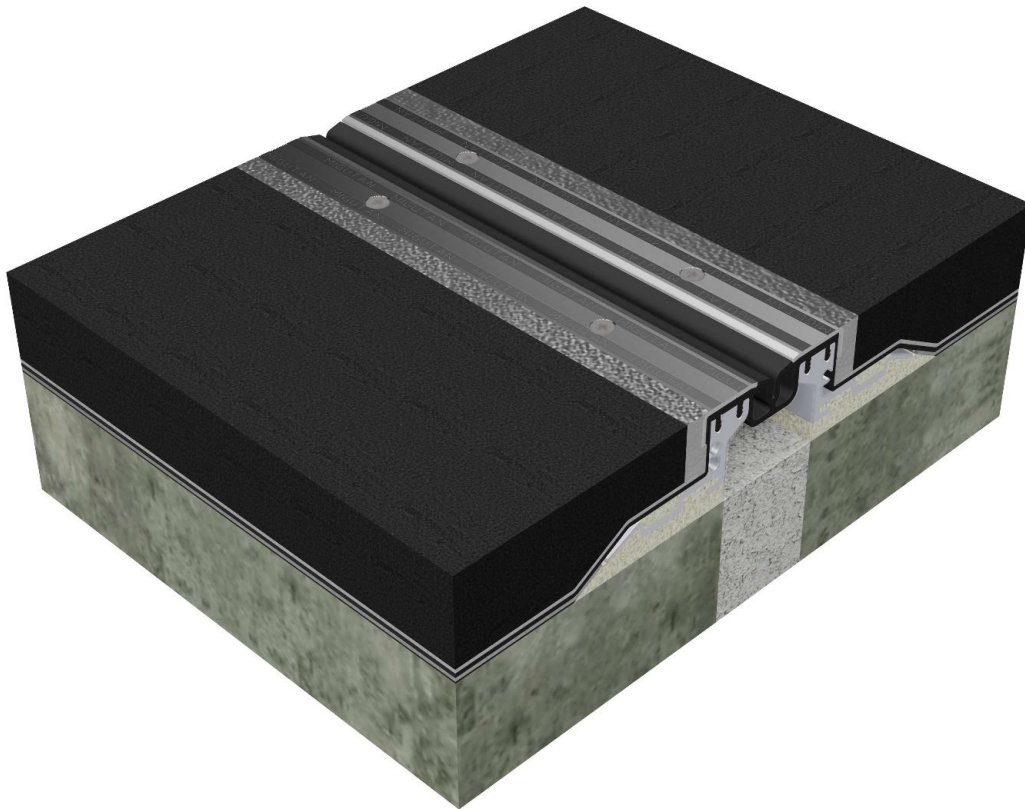
Under no circumstances the hot flame of the heater shall come in contact with the sealing elements.

14. Connection joint

Please make sure that the height of the asphalt is flush with the top edge of the installed joint cover. The cover must not protrude or be deeper than the asphalt.

We recommend that you create a connection joint on both sides next to the joint system and fill it with suitable material. This allows you to remove the stainless steel caps later and replace the centre seal if necessary.

It also prevents contact between the very hot mastic asphalt and the long foils.



15. Retighten Screws

The stainless steel screws are to be retightened after approx. 10-14 days by means of a torque wrench (7 Nm).

Our verbal and written application recommendations, which we give to support the buyer or the processor based on our experience and to the best of our knowledge in accordance with the current state of knowledge in science and practice, are non-binding and do not constitute a contractual legal relationship or any ancillary obligations arising from the purchase contract. They do not release the purchaser from testing our products for their suitability for the intended use on his own responsibility and from observing the property rights of third parties. In all other respects, our general terms and conditions of business shall apply. We reserve the right to make technical changes.