



Expansion joints – optional extras

Infrastructure | Buildings | Industrial structures

# mageba optional expansion joint features – optimising benefits



## **ROBO®DUR** asphalt-strengthening ribs

effective, protective, durable



**mageba**





# Product characteristics & benefits

## Principle

The mageba ROBO®DUR asphalt-strengthening system was developed to combat the deformation due to traffic of asphalt road surfacing adjacent to an expansion joint. Slits are cut in the asphalt (~10 mm of the thickness) at an angle of 45° to the driving direction, and filled with high-strength ROBO®DUR mortar. This reinforcement of the asphalt strengthens the surfacing in this area where it is most prone to deformation, preventing rutting.

## Characteristics

- Strengthens the road surfacing right up to the expansion joint's edge profile
- Prevents rutting and the resulting impacts on the joint from traffic, and thus extends the life of the joint and the whole structure
- Prevents damage by snow ploughs due to protruding edge profiles
- Ensures lasting driver comfort
- Helps the structure to remain watertight in this area, by protecting its waterproofing membrane

## Driver comfort

The use of the ROBO®DUR system can significantly increase the life of the expansion joint and of the adjacent asphalt surfacing. In doing this, it ensures not only the lasting proper functioning of the joint, but also driver comfort for many years after installation.

The considerable increase in service life and the reduction in impacts from traffic also reduce maintenance and replacement effort.

The strengthening ribs are strong enough to resist the vertical weight forces from traffic and the shear forces from braking.

## Areas of application

The ROBO®DUR system can be used anywhere that high loading from heavy traffic is to be expected, or where high braking or other shear forces will result in additional stresses in the surfacing. This is particularly the case at expansion joints in curves and at highway entries and exits, and at expansion joints on highways in general.

In addition, the ROBO®DUR system is frequently used at expansion joints which should require especially little maintenance, e.g. on main routes within a city, indirectly also reducing the noise emissions from a joint.

## Quality

For five decades, mageba expansion joints have proven their worth in thousands of structures under the most demanding conditions. In addition to the product properties, the extensive experience of our well-qualified manufacturing and installation staff also contributes to the high quality and durability of the products.

mageba operates a process-oriented quality system that is certified in accordance with ISO 9001:2015. Quality is also regularly checked by independent bodies such as the materials testing institute (MPA) of the University of Stuttgart. mageba factories are approved for welding in accordance with ISO 3834-2, and certified in accordance with the current steel construction standard EN 1090.

## Specification

### General parameters for installation:

Depth:	min. 70 mm (~10 mm of asphalt thickness)
Width:	15 mm
Length:	min. 600 mm
Interval:	350 mm
Angle:	45° to driving direction

## Related products

mageba offers the following additional options for use in connection with expansion joints:

- **ROBO®GRIP:** Anti-skid coating with high coefficient of friction, preventing skidding of over-rolling vehicles in wet conditions
- **ROBO®STATIFLEX®:** Strengthening strip of quick-hardening polymer concrete along the side of an expansion joint, which reduces rutting, increasing driver comfort and joint durability
- **ROBO®MUTE:** Noise-protection system, consisting of mats placed beneath the joint to reduce noise emissions

## Customer support

Our product specialists will be pleased to advise you in the selection of the optimal solution for your project, and to provide you with a quotation.

On our website, [mageba-group.com](http://mageba-group.com), you will find further product information, including reference lists and tender documentation.



Cutting of slits at a 45° angle to the driving direction

## mageba expansion joint types



Single gap joints



Cantilever finger joint



Sliding finger joints



Modular expansion joints

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