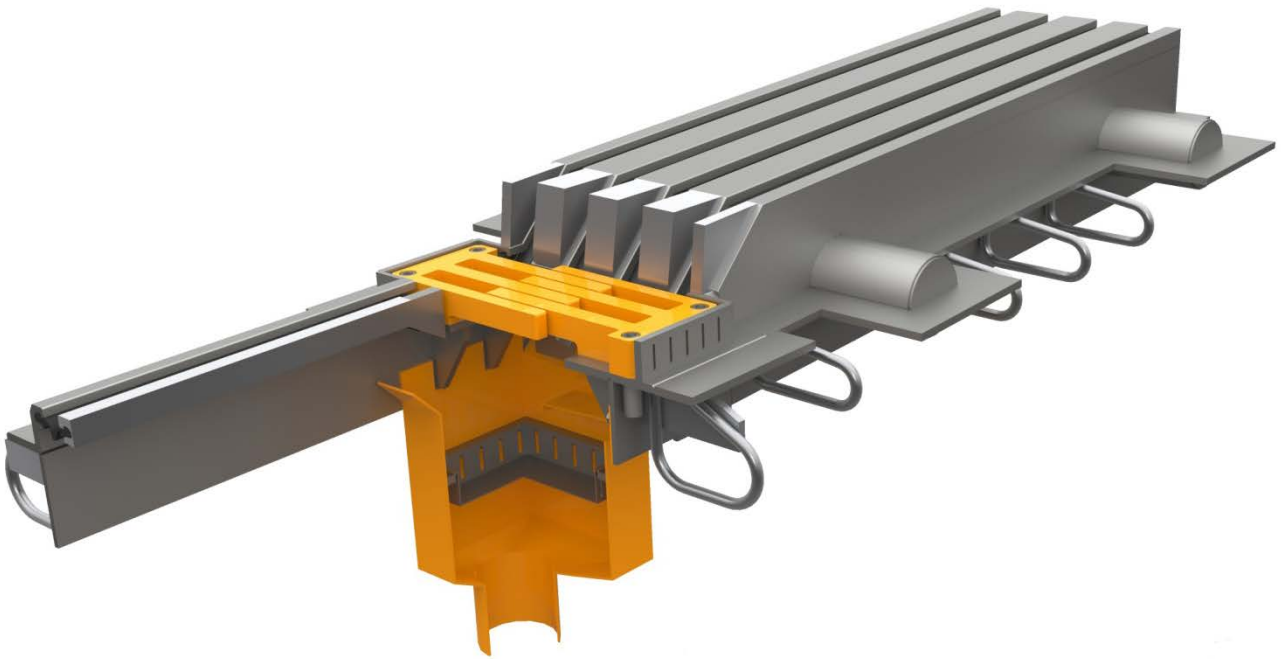


MAURER Point Drainage

Integrated bridge drainage in Expansion Joints



MAURER Point Drainage - Integrated bridge drainage in MAURER Expansion Joints

In Germany, the drainage of bridge structures is being ruled by the directive drawings issued by the Federal Institute of Roads. The maximum permissible distance between the drainage points is being ruled by the German Specification named *ZTV-Ing, Part 8*. According to the directive drawings named *RiZ Was 0*, "the water which flows towards the end of the superstructure has to be drained latest before the end of the superstructure"

With an integration of such a drainage into the modular expansion joint, a formation of puddles by way of accumulation of precipitation is averted in this area between the last drainage point and the expansion joint, which so far was very critical in respect of drainage. The water which was diverted by the slope of the carriageway to the lowest point of the expansion joint will be immediately and effectively forwarded into the drainage system of the bridge, and thus the traffic safety will be enhanced.

- **No standing water at the lowest point of the kerb unit**
- **No corrosion in the area of the kerb unit**
- **No additional maintenance efforts**

MAURER Point Drainage

Integrated bridge drainage in Expansion Joints



Contrary to the finger joints, the drainage is being accomplished at a defined point. The watertightness of the expansion joint remains effective without any restrictions.



Fig. 1 – Finger joint

Leakages in the area of the welded bends of edge and centre beams can be averted in designing curved bends instead of sharp bends in the steel profile. The constant curvature of the sealing element facilitates an unimpaired watertightness now also at these hitherto critical areas.

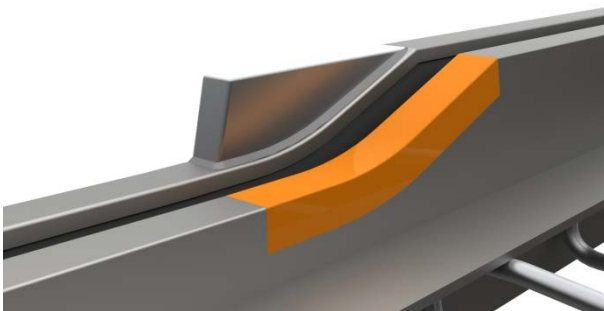


Fig. 2 - Change of slope: curved bend instead of a sharp bend

An accumulation of dirt as well as the formation of spontaneous vegetation below the sealing level will thus be avoided.



Fig. 3 - Collection of dirt with spontaneous vegetation

Contract specifications

Low noise emission roadway steel expansion joints, watertight, with an integrated drainage system in the low elevation point. Only type approved expansion joint types are allowed for use. Built in entire deck width.

In cornice area: geometry of steel and strip seal follows top level of cornice.

Design of changes in cross slope in front of curb section without welded butt joint. Cornice with coated stainless steel tear plates, material code 1.4571 or higher.

Roadway Expansion joint with strip seal accommodating same longitudinal- and lateral movement requirements.

Original factory corrosion protection of steel surfaces for C5M, by:

surface preparation by shot blasting at least SA 2,5;

70 microns primer coat, epoxy zinc dust-based,

2 nd intermediate coat, 150 microns epoxy based iron micaesious,

3rd final coat > 60 micron PUR (ozon resistant layer)

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