



XL 1

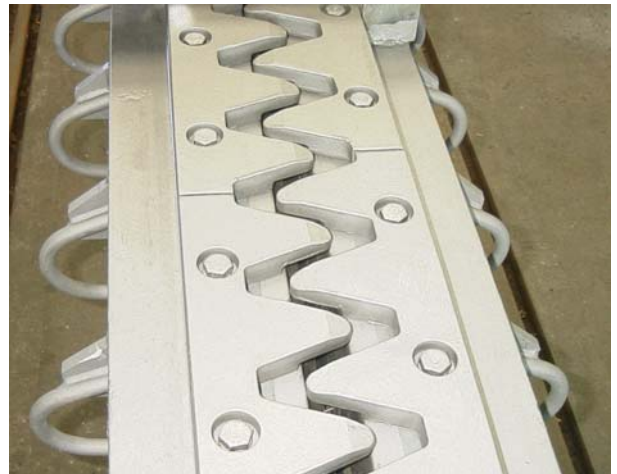
... the low noise emission MAURER single seal expansion joint

- Economic design of the expansion joint as well as of the adjacent connecting structure
- Long service life, maintenance free
- Watertight as per the proven MAURER design



Conventional single seal expansion joints are designed for a maximum gap width of 70 mm. With obtaining the General Approval of the German Federal Ministry of Transportation, this design allows an enhancement of the maximum gap width to a maximum of 100 mm for movements perpendicular to the carriageway. With resiliently beared structures the maximum gap width can be raised to 110 mm (see: Allgemeines Rundschreiben Straßenbau Nr. 8/2000). Skew movements can be executed in an angle of up to $60^\circ \leq \alpha \leq 120^\circ$ - beyond this angle, the wave plates can additionally protect against damages caused by snow ploughs.

MAURER XL 1 expansion joints are approved according to TL/TP-FÜ and thus externally controlled.



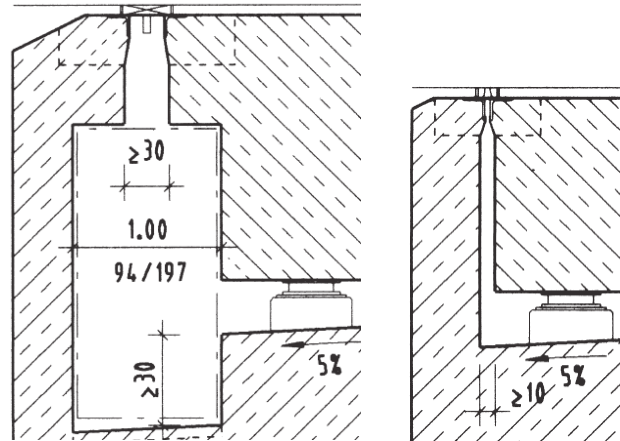
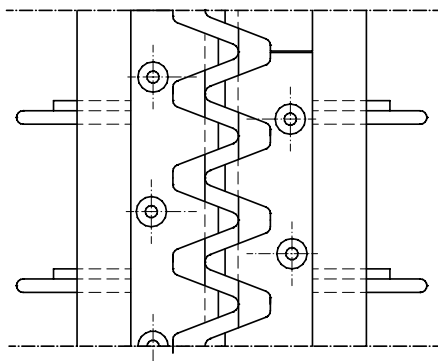
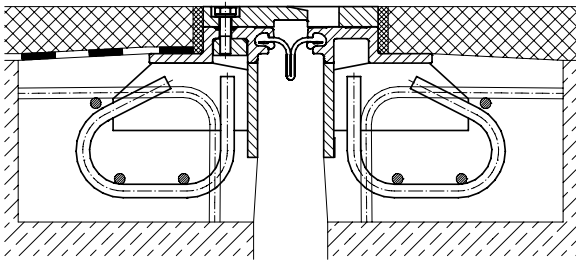
MAURER XL 1 Expansion Joints employ 1 strip seal and noise reducing wave shaped plates on the surface of the carriageway. The continuous surface facilitates the increase of the permissible gap width to 100 mm without impediment of the riding comfort and the safety of traffic, in particular for bicycles and pedestrians. Further, this design leads to a considerable enhancement of the scope of application of single seal expansion joints, and featuring a reduction of noise emission for residents living nearby.



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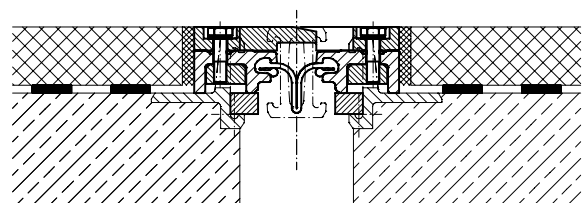
For the fixation of the wave shaped edge plates, continuously prestressed anchor bolts are designed. A replacement of the strip seals from above at a gap width of 25 mm is possible by using a special crowbar. For that end, both edge plates need to be removed. When the edge plates are fixated again, new anchor bolts have to be used. The suitability of usage of the new fixation elements in combination with the square nuts that remain in the structure was proven in laboratory tests.

According to the General Circular (ARS) Nr. 15/2002 of the German Federal Ministry of Transportation, the use of low noise emission expansion joints is only envisaged from 4 sealing elements or more. Reason is in particular of economic nature. If we take into consideration that that with the use of the XL 1 joint type in case of movements exceeding 65 mm, multi seal expansion joints or finger joints need not be envisaged, and consequently also the required maintenance access according directive drawing "Was 6" can be made obsolete, we suggest this General Circular to be reconsidered.



Abutment with and without maintenance access according Directive Drawing "Was 5/6"

Also possible is a retrofit or a redesign of existing expansion joints



Redesign of a D160 (box seal) into type Type XL 1