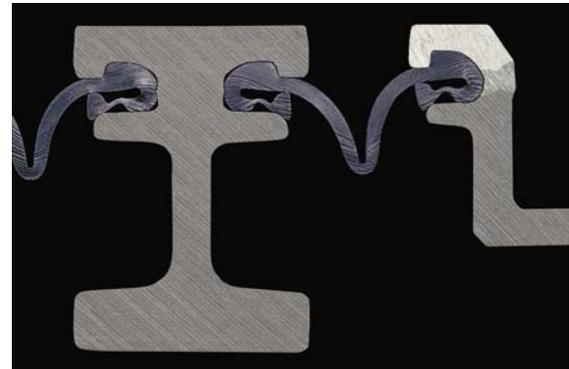




MAURER Expansion Joints ... with Hybrid-edge profile type SW



MAURER Expansion Joints with Hybrid-edge profile type SW are of renowned modular type, equipped with edge profiles whose heads are made from stainless steel.

MAURER Expansion Joints are manufactured from high class but economical structural steel with particular attention given to the durability by fatigue resistant formation of details. Disadvantage of susceptibility to corrosion is compensated by coatings, lifespan of which, however, is restricted. Surface of the steel elements which is permanently passed over does not corrode – even without particular materials or protective treatment. Surfaces and flanges connecting to the cap concrete in the footways or the sealing area between the edge elements must be considered different and here in particular in the water pile-up range at bottom point nearby the kerb unit. Corrosion may appear in all those areas, origin of which must be contributed towards various influences:

- Damage to surface due to utility vehicles such as snow ploughs or during installation
- Damage to flanges when cutting the casting compound
- Derusting of noses by aggressive media
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Appearances one and two do not mean any functional impairment but sometimes lead to objections occasioned by its appearance and the shortening of lifespan feared respectively. Modular expansion joints with more than one sealing element are designed for a fatigue resistance coming up to an application time of 40 years. This is also the time the corrosion protection treatment of the structural parts that are not directly crossed over but are subject to weathering have been designed for. Today, life expectancy of MAURER Expansion Joints with one sealing element would - under use of steel concrete anchorage with anchor disks and edge seals with sealing connection correspond to the life expectancy of the building structure – provided there were no time restrictions due to ageing and wear of the sealing elements. In Germany you can reckon with the removal of the sealing elements in periods of approx. 20 years. Next to the second removal, corrosion of the edge elements in the clamping reach will have advanced that much that also a removal of the upper steel parts at least becomes necessary.

For quality reasons MAURER modular expansion joints are hot-rolled and not extruded. They are produced from two parts: a welding seam connects the "upper part of claw" to the "lower part of claw". Heat development and draft during welding, in particular when using different materials made us weld together these profiles from upper and lower parts of the same material up to now.



MAURER Expansion Joints
... with Hybrid-Edge Profile Type SW

Through intensive co-operation with one of the leading European manufacturers of special rolled profiles, strictly adhering to the customary demands set to quality, Maurer Söhne has developed a hybrid profile with its surface, clamping and connection flange made of stainless steel (white = W) and for the remaining goes on to be made from structural steel (black = S) of grade S 235. The black-white-connection (SW) is realized by an optimized UP-welding in the clamping reach. The welded longitudinal connection of conventional edge profiles from S 235 and the hybrid-edge profile type SW can be realised both in works or at site without any problems. Manufacture of the hybrid-profiles is done in the rolling-mill under supervision of the MPA Dortmund. With this a most economic solution was found making use of the individual material advantages, i.e. corrosion resistance at the surface and fatigue resistance in the anchorage reach. Additional price of the subject matter does not exceed 20 per cent.



Material for the upper part of claw is the rustproof austenitic steel of material no. 1.4571, which is structurally approved can – thanks to its corrosion resistance also be used for inaccessible structural parts. It will keep its corrosion resistancy when handled appropriately, even next to welding work without the solution heat treatment usually necessary. For protection against corrosion in the reach of the weld seam and flight rust on the surface also the stainless steel will be given the same corrosion protection sheeting like the remaining edge profile. A prime cover layer is adopted in the claw reach only. One further advantage of the hybrid profile presents itself here. The upper reach of the claw that is difficult to be reached by the spraying nozzles will durably fulfill its task even if it is unprotected. Whereas there exist uncertainties with a full layer assembly because of the thickness tolerance and the durable and thus watertight clamping of the sealing element, with the hybrid profile you can devote all your attention to the geometrical tolerances.

Maurer Söhne offers expansion joints with the new edge profile in three variants – depending on what the client requires:

- single-seal MAURER expansion joints with SW edge profiles
- multi-seal MAURER expansion joints with SW edge profiles
- MAURER expansion joints with SW-edge profiles in footways

Expansion joints with one sealing profile should for economical reasons be executed with SW-edge profiles only in future. Especially in connection with the MAURER D 80 G sealing profiles („hut profile“) a solution of highest functional and esthetic claim will produce. Execution with SW-edge profiles is also of advantage with multi-seal expansion joints as with MAURER expansion joints a removal of the center profiles only (with swivel-joint expansion joints even nondestructive) can be done and in addition can the edge structure remain in the structure during reconstruction.



We recommend the following text to be entered into the tender documents:

Watertight expansion joint of steel in lamellar design according to static and structural requirements including kerb unit and fascia formation according to drawing to be installed in total width of superstructure.

Steel surfaces subject to corrosion to be adequately prepared in the factory, standard purity degree Sa 2 ½.

Corrosion protection treatment according to ZTV-KOR.

Expansion profile as folding profile, footways with MAURER special strip profile D 80 G or similar, guide of profile flush to upper edge of footway up to lower edge of fascia.

Steel edge profiles as hybrid profiles of type MAURER SW or similar. At least 20 mm high edge profile head of full material in refined steel, material no. 1.4571. reaching from surface of carriageway to level of sealing profile. Welding to the sub structure made of S235 JR by full seam.