



Rail fastening systems for slab tracks

System 300

Slab tracks System 300 with tension clamp Skl 15

Highly elastic.

Proven on high speed traffic lines worldwide.

Simple reliable and maintenance free.

Field of application

Slab tracks meet all the requirements for combined high-speed, heavy load and urban traffic. The appropriate solution in this case: The rail fastening system 300, which can be pre-assembled. It is suitable for all slab track construction systems.

Advantages

The highly elastic pad substitutes for the elasticity of the ballast bed. A steel load distribution plate with suitable rail pads is used to improve the load distribution over the elastic pad. The rail pad supports the rail, which is held laterally in position by plastic angled guide plates. The rail is permanently tightened by spring-actuation as a result of the long elastic spring deflection of the tension clamp Skl 15. The rail fastening system 300 can be adjusted by 60 mm in height and by 16 mm in track gauge.

Pre-assembly

All the fastening components can be manually or automatically pre-assembled in the sleeper factory. The rail is inserted at the construction site. Fastening components can be lost neither during transport nor during track laying.

Assembly

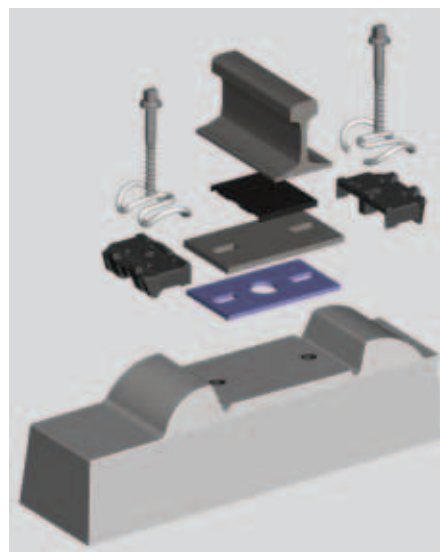
The sleeper screw is loosened by 2-3 turns. The tension clamp is pushed on the rail foot and tightened. A simple work step which requires no special training. Assembly can be carried out using simple commercially available screwing machines or automatic screwing assemblies.

Rail tensioning and creep resistance

The rail is permanently tightened to the concrete element by spring-actuation through the two torsion spring arms, with a spring deflection of approx. 15 mm and a toe load of approx. 2 x 9 kN. The requisite high creep resistance of the rail, which prevents the dangerous fracture gap in welded rails, is obtained thereby.

Track maintenance

Experience has shown that the Vossloh rail fastening system requires no regular maintenance.





Neutralisation

No fastening elements have to be removed from the sleeper with continuous welding of the rail. The sleeper screws merely have to be loosened but not disassembled.

Protection against tilting

Any up lift or tilting of the rail which may occur when running through narrow track curves is absorbed by the middle bend of the tension clamp after it has overcome the small air gap (between the middle bend of the tensions clamp and rail foot). Permanent deformation of the outer spring arms is therefore excluded.

Height adjustment

The system can be adjusted in height by up to 60 mm by means of rail pads of variable thickness (+ 6, - 4 mm) as well as by using height regulation plates.

Track adjustment

A track adjustment of ± 16 mm in steps of 1 mm is available as standard.

Exchangeability

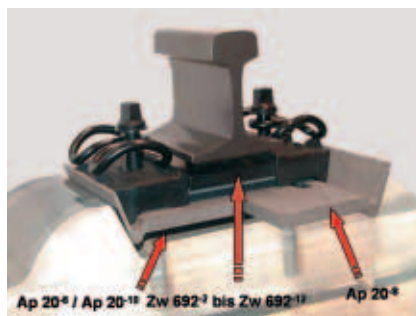
All components are exchangeable.

Electrical insulation

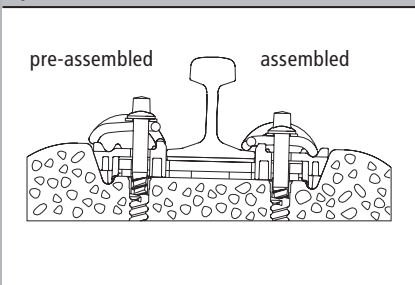
The rail fastening system 300 is completely electrically insulated as a result of the insulating plastic material of the angled guide plates, rail pads and dowel. No additional insulating components are required between the clamping element and the rail foot.

Reduced creep resistance

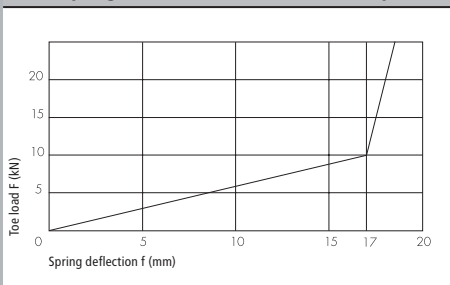
The tension clamp Skl B 15 with a reduced creep resistance of approx. 7 kN is available for certain construction schemes, e.g. on bridges.



System 300



Force/spring deflection of the tension clamp Skl 15



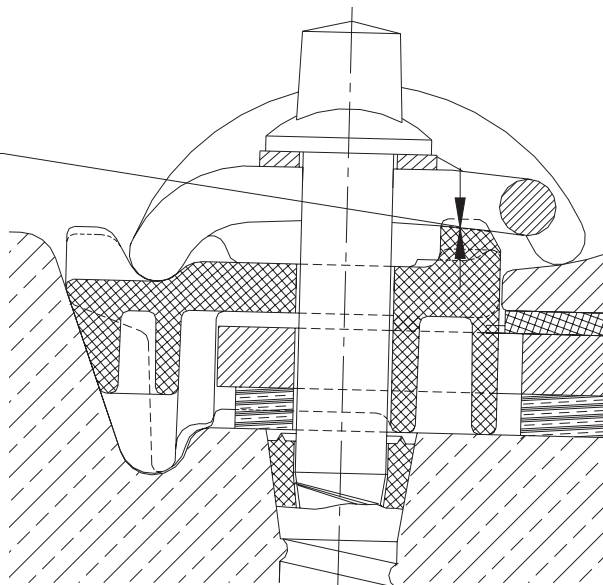
Tension Clamp Skl 15

Fitting instruction

Skl 15

Correct

The tension clamp is correctly fitted as soon as the middle bend of the clamp is in contact with the rib of the angled guide plate by tightening of the sleeper screw (max. permissible air gap: 0.5 mm). This is reached at a tightening torque of approx. 200 Nm.



Wrong

Middle bend does not rest upon the rib of the guide plate. Required toe load is not reached!

