



SF 100

Bogie-platform for passenger coaches

The bogie-platform SF 100 is a further development of the bogie-family SF 400. The SF 100 was designed for push-pull service in locomotive-hauled passenger coaches and for trailer-bogies in multiple units. The maximum operational speed is 249 km/h.

The bogies for end- and centre coaches are equipped with air-spring-systems and can be used for single and double-deck applications. The bogie is designed for a maximum axle load of 19 t in accordance with EN 13103. This is necessary to fulfil the requirements of modern double-deck coaches regarding interior (comfort, acoustics, fire protection requirements, etc.) and payload.

The concept of the SF 100 enables the production of high performance bogies for a lot of applications, due to its modular design. The axle guidance is carried out through one elastic bush per axle-box, which joins the radial arm with the frame.

The primary springs are located above the wheel-set bearings and consist of steel coil springs and rubber elements for acoustical and electrical isolation. This kind of wheel-set guidance does not need any maintenance during the relevant maintenance intervals and is more or less free of wear.

The open H-shaped bogie-frame is a high-sophisticated light weight design with a low torsion resistance. Between the two longitudinal beams are two transversal beams with brackets for the disc-brake units.

It is possible to use alternative brake-equipment (standard caliper with hangers or compact caliper). Depending on the brake-requirement, the bogies can be equipped with two or three brake-units per axle. The parking-brake can be operated in conventional way by handbrake-wheel and flex-ball-cable or with spring-loaded parking brake units. Magnetic track-brakes are available alternatively.

The air-spring in the secondary suspension system ensures high passenger ride quality. The leveling control valve guarantees that the same floor height can be maintained under varying load conditions. Both air-springs are mounted in serial with a rubber emergency spring. This ensures operation at maximum speed, even when the air-spring is deflated.

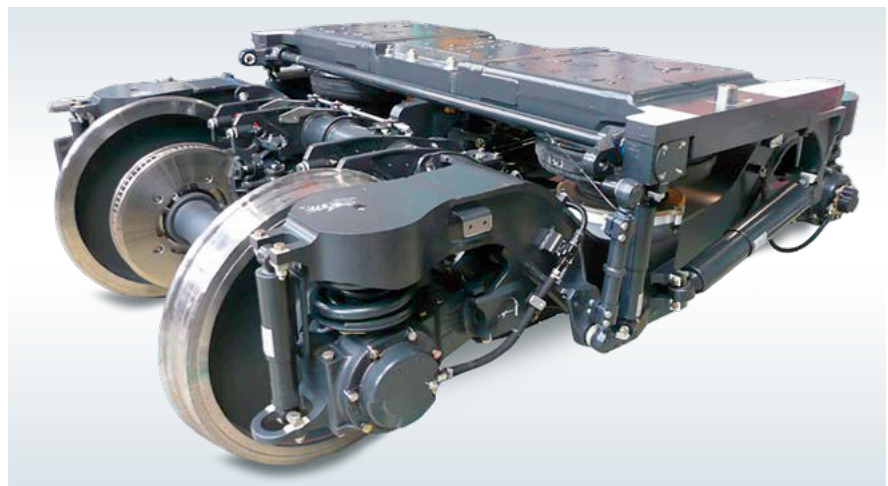
For the damping of lateral and vertical movements, hydraulic dampers are provided. To ensure a safe running behavior at higher velocity, the bogie can be equipped with up to 4 yaw-dampers.

The transmission of braking and acceleration forces between bogie and car-body is performed by a lemniscat consisting of a king pin, a yoke and two guiding rods.

To ensure the necessary flexibility, rubber bushes are integrated both in the yoke and in the guiding rods.

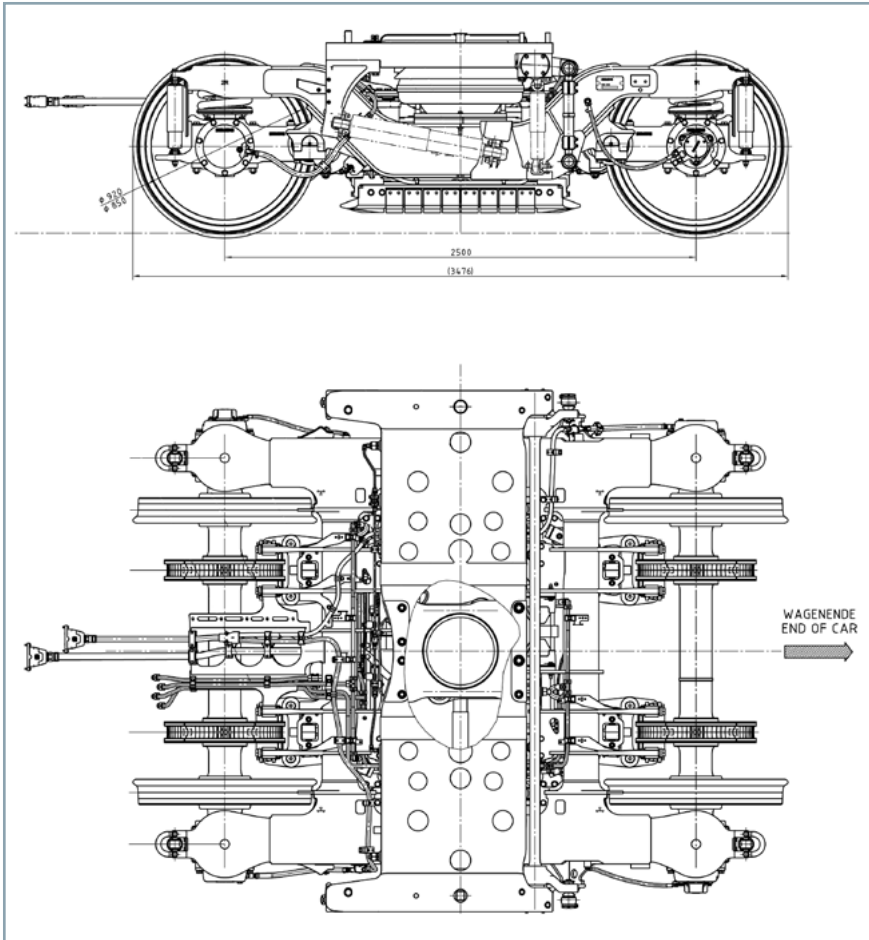
An additional air reservoir, mounted directly above the air spring, is one possible interface between car-body and bogie. The car-body can alternatively be supported on the secondary suspension by a bolster so that the bogie can be easily dismounted.

The curve depending transverse stop to limit the lateral play between car-body and bogie is integrated in the bogie, so an easier adjustment is possible.



Technical data

Bogie	SF 100
Running Speed	249 km/h
Axle load	Max. 19 t
Wheelbase	2500 mm
Track gauge	1435 mm
Wheel diameter new/worn	920/840 mm
Smallest radius of curvature in service/workshop	150/80 m
Weight	6.3 - 8.5 t



References

SBB NDW/Suisse
SZU NDW/Suisse



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The information given in this document contains general descriptions of technical possibilities which may not always be available in a particular case. The requested performance characteristics have therefore to be defined in the event of contract ward for the particular case in question.