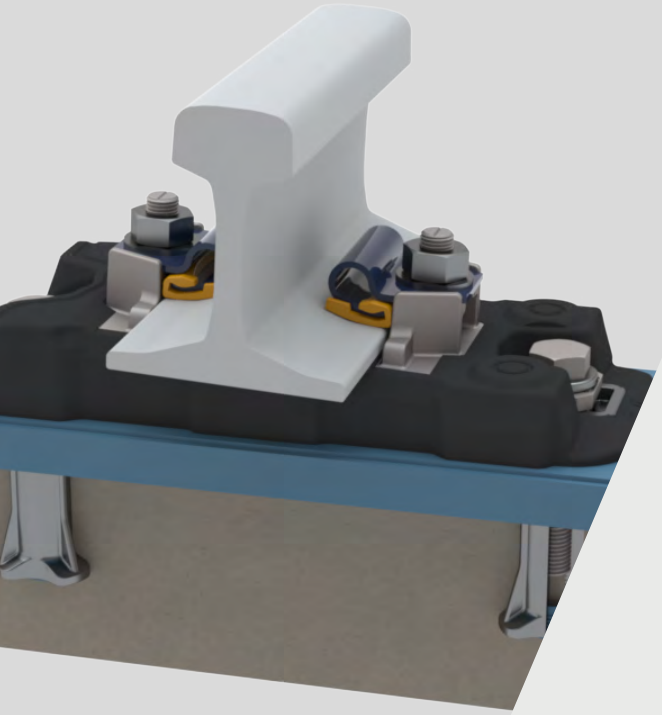
PANDROL
Partners in excellence

High Speed Bonded Baseplate

Fastening Systems



Pandrol's High Speed Bonded Baseplate reduces ground-borne vibrations caused by the major dynamic forces generated by passing trains.

This system was designed specifically for high speed line applications, but it is also suitable for use on metro lines, standard tracks and turnouts. A single fastening system can be used for the whole track, as the standard model is designed for running track and customised models are designed for switching zones.

The High Speed Bonded Baseplate provides both vertical and lateral stiffness via two independent cast baseplates. A one-piece bonded system (comprised of a top and bottom plate) is factory assembled by bonding with vulcanised rubber. This provides high levels of electrical resistance, long electrical leakage path and lateral resilience.

TECHNICAL FEATURES

Variable baseplate options

Available in two and four-hole offset and two-hole line footprint configurations. This gives the best possible solution for new build, track renewal and retrofit applications.

Different clip types

The High Speed Bonded Baseplate is available with a SKL3, SKL12 and Nabla G4 clip types.

Electrical insulation

The system's unique bonding process achieves very high levels of electrical resistance and long electrical leakage paths.

Turnout options

The baseplate comes in a variety of lengths and options to suit all turnout applications. The system is also suitable for steel bridges and ballasted tracks.

Track-structure interaction

Rail fastening clips are available in low toe load and zero longitudinal restraint (ZLR) configurations. This makes the system ideal for use on bridges and viaducts where the effects of track-structure interaction need to be considered.

Safety anchor

The High Speed Bonded Baseplate has a strong anchor with a highly resistant anti-rotation feature for safer installation and easy replacement through screwing.

Highly adjustable

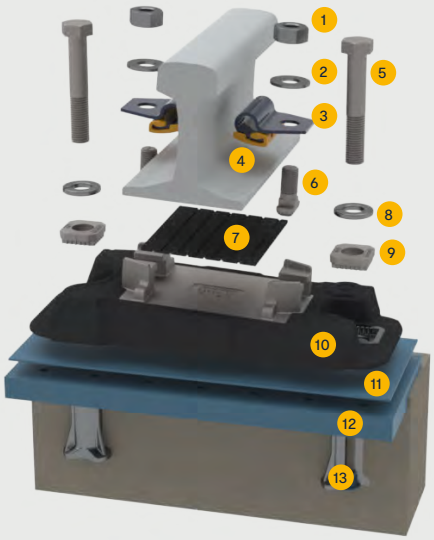
Easy lateral and vertical adjustments, with highly resistant large prongs for safer installation. The range of adjustability is high, with a lateral adjustment of ± 9 mm and a vertical adjustment of + 30 mm. Other adjustments can be done on request.

Robust and long-lasting

Due to its rubber composition, the baseplate is extremely resilient and robust, resulting in an extended product lifespan.

ADVANTAGES

- The system's low stiffness decreases the dynamic load level by reducing vibrations transmitted to the ground and distributing them along the supports. As a result, vibrations are isolated and the noise generated by moving wheels on the rail is attenuated.
- The High Speed Bonded Baseplate has particularly high corrosion resistance. The plate is covered with rubber which acts as a protective barrier between the baseplate and its environment.
- The system provides good track elasticity and a specific longitudinal rail restraint which can be an advantage when controlling the stress in the rails on bridges.
- The system provides electrical insulation for the rail, isolating it from the track bed and avoiding electrical leakage into the ground. In addition to this, the system has a high level of stray current protection.
- Installation is simple, requiring only one person with hand tools for either the entire assembly or the replacement of components. Methods of installation include top-down and bottom-up techniques with the possibility for compact and lateral/vertical adjustments.
- No maintenance required during the product's lifetime.



COMPONENTS

1. Hexagon nut
2. Flat washer
3. G4 clip
4. G4 Insulator
5. Hexagon bolt
6. T-Bolt
7. Rail pad
8. Grower washer reinforced
9. Adjustment bushing
10. Bonded baseplate
11. Shim
12. Construction shim
13. Cast anchor insert with plastic plug

SPECIFICATIONS

Assembly performance data	
Recommended categories	B, C, D
Type of track	Slab
Rail inclination	1/20
System type	SKL3, SKL12, Nabla G4
Static stiffness	25 MN/m
Dynamic stiffness	28 MN/m
Lateral adjustment	± 9 mm
Vertical adjustment	+30 mm
Gauge adjustment	± 18 mm
Weight	13.6 kg
Anchor diameter	24 or 27 mm
Dimensions (L x l x h)	476 x 191 x 54 mm

Performance values can be varied, depending on product configuration. For any other configuration, please contact us.

Standard compliance

- EN 13146
- EN 13481

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