PANDROL
Partners in excellence

Flexi Bonded Baseplate

Fastening Systems

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

This versatile system can be used on both standard track and turnouts, with insulators that can be opened to fit wiith different sizes of rails. 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 Flexi 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

Adjustable insulators

Insulators can be adjusted to fit with a wide range of rail sizes.

Widely compatible

The Flexi Bonded Baseplate is available with SKL and SD 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 Flexi Bonded Baseplate has a strong anchor with a highly resistant anti-rotation feature for safer installation and easy screw replacement.

Highly adjustable

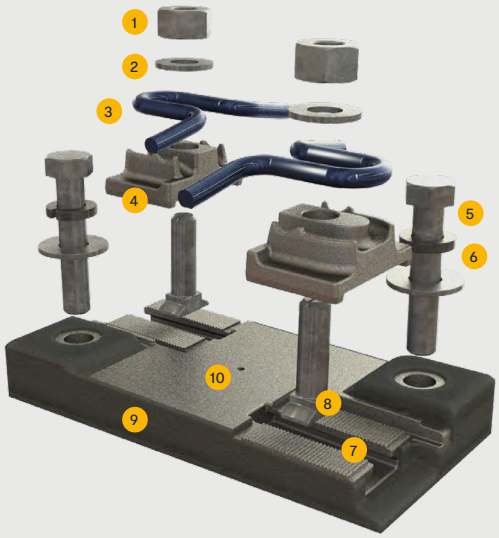
Easy lateral and vertical adjustments, with highly resistant large prongs for safer installation. The range of adjustability is high, with a lateral adjustment of ± 15 mm and a vertical adjustment of + 30 mm. Other adjustments can be done on request.

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 Flexi 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.
- Easy adaptation to different rail sizes.



COMPONENTS

1. Nut
1. Hexagon nut
2. Flat washer
3. SD clip
4. Adjustable SD shoulder
5. Hexagon bolt
6. Grower washer reinforced
7. Adjustment bushing
8. T-bolt
9. Bonded baseplate
10. Construction shim

SPECIFICATIONS

Assembly performance data	
Recommended categories	B
Type of track	Slab
Rail inclination	1/40
Rail fixation	SKL, SD
Static stiffness	29 MN/m
Dynamic stiffness	30 MN/m
Lateral adjustment	± 15 mm
Vertical adjustment	+ 30 mm
Gauge adjustment	± 15 mm
Anchor bolt diameter	22 mm
Weight	12,8 kg
Dimensions (L x l x h)	353 x 175 x 50 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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V1.1-0425