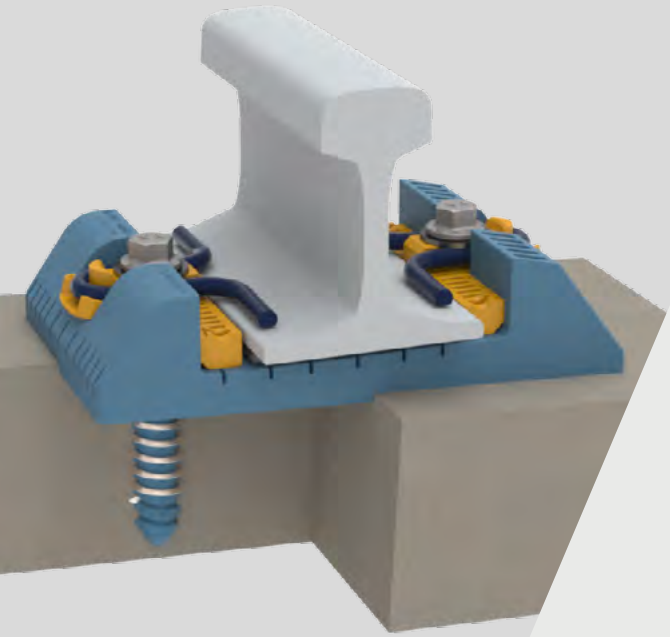
PANDROL
Partners in excellence

SD-SEE

Fastening Systems

Adding Value

The SD-SEE baseplate has an `anti-bubble' feature. Thanks to its system of channels and vents, air can escape easily, allowing improved installation into the concrete and greater lateral force absorption.



Pandrol's SD-SEE is a single-stage elastic fastening system on a composite baseplate, designed for use with SD fastening clips. It is ideal for use on concrete slab tracks in tramway and urban rail applications, where light structures and fast construction is needed. As well as being extremely lightweight, the fastening system naturally yields high electrical insulation thanks to its GS anchor insulators.

The SD-SEE system offers a particularly wide range of both vertical and lateral rail adjustment. Like SD sleepers, the system can be configured to suit a range of requirements for stiffness and clamping force. It can be installed onto slabs using the `top-down' method of track construction or by automated installation into fresh concrete.

TECHNICAL FEATURES

Embedded baseplate

The baseplate is partially embedded in the concrete to withstand the lateral and longitudinal loading. Clever engineering allows trapped air and water to escape, ensuring a solid fill of concrete under the rail seat.

Direct fastening

SD-SEE is a direct fastening system - the GS anchor is used both to attach the rail and to fasten the baseplate to the supporting concrete structure.

Electrical insulation

The SD-SEE baseplate, lateral insulators and GS dowels are made of composite material, which provides an exceptionally high level of electrical insulation.

Pre-assembled units

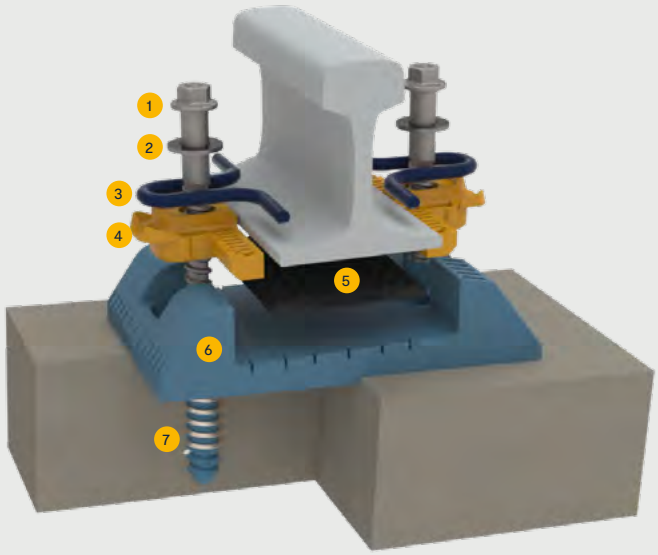
The SD-SEE system can be supplied as captive, pre-assembled units that are ready for top-down track construction methods.

Track-structure interaction

The SD clips are available in low toe load and a zero longitudinal restraint (ZLR) configuration, typically for use on bridges and viaducts when track-structure interaction effects need to be dealt with in the rail fastening assembly.

ADVANTAGES

- The SD-SEE system enables vertical adjustments to be made quickly, easily and without the need to fully disassemble the fastening. Minimal additional parts are needed; just rail shims and longer screws in extreme cases.
- The lightweight SD-SEE assembly can easily be carried and positioned by one person, saving on labour time and costs.
- As the SD-SEE system has minimal metal components, the risk of corrosion is very low. This makes it an attractive option for ensuring long service life in wet track conditions, such as tunnels.



COMPONENTS

1. Coachscrew
2. Flat washer
3. SD clip
4. Lateral insulator
5. Rail pad
6. Baseplate
7. GS anchorage

SPECIFICATIONS

Assembly performance data	
Recommended categories	A, B
Type of track	Slab
Rail inclination	1/40 or 1/20 (typical)
System type	SD
Static stiffness	55 MN/m
Dynamic stiffness	60 MN/m
Lateral adjustment	± 5 mm
Vertical adjustment	± 30 mm
Gauge adjustment	± 10 mm
Electrical insulation	> 12 kΩ

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

Standard compliance

- EN 13481
- EN 13146

LEARN MORE

www.pandrol.com

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