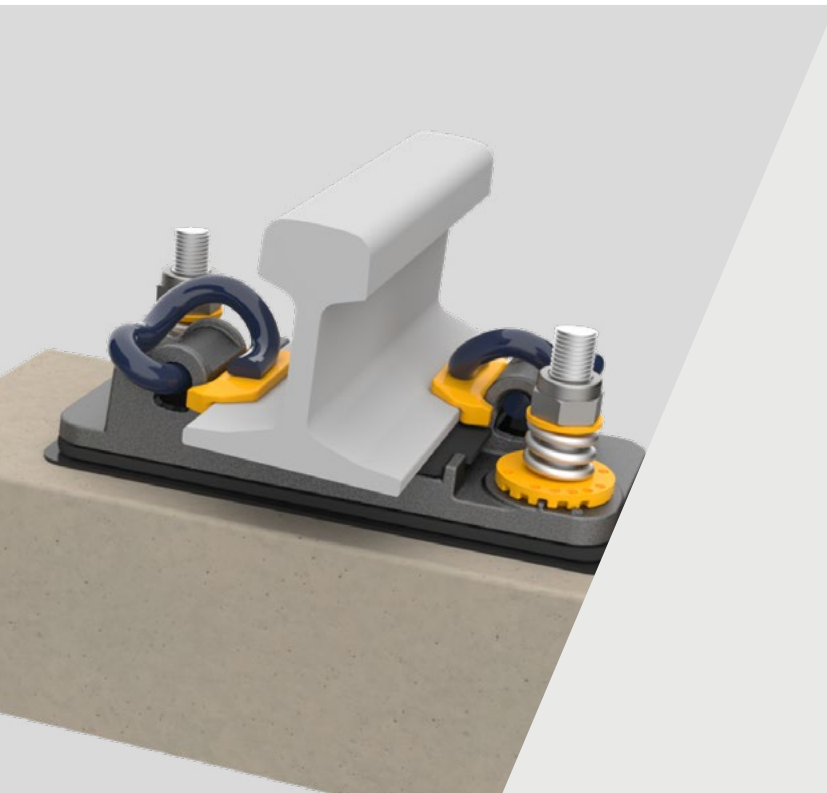


# e-Clip DRS

Fastening systems

## Adding Value

A major metro system in Dubai – the first in the Arabian Peninsula – has been operating since 2009 with 361,500 DRS baseplates



The DRS baseplate is a double-resilience e-clip fastening system that is ideal for use on non-ballasted tracks when ground-borne noise and vibration reduction are required. Originally introduced in the 1980s, today's evolution of the DRS baseplate is the trusted solution for metro, light rail and mainline slab tracks worldwide. Widely used on bridges, viaducts and in tunnels, it is suitable for all rail inclinations and rail types.

The DRS baseplate is mounted on a studded, natural rubber pad that can be tuned for different axle loads and stiffness requirements. With a threadless fastening system and parts that can be replaced in situ, the baseplate requires minimal maintenance.

Formerly known as VIPA DRS.

## → TECHNICAL FEATURES

### Double resilience system

The double resilience is the perfect configuration when ground-borne noise and vibration reduction are required.

### Variable baseplate options

The DRS system is available with different baseplate configurations: a 2-hole offset footprint and a 4-hole inline.

### Compact footprint

The 2-hole DRS baseplate provides a very compact footprint.

### Electrical insulation

The baseplate system provides an exceptionally high level of electrical insulation, with the rail insulated from the baseplate and the baseplate insulated from the concrete slab.

### Adjustability

The DRS baseplate achieves typical lateral adjustment of  $\pm 8$  mm, with additional adjustability possible to meet specific requirements. Typical vertical adjustment of up to 16 mm can be achieved with shims.

### Track structure interaction

Rail fastening clips for the DRS baseplate are available in low toe load and a zero longitudinal restraint (ZLR) configuration to deal with the effects of track structure interaction.

### Installation

The DRS baseplate is optimised for top-down construction, although the bottom-up method is also possible using alternative anchorage.

→ ADVANTAGES /

- The DRS baseplate is adjustable, can be installed in different ways and is available in a range of configurations, making it a versatile option for all non-ballasted tracks and rail types.
- Its versatility also means that it is the ideal solution for new-build tracks, renewals and retrofit applications.
- The resilience provided by the baseplate's rubber pad mitigates the effects of ground-borne vibration and secondary noise.
- High levels of electrical insulation increase the product's efficiency and cost-effectiveness.
- The compact footprint provided by the 2-hole baseplate reduces the size of pre-cast concrete elements required.
- All DRS parts can be fully replaced in situ, easing maintenance.
- Threadless fastening technology delivers low-maintenance operation throughout the baseplate's lifespan.

2 HOLE

4 HOLE



→ COMPONENTS /

1. e-Clip
2. DRS Baseplate
3. DRS Rail Pad
4. e-Clip Insulator
5. DRS Baseplate Pad
6. DRS Bush
7. Anchor Assembly

→ SPECIFICATIONS /

Assembly performance data	
Recommended categories	A, B, C, D
Type of track	Slab
Rail inclination	1/20 or 1/40
System type	e-Clip
Static stiffness	> 18 MN/m
Dynamic stiffness	> 21 MN/m
Lateral adjustment	± 8 mm (with eccentric bush)
Vertical adjustment	16 mm
Gauge adjustment	± 16 mm
Electrical insulation	> 10 kΩ

**Standard compliance**

- EN 13146 / Arema Test Methods

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

→ LEARN MORE

