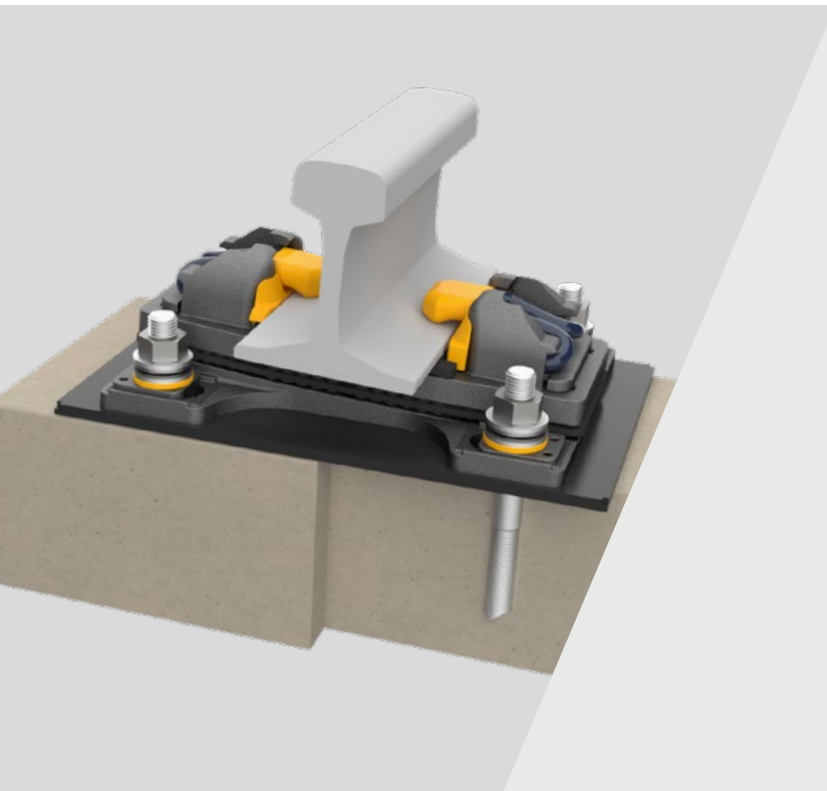


# VIPA SP

Fastening systems



VIPA SP is a high performance two-pad, two-plate system providing a wide range of applications for concrete, timber and slab track forms, providing optimal efficiency.

A resilient track support system developed to attenuate the wheel/rail contact-induced vibrations, which are transferred from the rail to the supporting structure.

VIPA SP is a low-stiffness assembly with high levels of vibration isolation, as well as high vertical and lateral adjustment, offering rapid adjustment to configuration with minimal additional components.

## → TECHNICAL FEATURES

### Lateral adjustment

VIPA SP enables lateral adjustments in the range of  $\pm 20$  mm per assembly (or  $\pm 40$  mm on track gauge), that can be made quickly and easily. No components need to be exchanged and there is no need to disassemble the fastening system.

Absolute lateral position of the rails can be set at both the track build stage and during track maintenance activities.

### Supplied as pre-assemblies

VIPA SP is supplied as pre-assembled units on the slab with the Fastclip in the parked position. The pre-assembled unit only needs to be positioned on the slab and tightened into its precise alignment.

### Developed for low rolling noise

VIPA SP has been developed to provide a stiffness characteristic that results in low rolling noise.

### Vertical adjustment

VIPA SP provides vertical adjustment up to + 30 mm, by means of fitting shims underneath the assembly.

No parts need to be exchanged or added to make vertical adjustments, other than the correct shims and the need for longer bolts at large intervals within the 70 mm vertical adjustment range.

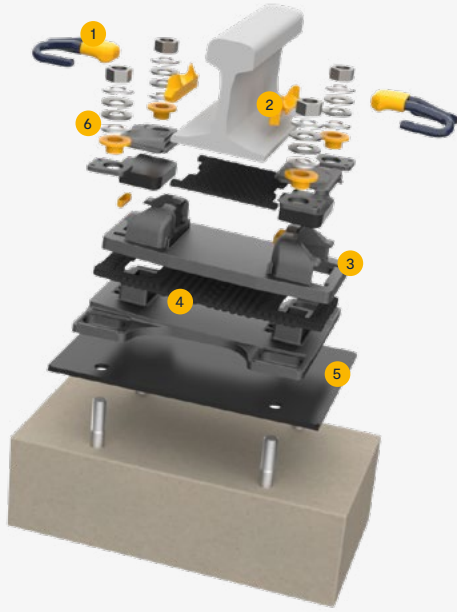
Vertical adjustments can normally be made without the need to disassemble the fastening system fully. Untightening the anchors is sufficient to allow all but very large adjustments to be made simply.

### Options to assist with track-structure interaction

VIPA SP is available in low toe load or zero longitudinal restraint (ZLR) configurations. These are for use on bridge and viaduct structures.

## → ADVANTAGES

- Intended for applications where very good vibration reduction is required.
- Designed for long life - all parts are fully accessible and replaceable, enabling repair that does not require replacement of the complete unit.
- Provides exceptionally wide adjustment, typically between +/- 20 mm lateral per baseplate, and +30 mm vertical.
- Features double electrical insulation - the rail is insulated from the top plate, and the top plate is insulated from the baseplate by the rubber pads, bushes and line insulators.
- VIPA SP products are supplied to track sites as fully assembled units.



## → COMPONENTS

1. FC clip and toe insulator
2. Side post insulators
3. Baseplate
4. Rail pad
5. Under baseplate pad
6. Anchors with inserts

## → SPECIFICATIONS

| Assembly performance data |                              |
|---------------------------|------------------------------|
| Recommended categories    | A, B, C, D                   |
| Type of track             | Slab, wood, steel, composite |
| Rail inclination          | 1/20 or 1/40 (typical)       |
| System type               | Fastclip FC                  |
| Static stiffness          | > 13 MN/m                    |
| Dynamic stiffness         | > 17 MN/m                    |
| Lateral adjustment        | ± 20 mm                      |
| Vertical adjustment       | + 30 mm                      |
| Gauge adjustment          | ± 40 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

