

Vanguard

Fastening Systems



Pandrol's Vanguard rail fastening system provides very low vertical dynamic stiffness, which leads to high levels of vibration isolation. Dynamic gauge widening under traffic is minimised. Vanguard delivers exceptional vibration reduction at a much lower installed cost than floating slab.

Because Vanguard significantly reduces vibration and secondary noise, it is ideal for use in areas most sensitive to environmental concerns.

→ TECHNICAL FEATURES

Highly adjustable

Vanguard baseplates provide exceptionally wide adjustment possibilities. The range is typically ± 20 mm lateral per baseplate, and +20 mm vertical. Further adjustment of the rail within the baseplate is also possible. For additional requirements please consult Pandrol.

Track structure interface

Accommodates large differential movement between track and structure.

Extremely low maintenance

Vanguard components are easily accessible to maintenance teams. Components can be easily inspected and maintained with standard track tools.

Installation on site

Vanguard can be installed on retrofit concrete sleepers, timber sleepers and slab track on bridges, tunnels and viaducts by various construction methods.

Low static stiffness

Vanguard provides very low static stiffness (nominal 5 kN/mm). Stiffness can be increased where required, by simple modification to the assembly.

Low profile

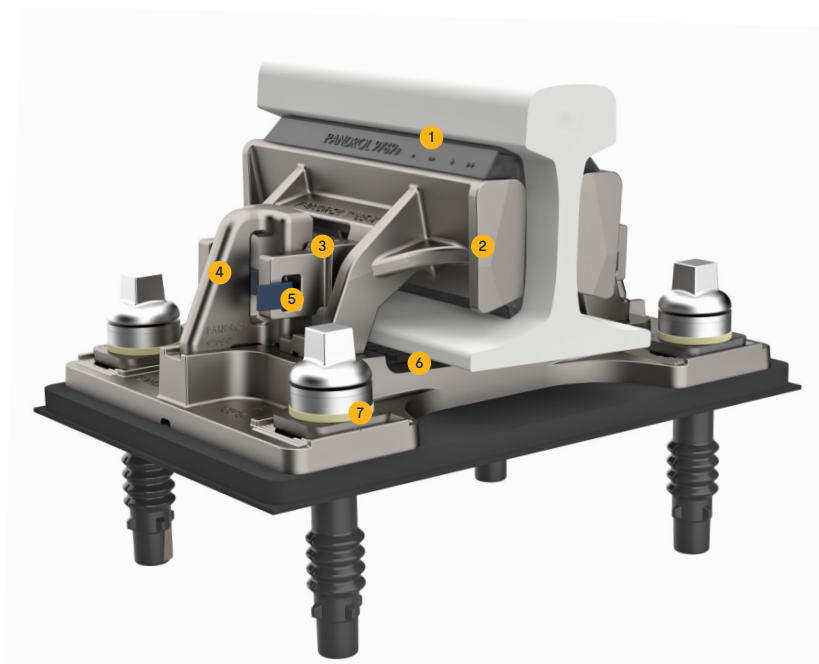
Thanks to the very low profile of Vanguard, compared to other low stiffness track forms, it can be installed within restrictive rail heights. Vanguard can reduce tunnel diameters, leading to reduced costs for new track construction.

The low weight of Vanguard can also lead to considerable cost savings in structures such as viaducts, which would otherwise have to accommodate the greater weight of floating slab-track.

Pandrol Vanguard can be installed on new track constructions.
The system can also be retrofitted to existing rail fastening systems that require reduction in ground-borne noise and vibration.

→ COMPONENTS

1. Rubber wedges that support the rail at the web
2. Side support brackets that hold the wedges in place and transfer load to the support structure
3. Locking wedges that fix the side brackets
4. Shoulders that provide location and the reaction point against which the fastening is braced
5. Locking clips ensure long-term security and safe operation
6. Bump stop pads enhance safety and long-term security
7. Serrated washer for lateral adjustment



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