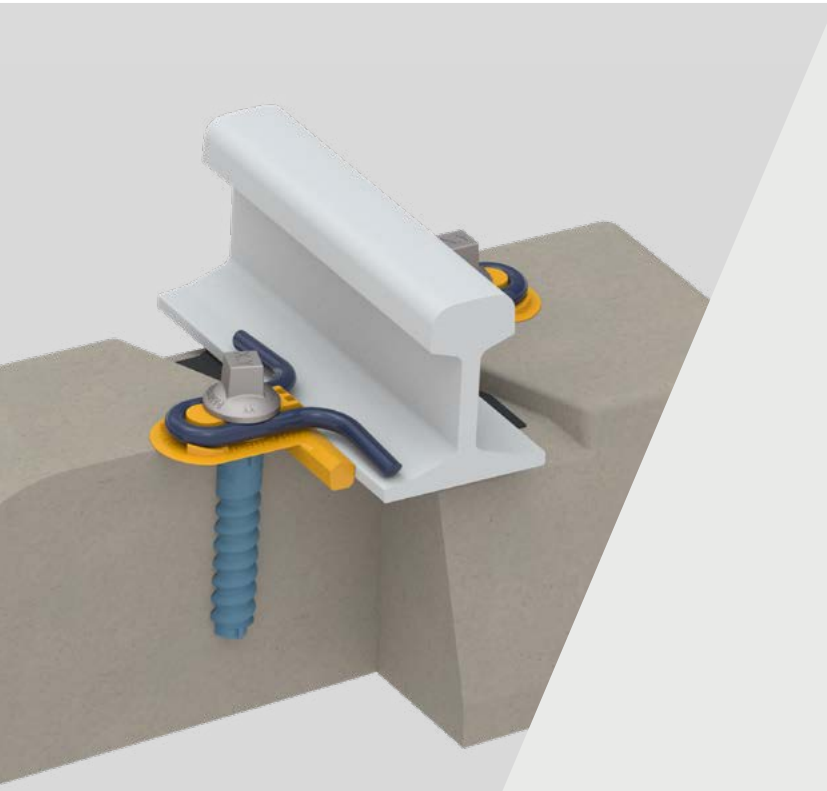


SD-E

Fastening systems

Adding Value

A proven futureproofing fastening system that provides the ability to tune track performance quickly.



Pandrol's SD-E is a durable and reliable threaded fastening solution that has been developed to minimize the CO₂ impact of the railway track specially for Cat B and Cat C applications.

SD-E is the lightest version of the SD product family (up to 40% weight reduction)

SD-E can deliver higher rates of construction thanks to its efficient controlled clip guidance from parked to the in-service position. Its optimized geometry also enables automatic installation resulting improved efficiency and cost saving during installation and maintenance.

→ TECHNICAL FEATURES

Captive fastening

SD-E sleepers can be supplied to sites fully pre-assembled, with all components remaining captive during construction and maintenance activities.

Eco-design

Compared to other screwed solutions, the clip is relatively low weight. This reduces its environmental impact and logistics cost without compromising on performance.

Increased robustness & Lifecycle

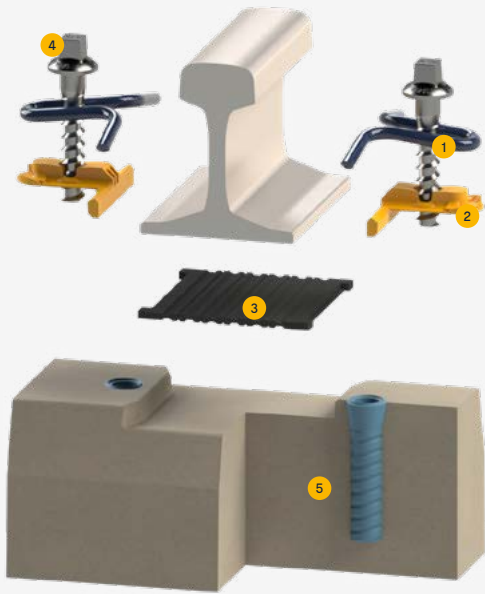
The clip has been modified to avoid frequencies where destructive amplitudes are generated, causing the clip to fail in fatigue. A significant increase in the natural frequency is key to increase the robustness of the tension clamp.

Innovative geometry

Pandrol SD-E innovative geometry increase the contact area between clip and rail and solves ballast entrapment problem of SKL tension clamps.

→ ADVANTAGES /

- The SD-E system's pre-assembled captive fastening units and simple switch-on/switch-off function enable very high rates of track construction and maintenance. This efficiency translates into huge savings in labour, as well as reduced distribution and handling costs throughout the system's lifecycle.
- The SD-E is an extremely environmentally-friendly fastening solution. reducing the CO₂ footprint, logistics costs and environmental impact.
- The SD-E system has been designed to avoid frequencies that cause fatigue and failure, resulting in a significant increase in the robustness of the tension clamp and a longer lifecycle.
- The innovative geometry of the SD fastening improves track stability, prevents dust and impurities entering the dowel, and solves the problem of ballast entrapment.



COMPONENTS /

1. SD clip
2. Guide plate insulators
3. Rail pad
4. Anchor screw
5. Dowel

→ SPECIFICATIONS /

Assembly performance data	
Static Stiffness	60 kN/mm
Longitudinal rail restraint	>10kN
Clamping Force	>20kN
Lateral adjustment	+/- 5
Gauge adjustment	+/- 10mm

