

PANDROL

FASTCLIP FE



PRODUCT INFORMATION



PANDROL PRESENTS:

FASTCLIP FE

The PANDROL FASTCLIP FE system is a resilient, threadless rail fastening system with the unique PANDROL switch on – switch off function that enables fast, efficient track installation and reduced maintenance costs.

For more information on the FASTCLIP range visit www.pandrol.com

LEARN MORE >

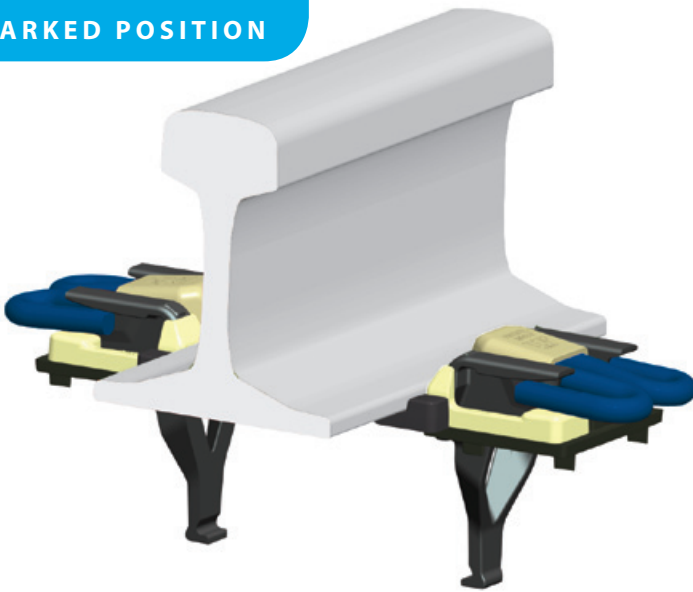


Sleepers arrive on site with all components held captive and the clips set at the parked position. Once the sleepers are placed and the rail has been threaded, clips are simply pushed from the parked to the installed position. Correct toe load is achieved automatically.

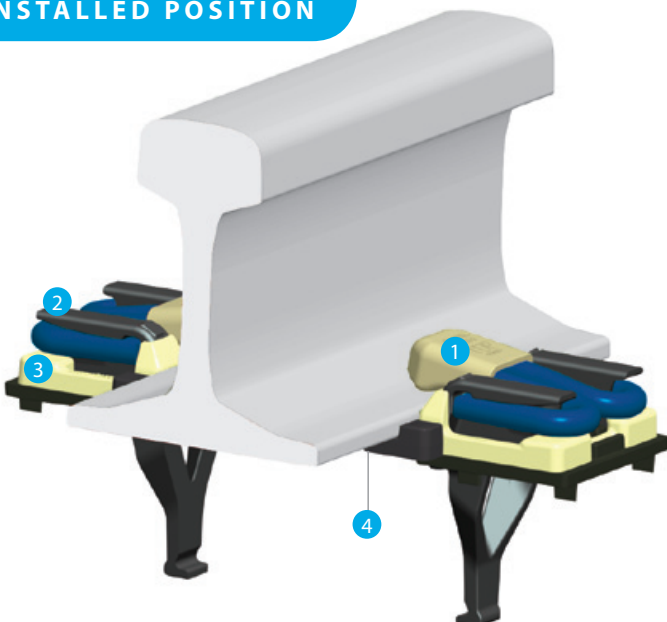
Components:

- 1. Clip and toe insulator**
 - Nominal toe load of 1,000-1,250 kg per clip based on customer requirements
- 2. Cast shoulder**
 - Made from spheroidal graphite cast iron
 - Excellent gauge retention
 - Low profile providing high lateral impact resistance
- 3. Collar**
 - High lateral stiffness and durability give excellent gauge retention
 - Excellent electrical insulation
 - Different widths available for dual-rail/gauge-widening where required
- 4. Studded EVA rail pad**
 - Rail pad provides high impact attenuation, preventing high dynamic forces being transmitted to the sleepers and ballast
 - Other pad types such as studded or grooved rubber, PU and HDPE are optional

PARKED POSITION



INSTALLED POSITION





INSTALLATIONS



SINCE 2007

FASTCLIP FE has been installed in Albania, Australia, Brazil, Bulgaria, Czech Republic, Estonia, Hungary, Lithuania, Malaysia, Mongolia, Norway, Romania, Serbia, Turkey, UK and USA.



TURKEY



NORWAY

FEATURES OF ASSEMBLY

FULLY PRE-ASSEMBLED

All the components leave the sleeper factory fully pre-assembled on the sleeper, offering huge savings in manpower, and reduced distribution and handling costs during track laying, stressing and rail changing.

THREADLESS

The PANDROL FASTCLIP system has no threaded components, eliminating costly maintenance.

REPLACEABILITY OF COMPONENTS

PANDROL FASTCLIP is virtually maintenance free. However, should you need to replace a component, it is a simple procedure to withdraw the clip, without the need to unscrew bolts.

RAIL TENSIONING / CREEP RESISTANCE

The correct tensioning is automatically achieved when the clip is driven into the working position.

ANCHORAGE

Cast-in shoulders hold the rail at correct gauge and set the Fastclip deflection. The shoulders are cast into the sleeper during the manufacturing process.

ELECTRICAL INSULATION

The FASTCLIP assembly provides excellent electrical insulation properties. The cast shoulders are electrically isolated from the rail by the collars. The spring clips are electrically isolated from the rail by the toe insulators.

STRESSING / NEUTRALISATION

All components remain captive during the stressing procedure. The clip is simply withdrawn back to the parked position to release the rail. Stressing rollers are available for use if required.

HEAVY HAUL

The FE1500 series system is suitable for heavy haul application.

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FASTCLIP FE SYSTEM

- For use on concrete sleepers
- Suitable for use on light rail, metro, general main line, high speed and heavy axle loads
- Suitable for use on monobloc sleepers (pre or post-tensioned) or reinforced bi-block sleepers

Application data (Standard products – special variants may differ)

Rail Inclination	As provided in the sleeper				
Pad Type	Please consult PANDROL for appropriate pad types against operating requirements				
Typical Applications	Light rail, Metro, general main line, mixed traffic, heavy haul and high speed				
Clip Type	PANDROL FASTCLIP FE1400			PANDROL FASTCLIP FE1500	
EN13481-2 Fastening Category	Cat A	Cat B	Cat C	Cat D	For max axle load/radius please consult PANDROL
Maximum Axle Load*	130 kN	180 kN	260 kN	260 kN	
Minimum Curve Radius*	40 m	80 m	150 m	400 m	

* For Special applications consult Pandrol

Typical performance data*

EN13481-1 Fastening Category	Cat A	Cat B	Cat C/D	Test Method	Remarks
Assembly static stiffness	70-210 kN/mm	80-220 kN/mm	95-250 kN/mm	EN13146-9:2011	Dependent upon pad selection
Assembly dynamic stiffness	80-280 kN/mm	90-310 kN/mm	110-400 kN/mm	EN13146-9:2011	
Impact load attenuation	30-50%			EN13146-3:2012	
Electrical Insulation	>10 kΩ			EN13146-5:2012	

	FE1400	FE1500	
Nominal toe load	1000 kgf	1250 kgf	
Clamping force	>16 kN	>20 kN	EN13146-7:2012
Creep resistance	>9 kN	>11 kN	EN13146-1:2012

COMPLIANCE WITH STANDARDS:

PANDROL FASTCLIP FE1400 series fastenings are compliant with the requirements of EN13481-2:2012 and the High Speed Interoperability Directive (TSI). PANDROL FASTCLIP FE1500 series fastenings are compliant with the requirements of EN13481-8:2012 – Fastening systems for track with heavy axle loads. Some configurations of Pandrol Fastclip FE1400 and FE1500 series fastenings are compliant with the requirements of AREMA manual Chapter 30 Part 4.

NOTE:

PANDROL is an innovator and designer of bespoke rail fastenings. The data shown above is indicative of typical performance, but is naturally dependant on external factors. Should you have different requirements, please contact us to discuss tailoring products to suit local operating conditions. The technical information given in this brochure was correct at the time of printing, however the company undertakes a continuing programme of research and development and improvements may since have been introduced.

ISSUE 4 2014

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