

PANDROL

FASTCLIP FC Assembly

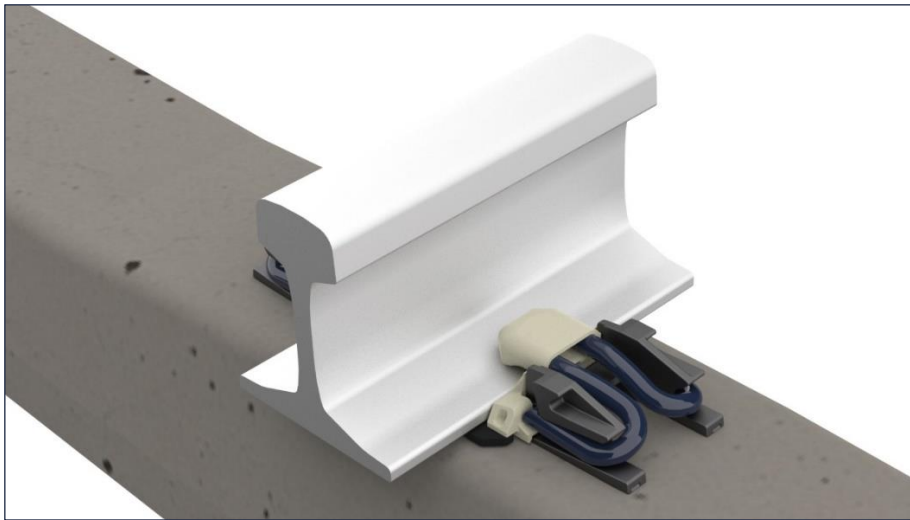
PRODUCT GUIDE



001-23_C
5th October 2020

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General Description



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

Sleepers arrive on site with all components held captive and the clips set at the parked position. It is 'switched on' by driving the clip on to the rail foot using a track machine or handtool.

Options for gauge widening, redemption and gauge adjustment. Special track applications for joint bars, guard rails, zero longitudinal restraint (ZLR), and dual or triple rail requirements. The assembly can be fully dismantled for inspection and maintenance purposes. All parts are replaceable.

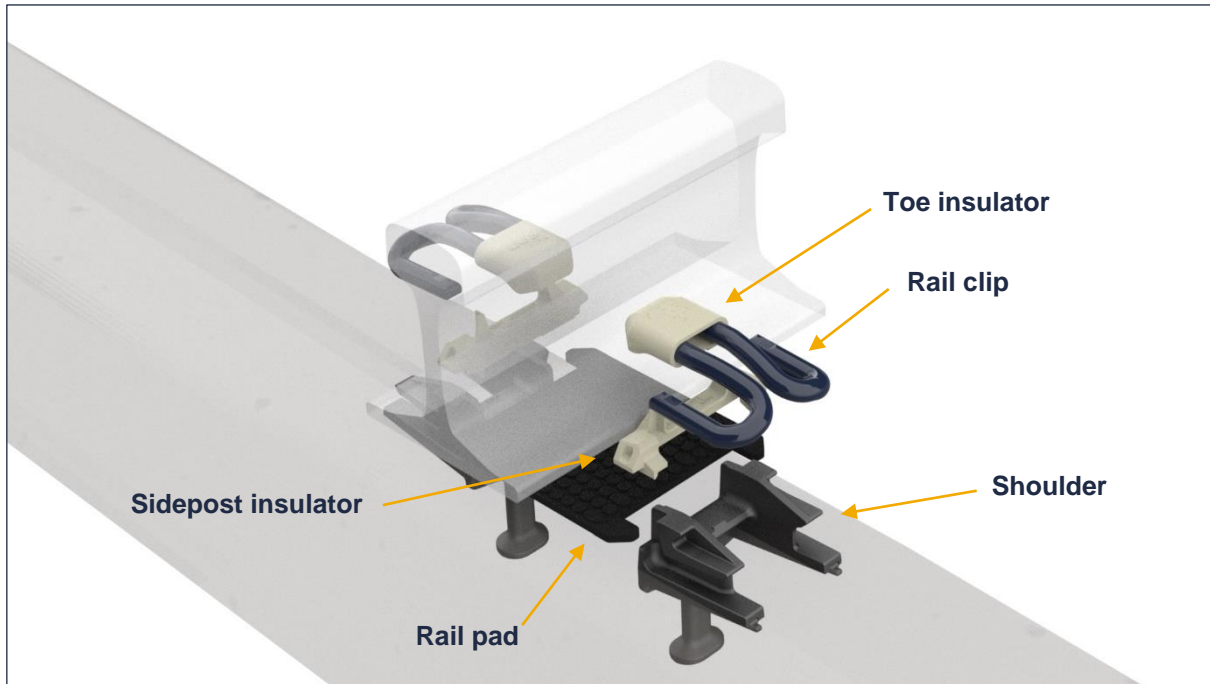
Recommendations for Ballasted Track

Technical Features

FASTCLIP FC system	For use on concrete sleepers/blocks and steel sleepers. Optimised for high output track relaying/mechanisation and suited to all normal track construction techniques.
Lateral adjustment (If required)	Gauge adjustment (up to +/-12mm), gauge widening (up to +24mm), gauge redemption (up to -24mm). Special applications consult PANDROL
Vertical adjustment	On sleeper in ballast

FASTCLIP		Operating Conditions				General Suitability				
CEN Cat	Track Type	Typical Rad (m)	Min Rad (m)	Typical Axle (kN)	Max Axle (kN)	Max Speed (km/h)	Rail pad resilience			
							Very Stiff	Stiff	Med	Soft
A	Light Urban / Tram	80	40	100	130	100	✓	✓	✓	✓
B	Light Urban / Metro	100	80	160	180	140	✓	✓	✓	✓
C	Main Line	400	150	225	260	250	✓	✓	✓	✓
D	Main Line, High Speed	800	400	180	260	350	✓	✓	✓	✓
E	Heavy Freight	150	150	300	350	200	✓	✓	✓	
>E	Very Heavy Haul Freight	150	150	350	400	120	✓	✓		

Standard Components

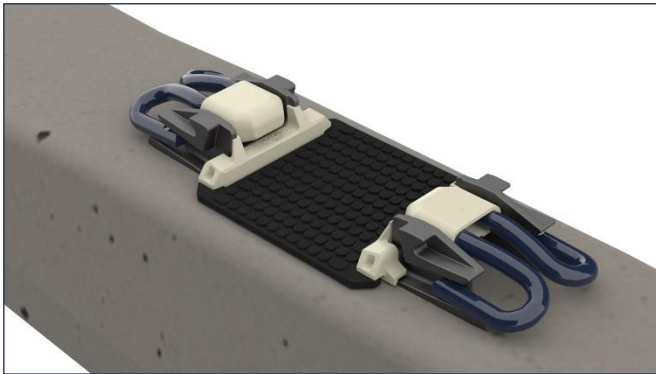


Component (per railseat)	Remarks	Part no.
FC FASTCLIP rail clip (2)	Spring steel	Refer to assembly drawing
Toe insulator (2)	HVN	
Pad - rail (1)	Rubber, EVA, Polyurethane options as required	
Sidepost (2)	HVN	
Shoulder (2)	SG Iron – Cast in Sleeper	

Construction

Sleepers are delivered to site with all the components pre-assembled and held captive with the FASTCLIP FC clips installed to the 'parked' position ready to accept the rail. Once the rails are threaded the FASTCLIP FC clips are driven forward onto the railfoot either mechanically or manually.

Clips in parked position



Rail threaded and clips fully installed



The system lends itself to various track construction methods. Contact PANDROL for full details.

Construction Methods

Method	Loose Sleeper Relay	Track Panel Build	High Output Automated Track Relaying Machine
Pre-cast block/sleeper	✓	✓	✓

Special Applications

The PANDROL FASTCLIP FC system can be used with:

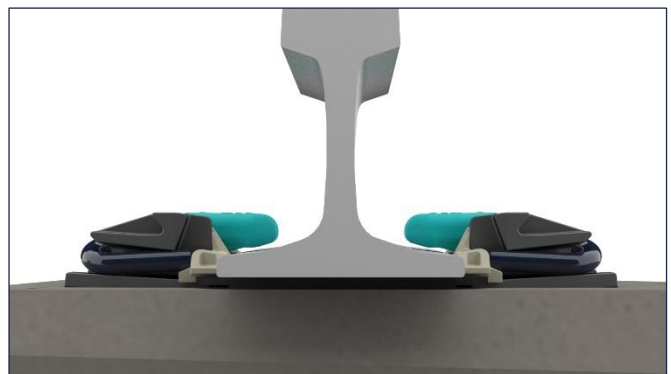
Rail Joints. The FC1402 rail clip is supplied along with an 'Interface Plate' which applies the clamping force to the rail foot in the limited space available.

ZLR Systems. The zero longitudinal restraint system can be supplied where differential thermal movement between the support structure and rail is required.

Joint bar fastenings



ZLR – Zero longitudinal restraint



Handtools and Machinery

Handtools

The FASTCLIP FC assembly uses two different handtools; one tool for installation and one tool for extraction. Refer to the Operation and Maintenance Manual for all handtool information.

Clip installation



Clip extraction



Machinery

A range of automated machines are available for larger scale FASTCLIP FC sleeper installations.



Lateral Adjustment

The FASTCLIP FC system is available in different variants. Lateral rail adjustment can be offered through a simple exchange of the FASTCLIP FC sidepost insulators. PANDROL can supply a range of different thickness FASTCLIP FC sidepost insulators to enable lateral rail adjustment requirements, each sidepost insulator being identified with a different colour.

- Standard configuration has no lateral adjustment
 - Gauge Adjustment up to +/-12mm
 - Gauge Widening up to +24mm
 - Gauge Redemption up to -24mm
- (per railseat)

Range of FASTCLIP FC Sidepost Insulators

The table below lists all the available FC collars. The clip type will determine the limits of which thickness of sideposts can be used, thus the limit of lateral rail adjustment that can be obtained. Ultra-Violet (UV) options available in all thickness can be supplied black in colour.

Sidepost Increments 1mm	FC1501 Clip	FC1504 Clip	FC1604 Clip	FC1605 Clip
Sidepost - 6mm	Sidepost range 6mm - 12mm	Sidepost range 6mm - 18mm	Sidepost range 6mm - 12mm	Sidepost range 6mm - 18mm
↓ ↓				
Sidepost - 18mm				

Example: 8mm sidepost



Example: 16mm sidepost



For further detail consult PANDROL



Safety, Life Cycle and Environmental Information

SAFETY - PANDROL Fastener components are safe to handle during installation and use based on intended and expected service conditions. Contamination during service from railway traffic (passenger and freight) is expected, so appropriate precautions (e.g. the use of personal protective equipment, PPE) are recommended when inspecting / replacing fastener components in this condition. Safety warnings are included on PANDROL brand handtools.

ENVIRONMENT - PANDROL Fastener components include recycling codes (e.g. plastic insulators, bushes, shims and pads) and can be readily recycled (e.g. cast iron). Local regulations should be respected when disposing of packaging materials and when disposing of worn / life expired fastener components.

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Find out more at

pandrol.com

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