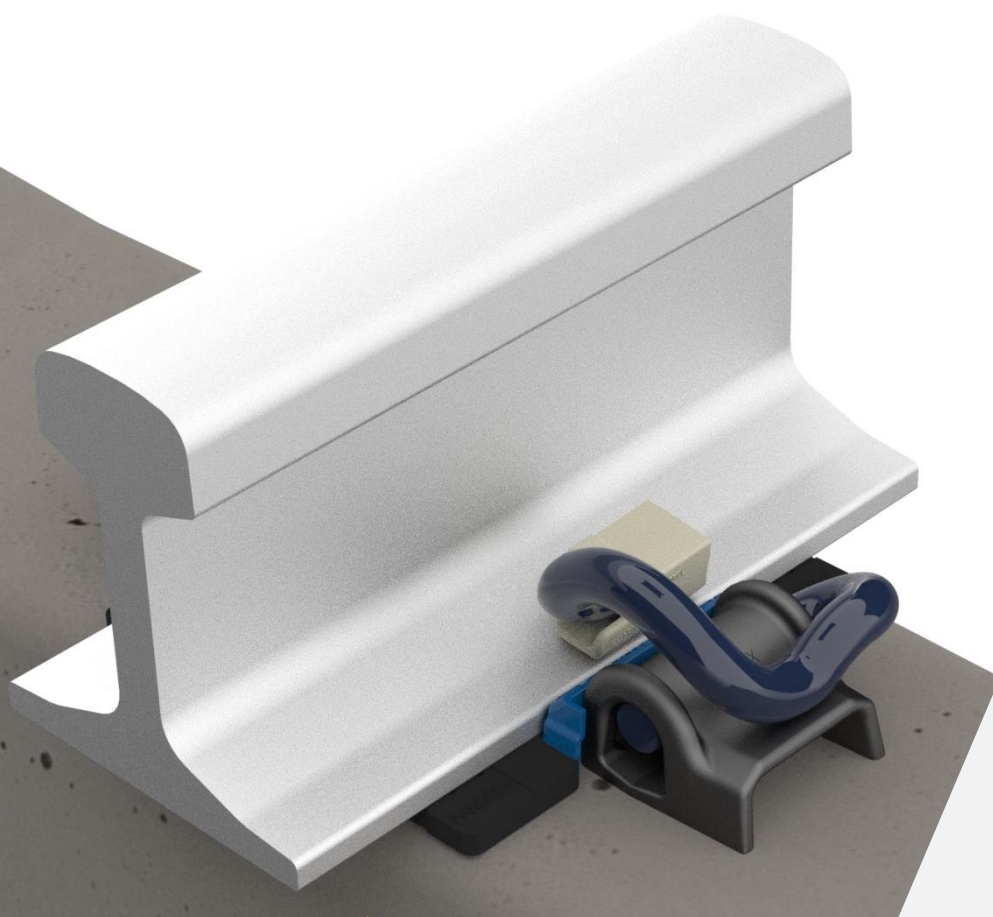


PANDROL

Re System

PRODUCT GUIDE

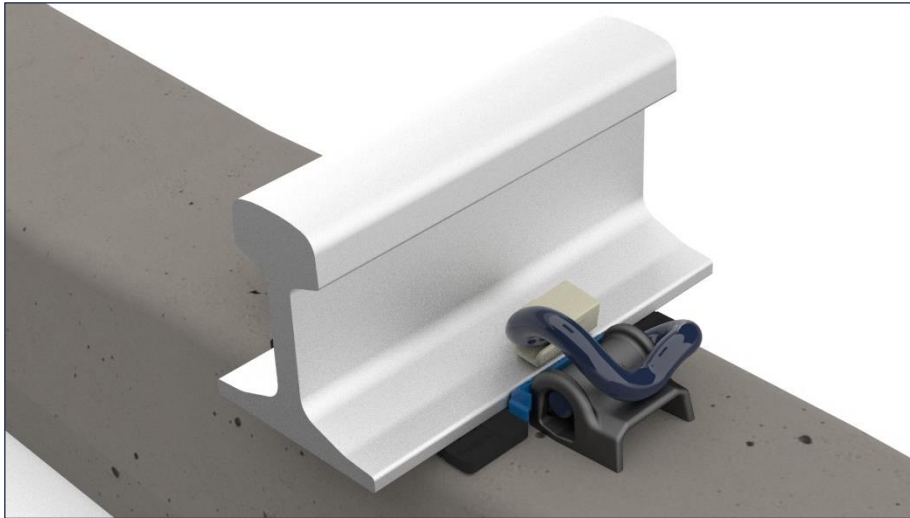


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17th December 2020

Partners in excellence

General Description



The PANDROL Re System is a resilient, threadless rail fastening that enables fast, efficient installation, achieving longer lengths of re-railing in any possession, and reduced maintenance costs, by matching the durability of the fastening components to the residual life of older sleeper types.

Has a reduced number of loose components when compared to a traditional e-Clip equivalent resulting in faster clip, pad/insulator installation times during track refurbishments.

Rail pads are supplied with sidepost insulators already attached. This reduces time and labour when laying out and installing components on site. Toe insulators are already in place on the toe of the clip. This further reduces installation times.

Can be installed on new or existing Pandrol e-Clip or PR Clip concrete sleepers, steel sleepers, baseplates and turnouts.

Recommendations for Ballasted Track

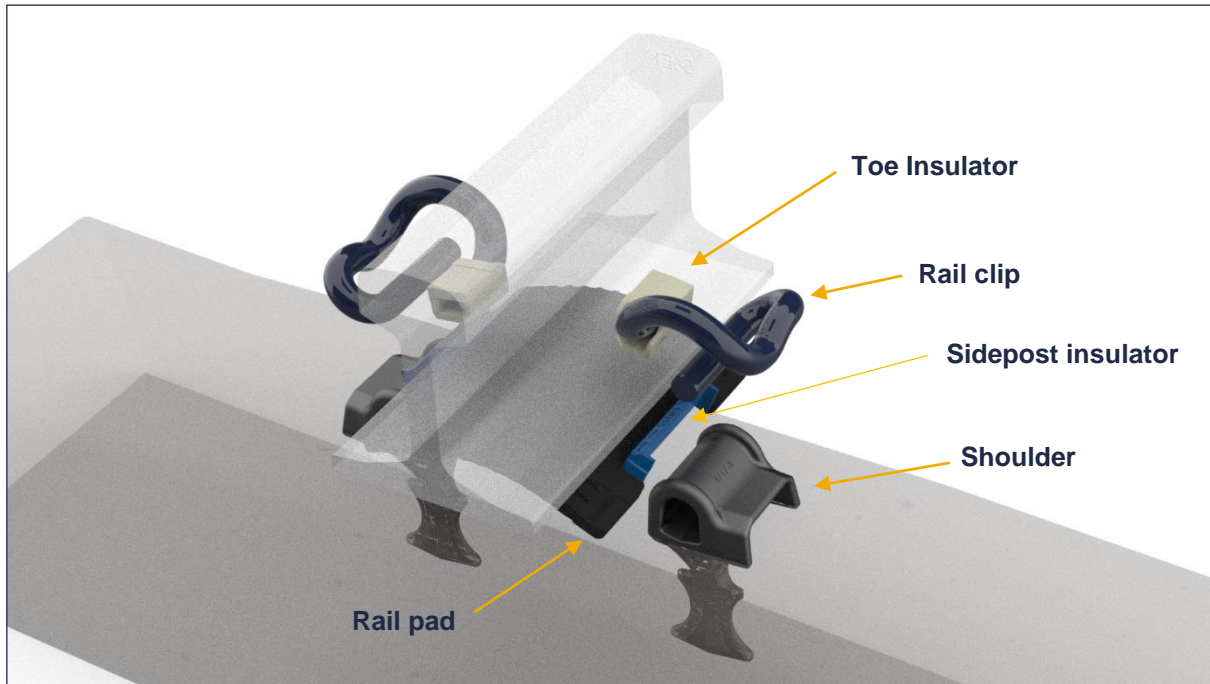
Technical Features

PANDROL Re System

For use on concrete sleepers/blocks steel sleepers, baseplates and turnouts. Can be used for track renewal of new or serviceable sleepers originally designed for either 'PR' or 'e' Series clips

FASTCLIP		Operating Conditions					General Suitability			
CEN Cat	Track Type	Typical Rad	Min Rad	Typical Axle	Max Axle	Max Speed	Rail pad resilience			
		(m)	(m)	(kN)	(kN)	(km/h)	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

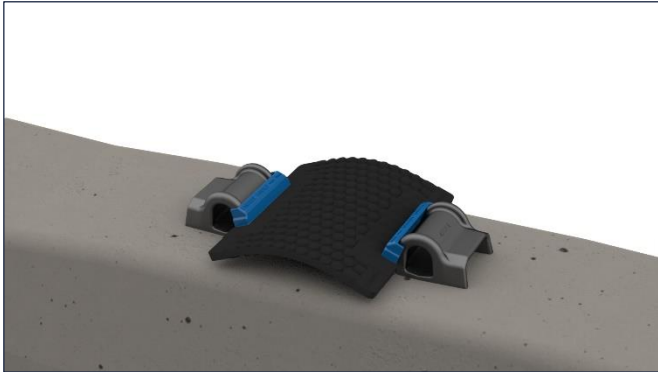


Component (per railseat)	Remarks	Part no.
Re clip with integral toe insulator (2)	Toe insulator Material HVN	Refer to assembly drawing
Rail pad – with integral sidepost insulators (1)	Rubber, EVA, Polyurethane options as required. Sidepost insulator material HVN	

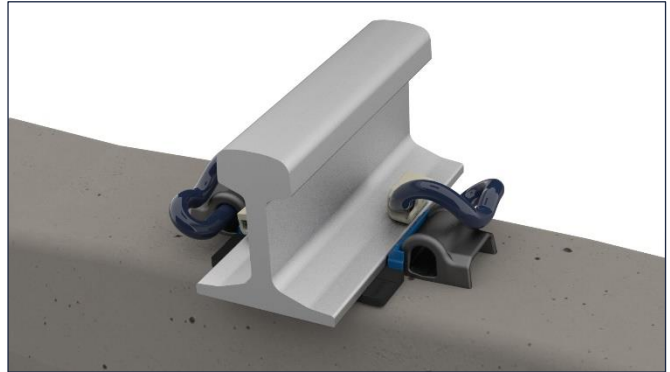
Construction

PANDROL Re System installs on new and existing concrete sleepers fitted with PANDROL e-Clips or PR Clips. It can also be installed on steel sleepers, baseplates and turnouts. A unique special shaped pad incorporating sidepost insulators has been designed for assisting rail threading.

Rail pad with integral sidepost insulator



Re Clip in position for installing



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	✓	✓	✓

Retrofit - Efficiency Gains

Re System can be easily and quickly retrofitted to existing PANDROL e-Clip and PR Clip assemblies. With separated toe and sidepost insulator functions, Re System also provides greatly improved insulator durability.

Efficiency Gains

Re System delivers insulators integrated with rail pads and pre-assembled clips as single components to create valuable efficiency improvements.

Independent process study on 25 concrete sleepers

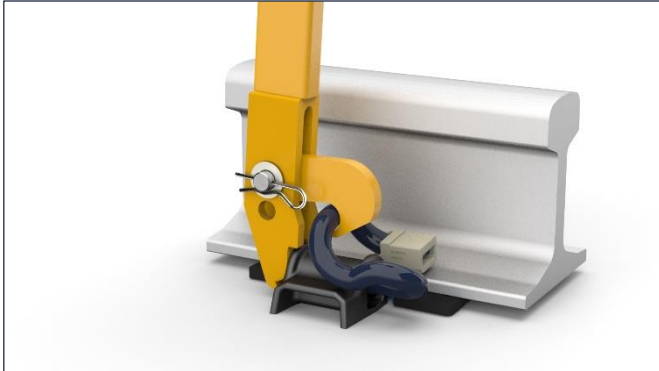
Operation	Traditional e-Clip / Pr Clip		Re System		% Savings
	Staff	Time	Staff	Time	
Component Distribution	3	2m 40s	2	2m 16s	15% Time 33% Staff
Work content of distribution	7.98 Operator. minutes		4.5 Operator. minutes		44% Less work
Installation & clip insertion	5	4m 49s	3	3m 8s	35% Time 40% Staff
Work content of installation	24.1 Operator. minutes		9.39 Operator. minutes		61% Less work

Handtools and Machinery

Handtools

The Re System uses only one lightweight handtool for installation and extraction. Refer to the Operation and Maintenance Manual for specific handtool information.

Clip installation



Clip extraction



Machinery

A range of automated machines are available for larger scale Re System sleeper installations.





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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