



PANDROL

Partners in excellence

SRT Thailand Track Fastening Guide

2026 Edition

Partners in excellence

At Pandrol, we believe in quality above all else, and are proud to provide innovative products and services that support rail infrastructure. Across the world, our solutions define the industry standard in rail fastenings, aluminothermic welding, electrification, track engineering and maintenance, and noise and vibration reduction.

This booklet is intended for use by all those involved in the specification, installation, and maintenance of Pandrol fastenings for State Railway of Thailand (SRT) and has been designed to answer the most frequently asked questions relating to our fastenings. It is not applicable to other railways because product specifications vary from region to region.

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Fastclip FC

Fastclip is a total system in which all components are delivered to site pre-assembled on the sleeper or baseplate. Once the sleepers are laid and the rail installed the clip is simply pushed onto the rail by means of a simple drive action.

Fastclip FC is a threadless fastening with low maintenance and pre-assembly of the fastening which remains captive on the sleeper. The unique switch on – switch off system enables fast efficient track installation (seamless destressing, easy unclipping for welding etc.) and reduced maintenance costs. It is designed for all categories of track and rapid installation by mechanised equipment.

Fastclip FC also eases the on-site logistics during track construction. As the system is fully captive, there is no need to distribute components (clips, pads, insulators) alongside the track and there is no risk of loss or theft of components.

→ Fastclip Assemblies (Ballasted Track)

Pandrol Assembly Reference	Description
21868	<p>FC1509 Concrete sleeper assembly for 54E1 rail 1000 mm gauge. Gauge widening available up to +20 mm*</p> <p>Qty per Rail Seat</p> <p>10856 FC1509 Clip Assembly (black) x2 10292 FC 8 mm Insulator (natural) x2 21007 FC HDPE Rail pad x1</p> <p><i>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. Standard sleeper = 1000 mm nominal gauge. GW1 sleeper = 1002 – 1010 mm gauge. GW2 sleeper = 1012 – 1020 mm gauge.</i></p>
24774	<p>FC1511 Concrete sleeper assembly for BS100A rail 1000 mm Gauge*</p> <p>Qty per Rail Seat</p> <p>11503 FC1511 Clip Assembly (red brown) x2 11746 FC 11 mm Insulator (green) x1 21084 FC 12 mm Insulator (light blue) x1 21115 FC HDPE Rail pad x1</p> <p><i>*Interchangeable with 54E1 rail in the same rail seat via insulator, rail pad, and rail clip change</i></p>



→ Fastclip Special Applications (ZLR)



Pandrol Assembly Reference	Description
23569	<p>FC1509 ZLR Concrete sleeper assembly for 54E1 rail</p> <p>Qty per Rail Seat</p> <p>13769 FC1509 ZLR Clip Assembly x2 (black) 13768 Interface Plate ZLR x2 10292 FC 8 mm Insulator (natural) x2 21007 FC HDPE Rail pad x1</p> <p><i>*See terminology. Converts standard Fastclip assembly 21868 to a rail free ZLR assembly*.</i></p>



→ Fastclips

Pandrol Part Reference	Description	
10856	<p>FC1509 Clip Assembly Standard Finish: Black</p> <p>Toe Insulator Natural Standard toe load clip Material: Spring Steel + Plastic (HVN)</p>	
11503	<p>FC1511 Clip Assembly Standard Finish: Red brown</p> <p>Toe Insulator Natural Standard toe load clip Material: Spring Steel + Plastic (HVN)</p>	
13769	<p>FC1509 ZLR Clip Assembly Standard Finish: Black</p> <p>Toe Insulator Green Material: Spring Steel + Plastic (HVN) Used in Zero Longitudinal Restraint (ZLR) assemblies – see Terminology.</p>	

→ Fastclip Rail Pads

Pandrol Part Reference	Description	
21007	<p>FC HDPE Rail Pad (Black)</p> <p>Working Thickness 7.5 mm Material: HDPE Used on Fastclip concrete sleepers with 54E1 rail.</p>	
21115	<p>FC HDPE Rail Pad (Black)</p> <p>Working Thickness 9 mm Material: HDPE Used on Fastclip concrete sleepers with BS100A rail.</p>	

→ Fastclip Insulators

Pandrol Part Reference	Description
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Insulators for 54E1 rail

11745

FC Side post Insulator 6 mm (Yellow)

Material: Plastic (HVN)
Used on Fastclip concrete sleepers.



10292

FC Side post Insulator 8 mm (Natural)

Material: Plastic (HVN)
Used on Fastclip concrete sleepers.



21083

FC Side post insulator 10 mm (Brown)

Material: Plastic (HVN)
Used on Fastclip concrete sleepers.



→ Fastclip Insulators

Pandrol Part Reference	Description
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Insulators for BS100A rail

11746

FC Side post insulator 11 mm (Green)

Material: Plastic (HVN)
Used on Fastclip concrete sleepers.



21084

FC Side post insulator 12 mm (Light Blue)

Material: Plastic (HVN)
Used on Fastclip concrete sleepers.



→ Fastclip Shoulders

Pandrol Part Reference	Description
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10530	<p>FC Cast in Shoulder for Concrete Sleepers</p> <p>Material: Cast Iron (SGI) Precast in supplied Fastclip sleeper.</p>
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→ Fastclip Special Applications (ZLR) – Interface Plates

Pandrol Part Reference	Description
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13768	<p>Fastclip ZLR interface plate to suit 10530 shoulder</p> <p>Material: Cast Iron (SGI) Used in Zero Longitudinal Restraint (ZLR) assemblies – see Terminology.</p>
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→ Handtools for Fastclip

Pandrol Tool Reference	Description
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Handtools for Fastclip concrete sleeper assemblies

PP140172	<p>Fastclip Factory Installation Tool (Body and Handle Yellow, Reaction Frame Black)</p> <p>Used to pre-assemble Fastclip to the concrete sleeper.</p>
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→ Handtools for Fastclip

Pandrol Tool Reference	Description
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Handtools for Fastclip concrete sleeper assemblies

PP140142	<p>Fastclip Clip Installer (Body and Handle Yellow, Reaction Frame Black)</p> <p>Suitable for use on Fastclip FC concrete sleepers only.</p>
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PP140143	<p>Fastclip Clip Extractor (Body and Handle Cream, Reaction Frame Black)</p> <p>Suitable for use on Fastclip FC concrete sleepers only.</p>
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PP140144	<p>Fastclip Sleeper Lifter (Body and Handle Blue, Lifting Jaw and Link Black)</p> <p>Suitable for use on Fastclip FC concrete sleepers only. Used in conjunction with the Fastclip installer where sleepers need to be lifted.</p>
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→ Handtools for Fastclip

Pandrol Tool Reference	Description
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Handtools for Fastclip concrete sleeper assemblies

PP140168	<p>Fastclip Rear Arch Extractor (Body and Handle Grey, Reaction Frame Black)</p> <p>Suitable for use on Fastclip FC concrete sleepers only. This tool is required at IBJ's to extract clips which are shielded by the joint.</p>
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24720	<p>Fastclip Clip Installer for use at guard rail locations (Body and Handle Yellow, Reaction Frame Green)</p> <p>Suitable for use on Fastclip FC concrete sleepers where an adjacent guard rail is installed.</p>
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→ Machines for Automated Installation and Extraction of Fastclip

Pandrol Machine Reference	Description
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CD200 IQ	<p>CD200 IQ</p> <p>For clip installation and extraction to achieve productivity and efficiency gains. Single operator walk behind machine. Intuitive control system with digital display. Clips up to 20 sleepers per minute. Sleeper lift function for lift of low-lying sleepers up to 50 mm.</p>
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→ Fastclip Stressing Rollers

Pandrol Tool Reference	Description
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SR201001	<p>FC Stressing Roller (Yellow)</p> <p>For Fastclip FC Sleeper. This is a multi-function stressing roller for FC clip types. It combines both the side and under roller requirements for stressing rail. It also incorporates a lift function removing the need for track jacks. Suitable for use with 54E1 Rail.</p>
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2



Fastclip Baseplate

A fastening assembly which provides a captive Pandrol Fastclip rail fastening system mainly for ballastless track applications. The baseplate offers a very large range of both vertical and lateral adjustment in a configuration where these adjustments can be made very quickly and easily and with a minimum of additional components required.

The Pandrol Fastclip Baseplate is designed for use on pre-cast concrete elements.

As the system is fully captive, there is no need for a distribution of the various components alongside the track before construction, which is particularly convenient on elevated structures and tunnel areas with limited accessibility.



→ Fastclip Baseplate Assemblies (Ballastless Track)

Pandrol Assembly Reference	Description
23146	FCB 2 Hole SR Baseplate assembly for 54E1 rail For Embedded Concrete Sleeper Applications 1000 mm Gauge. Gauge adjustment available ± 20 mm*
Qty per Rail Seat	
22605	Pad Conforming x1
21250-SRT	Baseplate x1
22606-SRT	Pad-Rail x1
21809-11	Insulator-Sidepost 11 mm x2
9471	FC1501 Clip and Toe Insulator Assembly x2
22607	Bush-Clamp x2
21632	Washer-Clamp x2
12412	M27 Disc Spring Washer x2
C225/195-J06	Screw GS25 mm (154 mm long) x2



*Gauge adjustment achieved within the baseplate.

→ Special Applications (ZLR)

Pandrol Assembly Reference	Description
24251	FCB 2 Hole ZLR* Baseplate assembly for 54E1 rail. For Embedded Concrete Sleeper Applications 1000 mm Gauge. Gauge adjustment available ± 20 mm**
Qty per Rail Seat	
22605	Pad Conforming x1
21250-SRT	Baseplate x1
26461-SRT	Pad-Rail x1
24252-SRT	Rail Shim ZLR x1
21809-11	Insulator-Sidepost 11 mm x2
26490	FC1501 Clip and ZLR Toe Insulator Assembly x2
22607	Bush-Clamp x2
21632	Washer-Clamp x2
12412	M27 Disc Spring Washer x2
C225/195-J06	Screw GS25 mm (154 mm long) x2



*See terminology.

** Gauge adjustment achieved within the baseplate.

Converts standard FCB assembly 23146 to a rail free ZLR assembly.

→ Fastclips

Pandrol Part Reference	Description
9471	FC1501 Clip Assembly Standard Finish: Black Toe insulator: Natural Standard toe load clip Material: Spring Steel + Plastic (HVN).
24690	FC1501 ZLR Clip Assembly Standard Finish: Black Toe insulator: Blue Material: Spring Steel + Plastic (HVN) Used in Zero Longitudinal Restraint (ZLR) assemblies – see Terminology.





→ Fastclip Baseplates


Pandrol Part Reference	Description
21250-SRT	FCB Baseplate non-inclined Material: Cast Iron (SGI).







→ Fastclip Baseplate Rail Pads

Pandrol Part Reference	Description	
22606-SRT	FCB Studded Rubber Rail Pad (Black) SR Single Resilience Assemblies. Working Thickness: 10 mm Material: Natural Rubber.	
24641-SRT	FCB Studded Rubber ZLR Rail Pad (Black) Used in Zero Longitudinal Restraint (ZLR) assemblies – see Terminology. Working Thickness: 8 mm Material: Natural Rubber.	

→ Fastclip Baseplate Insulators

Pandrol Part Reference	Description	
21809-11	11 mm Side Post Insulator (Dark Blue) Material: HVN For FCB baseplate assemblies with 54E1 rail. Fitted field and gauge side of the baseplate.	

→ Fastclip Baseplate Anchors

Pandrol Part Reference	Description	
Fastclip Baseplate Anchor Assembly		
Not allocated	FCB Anchor Screw 25 mm Assembly For initial build Components per anchor assembly (2 per FCB baseplate required) C225/195-J06 GS25 Anchor Screw* (154 mm) x1 12412 Washer x1 22607 Bush - Clamp x1 21632 Washer - Clamp x1 C225/251 GS Dowel Assembly x1 <i>*For vertical rail adjustment up to +10 mm.</i>	
Fastclip Baseplate Anchor Parts		
C225/195-J06	FCB GS25 Anchor Screw (154 mm) For vertical rail adjustment 0 -10 mm. Material: Steel Finish: Galvanised.	
C225/195-J08	FCB GS25 Anchor Screw (164 mm) For vertical rail adjustment 10 -20 mm. Material: Steel Finish: Galvanised.	
C225/195-J10	FCB GS25 Anchor Screw (174 mm) For vertical rail adjustment 20 -30 mm. Finish: Galvanised.	
12412	M27 Disc Spring Washer	
21632	Washer - clamp - FCB	

→ Fastclip Baseplate Anchors

Pandrol Part Reference	Description
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Fastclip Baseplate Anchor Parts

22607	Bush – clamp – FCB
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C225/251	FCB SR Dowel Assembly
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Supplied pre-cast in concrete sleeper.



→ Fastclip Baseplate Conforming Pads

Pandrol Part Reference	Description
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22605	3 mm Thick Conforming Pad (Black)
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Material: EVA
For pre casted concrete elements.
(Bottom-Up Build Method).



→ Fastclip Baseplate Height Adjustment Shims

Pandrol Part Reference	Description
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21285-1	FCB Height Adjustment Shim 1 mm
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Material: Mild Steel – Sheradized.



21285-2	FCB Height Adjustment Shim 2 mm
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Material: Mild Steel – Sheradized.

21284-3	FCB Height Adjustment Shim 3 mm
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Material: HDPE.

21284-4	FCB Height Adjustment Shim 4 mm
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Material: HDPE.



21284-5	FCB Height Adjustment Shim 5 mm
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Material: HDPE.

21284-10	FCB Height Adjustment Shim 10 mm
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Material: HDPE.

→ Fastclip Baseplate Special Applications (ZLR) – Rail Shims

Pandrol Part Reference	Description
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24252-SRT	FCB Rail Shim – ZLR (Black)
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Material: EVA
Used in Zero Longitudinal Restraint (ZLR) assemblies –
see Terminology
Thickness: 2 mm.



→ Handtools for Fastclip Baseplate

Pandrol Tool
Reference

Description

Handtools for Fastclip baseplate assemblies on ballastless track

AE19914

**Fastclip Over The Rail (OTR)
Clip Installer (Yellow)**

Recommended for use with Fastclip baseplate assemblies.



AE17385

**Fastclip Clip Extractor
(Cream)**

Recommended for use with Fastclip baseplate assemblies.



3



e-Clip

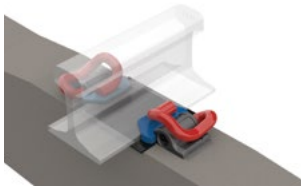


The original Pandrol e-Clip has stood the test of time all around the world thanks to the geometric design and ease of installation. They have been used across hundreds of applications, covering virtually every possible known rail section. Today's Pandrol e-Clips are an evolution of time-tested technologies, which have safely carried the world's rail passengers and freight for decades.



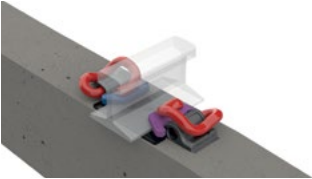
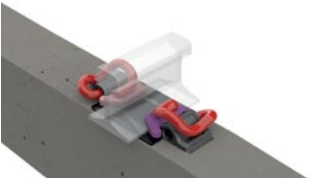
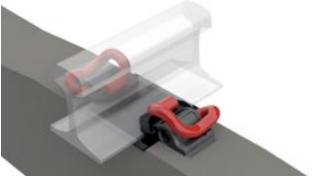
→ e-Clip Assemblies (Ballasted Track)

Pandrol Assembly Reference	Description	
13401	e2091TAV / e1819AV Concrete Sleeper Assembly for 54E1 Rail* 1000 mm Gauge Qty per Rail Seat 7997 or 7540 e2091TAV or e1819AV Clips x2 13403 Rail Pad x1 20074 11.5 mm Insulator (Light Blue) Gauge Side x1 20075 14.5 mm Insulator (Dark Blue) Field Side x1 <i>* Interchangeable with 60E1 rail in the same rail seat via insulator change.</i>	
13401	e2091TAV / e1819AV Concrete Sleeper Assembly for 60E1 Rail* 1000 mm Gauge Qty per Rail Seat 7997 or 7540 e2091TAV or e1819AV Clips x2 13403 Rail Pad x1 13404 8 mm Insulator (black) x 2 <i>* Interchangeable with 54E1 rail in the same rail seat via insulator change.</i>	
18912	e2091TAV / e1819AV Concrete Sleeper Assembly for 54E1 rail 1000 mm Gauge. Gauge widening available up to +19 mm* Qty per Rail Seat 7997 or 7540 e2091TAV or e1819AV Clips x2 20275 Rail Pad x1 20074 11.5 mm Insulator (Light Blue) Gauge Side x1 20075 14.5 mm Insulator (Dark Blue) Field Side x1 <i>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change 13402 Shoulder setting = 0 - 15 mm gauge widening 25844 Shoulder setting = 11 - 19 mm gauge widening</i>	

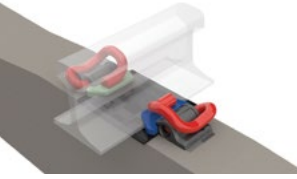
→ e-Clip Assemblies (Ballasted Track)

Pandrol Assembly Reference	Description	
25680	e2091TAV / e1819AV Concrete Sleeper Assembly for 54E1 rail 1000 mm Gauge. Gauge widening available up to +20 mm* Qty per Rail Seat 7997 or 7540 e2091TAV or e1819AV Clips x2 20275 Rail Pad x1 20074 11.5 mm Insulator (Light Blue) Gauge Side x1 20075 14.5 mm Insulator (Dark Blue) Field Side x1 <i>Interchangeable with BS100A rail in the same rail seat via insulator change.</i> <i>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. 13402 Shoulder setting = 0 - 8 mm gauge widening. 25642 Shoulder setting = 10 - 20 mm gauge widening.</i>	
11560	e2091TAV Concrete Sleeper Assembly for BS70A rail 1000 mm Gauge. Gauge widening available up to +20 mm* Qty per Rail Seat 7997 e2091TAV Clip x2 11557 Rail Pad x1 11566 13 mm Insulator (Pink) Gauge Side x1 11571 25 mm Insulator (Light Blue) Field Side x1 <i>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. 7544 Shoulder setting = 0 - 6 mm gauge widening. 11559 Shoulder setting = 8 - 20 mm gauge widening.</i>	
11561	e2091TAV Concrete Sleeper Assembly for BS70R rail 1000 mm Gauge. Gauge widening available up to +20 mm* Qty per Rail Seat 7997 e2091TAV Clip x2 11557 Rail Pad x1 11575 10 mm Insulator (Natural) Gauge Side x1 11580 22 mm Insulator (Black) Field Side x1 <i>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. 7544 Shoulder setting = 0 - 6 mm gauge widening. 11559 Shoulder setting = 8 - 20 mm gauge widening.</i>	

→ e-Clip Assemblies (Ballasted Track)

Pandrol Assembly Reference	Description									
11562	<p>e2091TAV Concrete Sleeper Assembly for 70 ASCE rail 1000 mm Gauge. Gauge widening available up to +20 mm*</p> <p>Qty per Rail Seat</p> <table border="1"> <tr> <td>7997</td> <td>e2091TAV Clip x2</td> </tr> <tr> <td>11557</td> <td>Rail Pad x1</td> </tr> <tr> <td>11584</td> <td>11 mm Insulator (Dark Blue) Gauge Side x1</td> </tr> <tr> <td>11589</td> <td>21 mm Insulator (Purple) Field Side x1</td> </tr> </table> <p>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. 7544 Shoulder setting = 0 - 6 mm gauge widening. 11559 Shoulder setting = 8 - 20 mm gauge widening.</p>	7997	e2091TAV Clip x2	11557	Rail Pad x1	11584	11 mm Insulator (Dark Blue) Gauge Side x1	11589	21 mm Insulator (Purple) Field Side x1	
7997	e2091TAV Clip x2									
11557	Rail Pad x1									
11584	11 mm Insulator (Dark Blue) Gauge Side x1									
11589	21 mm Insulator (Purple) Field Side x1									
11563	<p>e2091TAV Concrete Sleeper Assembly for BS80A rail 1000 mm Gauge. Gauge widening available up to +20 mm*</p> <p>Qty per Rail Seat</p> <table border="1"> <tr> <td>7997</td> <td>e2091TAV Clip x2</td> </tr> <tr> <td>11557</td> <td>Rail Pad x1</td> </tr> <tr> <td>11596</td> <td>12 mm Insulator (Pink) Gauge Side x1</td> </tr> <tr> <td>11600</td> <td>20 mm Insulator (Purple) Field Side x1</td> </tr> </table> <p>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. 7544 Shoulder setting = 0 - 6 mm gauge widening. 11559 Shoulder setting = 8 - 20 mm gauge widening.</p>	7997	e2091TAV Clip x2	11557	Rail Pad x1	11596	12 mm Insulator (Pink) Gauge Side x1	11600	20 mm Insulator (Purple) Field Side x1	
7997	e2091TAV Clip x2									
11557	Rail Pad x1									
11596	12 mm Insulator (Pink) Gauge Side x1									
11600	20 mm Insulator (Purple) Field Side x1									
11564	<p>e2091TAV / e1819AV Concrete Sleeper Assembly for BS100A rail 1000 mm Gauge. Gauge widening available up to +20mm*</p> <p>Qty per Rail Seat</p> <table border="1"> <tr> <td>7997 or 7540</td> <td>e2091TAV or e1819AV Clips x2</td> </tr> <tr> <td>2061 / 54</td> <td>Rail Pad x1</td> </tr> <tr> <td>7324</td> <td>8 mm Insulator (Black) x2</td> </tr> </table> <p>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. 7544 Shoulder setting = 0 - 6 mm gauge widening. 11559 Shoulder setting = 8 - 20 mm gauge widening.</p> <p>Alternative rail pad 9588 replaces standard rail pad 2061 / 54 at joint bar locations.</p>	7997 or 7540	e2091TAV or e1819AV Clips x2	2061 / 54	Rail Pad x1	7324	8 mm Insulator (Black) x2			
7997 or 7540	e2091TAV or e1819AV Clips x2									
2061 / 54	Rail Pad x1									
7324	8 mm Insulator (Black) x2									



→ e-Clip Assemblies (Ballasted Track)

Pandrol Assembly Reference	Description									
15763	<p>e2091TAV Concrete Sleeper Assembly for BS100A rail* 1000 mm Gauge.</p> <p>Qty per Rail Seat</p> <table border="1"> <tr> <td>7997</td> <td>e2091TAV Clips x 2</td> </tr> <tr> <td>25641</td> <td>Rail Pad x 1</td> </tr> <tr> <td>25635</td> <td>15 mm Insulator (light green) x Gauge Side x 1</td> </tr> <tr> <td>25638</td> <td>18 mm Insulator (dark blue) Field Side x 1</td> </tr> </table> <p>* Interchangeable with 54E1 rail in the same rail seat via insulator change</p> <p>Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. 13402 Shoulder setting = 0 - 8 mm gauge widening. 25642 Shoulder setting = 10 - 20 mm gauge widening.</p>	7997	e2091TAV Clips x 2	25641	Rail Pad x 1	25635	15 mm Insulator (light green) x Gauge Side x 1	25638	18 mm Insulator (dark blue) Field Side x 1	
7997	e2091TAV Clips x 2									
25641	Rail Pad x 1									
25635	15 mm Insulator (light green) x Gauge Side x 1									
25638	18 mm Insulator (dark blue) Field Side x 1									



→ e-Clip Baseplate (Ballasted Track)

Pandrol Assembly Reference	Description									
8386	<p>For Fixation to Timber / Synthetic Sleeper</p> <p>e2091TAV Baseplate Assembly for BS100A rail Timber Sleepers</p> <p>Qty per Rail Seat</p> <table border="1"> <tr> <td>7996 LS</td> <td>Cast Baseplate, BS100A, 1:40 x1</td> </tr> <tr> <td>7997</td> <td>e2091TAV Clip x2</td> </tr> <tr> <td>LS-13034</td> <td>Lockspike, Type L6 as required*</td> </tr> <tr> <td>S10207</td> <td>'Gagelok' Lock Screw, 16 mm x 105Lg as required*</td> </tr> </table> <p>* Baseplate can be fastened by either Lockspike or Lockscrew. Also can be used in a combination of each.</p>	7996 LS	Cast Baseplate, BS100A, 1:40 x1	7997	e2091TAV Clip x2	LS-13034	Lockspike, Type L6 as required*	S10207	'Gagelok' Lock Screw, 16 mm x 105Lg as required*	
7996 LS	Cast Baseplate, BS100A, 1:40 x1									
7997	e2091TAV Clip x2									
LS-13034	Lockspike, Type L6 as required*									
S10207	'Gagelok' Lock Screw, 16 mm x 105Lg as required*									

→ e-Clips

Pandrol Part Reference	Description	
7997	e2091TAV Clip Standard Finish: Red Standard toe load clip Material: Spring Steel.	
7540	e1819AV Clip Standard Finish: Black Standard toe load clip Material: Spring Steel.	

→ e-Clip Rail Pads

Pandrol Part Reference	Description	
13403	Plain Rail Pad Thickness: 5 mm Material: HDPE For Deep Post Insulators Used on e-Clip concrete sleeper assemblies with 54E1 and 60E1 rail.	
20275	Plain Rail Pad Thickness: 5 mm Material: HDPE For Deep Post Insulators Used on e-Clip concrete sleeper assemblies with 54E1 rail with gauge widening.	

→ e-Clip Rail Pads

Pandrol Part Reference	Description	
25643	Plain Rail Pad Thickness: 5 mm Material: HDPE For Deep Post Insulators Used on e-Clip complementary concrete sleeper with 54E1 rail with gauge widening.	
11557	Plain Rail Pad Thickness: 5 mm Material: HDPE For Deep Post Insulators Used on e-Clip concrete sleeper assemblies with BS70A, BS70R, 70ASCE, BS80A rail.	
2061/54	Plain Rail Pad Thickness: 5 mm Material: HDPE Used on e-Clip concrete sleeper assemblies with BS100A rail.	
25641	Plain Rail Pad Thickness: 5 mm Material: HDPE Used on e-Clip concrete sleeper assemblies with BS100A rail in a 54E1 rail seat with 0-8mm gauge widening.	
2061/37	Plain Rail Pad Thickness: 5 mm Material: HDPE Used on e-Clip concrete sleeper assemblies with BS100A rail in a 54E1 rail seat with 20mm gauge widening.	
9588	Chevron Grooved Rail Pad Thickness 6.5 mm Material: Rubber Used on e-Clip concrete sleeper assemblies with BS100A rail at joint bar locations.	

→ e-Clip Insulators for Concrete Sleepers

Pandrol Part Reference	Description
Insulators for 54E1 Rail	
25705	e-Clip Insulator 5 mm (Natural) Deep Post Material: GRN For 54E1 Rail
25706	e-Clip Insulator 6 mm (Light blue) Deep Post Material: GRN For 54E1 Rail
18906	e-Clip Insulator 7 mm (Pink) Deep Post Material: GRN For 54E1 Rail
18907	e-Clip Insulator 9 mm (White) Deep Post Material: GRN For 54E1 Rail
25707	e-Clip Insulator 10 mm (Light green) Deep Post Material: GRN For 54E1 Rail
18908	e-Clip Insulator 11 mm (Brown) Deep Post Material: GRN For 54E1 Rail
20074	e-Clip Insulator 11.5 mm (Light Blue) Deep Post Material: GRN For 54E1 Rail
13405	e-Clip Insulator 13 mm (Grey) Deep Post Material: GRN For 54E1 Rail
20075	e-Clip Insulator 14.5 mm (Dark Blue) Deep Post Material: GRN For 54E1 Rail



→ e-Clip Insulators for Concrete Sleepers

Pandrol Part Reference	Description
Insulators for 54E1 Rail	
18909	e-Clip Insulator 15 mm (Red) Deep Post Material: GRN For 54E1 Rail
18910	e-Clip Insulator 17 mm (Yellow) Deep Post Material: GRN For 54E1 Rail
18911	e-Clip Insulator 19 mm (Orange) Deep Post Material: GRN For 54E1 Rail
Insulators for BS70A Rail	
11565	e-Clip Insulator 11 mm (Dark Blue) Deep Post Material: GRN For BS70A Rail
11566	e-Clip Insulator 13 mm (Pink) Deep Post Material: GRN For BS70A Rail
11567	e-Clip Insulator 15 mm (Brown) Deep Post Material: GRN For BS70A Rail
11568	e-Clip Insulator 17 mm (Dark Grey) Deep Post Material: GRN For BS70A Rail
11569	e-Clip Insulator 21 mm (Purple) Deep Post Material: GRN For BS70A Rail



→ e-Clip Insulators for Concrete Sleepers

Pandrol Part Reference / Description

Insulators for BS70A Rail

11570 e-Clip Insulator 23 mm (Red) Deep Post

Material: GRN
For BS70A Rail

11571 e-Clip Insulator 25 mm (Light Blue) Deep Post

Material: GRN
For BS70A Rail

11572 e-Clip Insulator 27 mm (Dark Green) Deep Post

Material: GRN
For BS70A Rail

11573 e-Clip Insulator 29 mm (Yellow) Deep Post

Material: GRN
For BS70A Rail

Insulators for BS70R Rail

11574 e-Clip Insulator 8 mm (Black) Deep Post

Material: GRN
For BS70R Rail

11575 e-Clip Insulator 10 mm (Natural) Deep Post

Material: GRN
For BS70R Rail

11576 e-Clip Insulator 12 mm (Pink) Deep Post

Material: GRN
For BS70R Rail

11577 e-Clip Insulator 14 mm (Brown) Deep Post

Material: GRN
For BS70R Rail

→ e-Clip Insulators for Concrete Sleepers

Pandrol Part Reference / Description

Insulators for BS70R Rail

11578 e-Clip Insulator 18 mm (Orange) Deep Post

Material: GRN
For BS70R Rail

11579 e-Clip Insulator 20 mm (Purple) Deep Post

Material: GRN
For BS70R Rail

11580 e-Clip Insulator 22 mm (Black) Deep Post

Material: GRN
For BS70R Rail

11581 e-Clip Insulator 24 mm (Light Blue) Deep Post

Material: GRN
For BS70R Rail

11582 e-Clip Insulator 26 mm (Dark Green) Deep Post

Material: GRN
For BS70R Rail

Insulators for 70ASCE Rail

11583 e-Clip Insulator 9 mm (Black) Deep Post

Material: GRN
For 70ASCE Rail

11584 e-Clip Insulator 11 mm (Dark Blue) Deep Post

Material: GRN
For 70ASCE Rail

11585 e-Clip Insulator 13 mm (Pink) Deep Post

Material: GRN
For 70ASCE Rail

→ e-Clip Insulators for Concrete Sleepers

Pandrol Part Reference	Description
Insulators for 70ASCE Rail	
11586	e-Clip Insulator 15 mm (Brown) Deep Post Material: GRN For 70ASCE Rail
11587	e-Clip Insulator 17 mm (Dark Grey) Deep Post Material: GRN For 70ASCE Rail
11588	e-Clip Insulator 19 mm (Orange) Deep Post Material: GRN For 70ASCE Rail
11589	e-Clip Insulator 21 mm (Purple) Deep Post Material: GRN For 70ASCE Rail
11590	e-Clip Insulator 23 mm (Red) Deep Post Material: GRN For 70ASCE Rail
11591	e-Clip Insulator 25 mm (Light Blue) Deep Post Material: GRN For 70ASCE Rail
Insulators for BS80A Rail	
11595	e-Clip Insulator 10 mm (Dark Blue) Deep Post Material: GRN For BS80A Rail
11596	e-Clip Insulator 12 mm (Pink) Deep Post Material: GRN For BS80A Rail



→ e-Clip Insulators for Concrete Sleepers

Pandrol Part Reference	Description
Insulators for BS80A Rail	
11597	e-Clip Insulator 14 mm (Brown) Deep Post Material: GRN For BS80A Rail
11598	e-Clip Insulator 16 mm (Dark Grey) Deep Post Material: GRN For BS80A Rail
11599	e-Clip Insulator 18 mm (Orange) Deep Post Material: GRN For BS80A Rail
11600	e-Clip Insulator 20 mm (Purple) Deep Post Material: GRN For BS80A Rail
11601	e-Clip Insulator 22 mm (Red) Deep Post Material: GRN For BS80A Rail
11602	e-Clip Insulator 24 mm (Light Blue) Deep Post Material: GRN For BS80A Rail
Insulators for BS100A Rail	
11603	e-Clip Insulator 6 mm (Orange) Material: GRN For BS100A Rail
7324	e-Clip Insulator 8 mm (Black) Material: GRN For BS100A Rail



→ e-Clip Insulators for Concrete Sleepers

Pandrol Part Reference	Description
Insulators for BS100A Rail	
23289	e-Clip Insulator 9 mm (White) Material: GRN For BS100A Rail
11605	e-Clip Insulator 10 mm (Green) Material: GRN For BS100A Rail
25640	e-Clip Insulator 11 mm (Light blue) Material: GRN For BS100A Rail
11606	e-Clip Insulator 12 mm (Natural) Material: GRN For BS100A Rail
25633	e-Clip Insulator 13 mm (Red) Material: GRN For BS100A Rail
25634	e-Clip Insulator 14 mm (Orange) Material: GRN For BS100A Rail
25635	e-Clip Insulator 15 mm (Light green) Material: GRN For BS100A Rail
25636	e-Clip Insulator 16 mm (Brown) Material: GRN For BS100A Rail
25637	e-Clip Insulator 17 mm (Yellow) Material: GRN For BS100A Rail



→ e-Clip Insulators for Concrete Sleepers


Pandrol Part Reference	Description
Insulators for BS100A Rail	
25638	e-Clip Insulator 18 mm (Dark blue) Material: GRN For BS100A Rail
25639	e-Clip Insulator 19 mm (Light grey) Material: GRN For BS100A Rail
Insulators for 60E1 Rail	
13404	e-Clip Insulator 8 mm (Black) Deep Post Material: GRN For 60E1 Rail





→ e-Clip Shoulders

Pandrol Part Reference	Description	
7323	<p>e-Clip Shoulder for Concrete Sleepers</p> <p>Material: Cast Iron (SGI). Precast in supplied e-Clip sleeper.</p>	
18375	<p>Assembled e-Clip Shoulder and Seal Plate for Concrete Sleepers*</p> <p>Pre-assembled components</p> <p>18374 Cast shoulder. Material SGI. 17406 Seal plate. Material Nylon. Precast in supplied e-Clip sleeper. *Alternative option to 7323 or 24692 shoulder.</p>	
24692	<p>e-Clip Shoulder for Concrete Sleepers</p> <p>Material: Cast Iron (SGI). Precast in supplied e-Clip sleeper.</p> <p>*Alternative option to 7323 or 18375 shoulder.</p>	

→ e-Clip Baseplates for Timber Sleepers

Pandrol Part Reference	Description	
7996	<p>LS Cast Baseplate for BS100A rail</p> <p>Inclination 1:40. Material: Cast Iron (SGI). Can be supplied with round holes.</p>	

→ e-Clip Baseplate Fixings for Timber Sleepers

Pandrol Part Reference	Description	
LS-13034	<p>Lockspike Type L6</p>	
S10207	<p>'Gagelok' Lock Screw 16 mm x 105Lg</p> <p>Also called GageLok-6 16 mm Lok.</p>	

→ Handtools for e-Clip (Ballast)

Pandrol Tool Reference	Description
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Handtools for Anti Vandal e-Clip assemblies on ballasted track

AE21227

e-Clip Installer (Yellow)

Suitable for installing e2091TAV clips on Concrete Sleepers.

Replacement hooks are available: Pandrol No. AE21229.



AE21229

e-Clip Installer replacement hook (Yellow)

For use with AE21227 handtool.



PP140036

e-Clip Installer (Yellow)

Suitable for installing e1819AV clips on Concrete Sleepers.

Replacement hooks are available: Pandrol No. PP140075.



PP140075

e-Clip Installer replacement hook.

For use with PP140036 handtool.



→ Handtools for e-Clip (Ballast)

Pandrol Tool Reference	Description
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Handtools for Anti Vandal e-Clip assemblies on ballasted track

AE21732

e-Clip Extractor (Cream)

Suitable for extracting e2091TAV and e1819AV clips on Concrete Sleepers.

Replacement hooks are available: Pandrol No. AE21763.



AE21763

e-Clip Extractor replacement hook (Cream)

For use with AE21732 handtool.



AE19544

e-Clip Pansetter (Blue)

Used for lifting the sleeper to the rail foot. It pushes the rail over, leaving the correct gap between the rail foot and the Pandrol housing, so that the insulator can be easily placed in the correct position.



→ e-Clip Stressing Roller

Pandrol Tool Reference

Description

SR313001

The eVSR (Yellow)

A multi-function stressing roller for e-Clip types. It combines both the side and under roller requirements for stressing rail. It also incorporates a lift function removing the need for track jacks.

Suitable for use with 54E1 and 60E1 rails.



SR313002

The eVSR (Yellow)

A multi-function stressing roller for e-Clip types. It combines both the side and under roller requirements for stressing rail. It also incorporates a lift function removing the need for track jacks.

Suitable for use with BS80A and BS100A rails.





e-Clip SRS

The Single Resilient System (SRS) e-Clip assembly is ideally suited to transit applications where noise and vibration mitigation is required. This non-bonded, low-profile system is fully insulated and provides excellent stray current protection. The SRS assembly consists of a cast base plate and a resilient pad and is ideally suited for all slab track applications.

→ e-Clip SRS Baseplate Assemblies (Ballastless Track)

Pandrol Assembly Reference	Description
19146	<p>e-Clip SRS Baseplate Assembly for 54E1 Rail For Embedded Concrete Sleeper Applications 1000 mm Gauge. Gauge adjustment available ± 20 mm*</p> <p>Qty per Rail Seat</p> <ul style="list-style-type: none"> 15156 Baseplate – Cast x1 7997 e2091TAV Rail Clip x2 19124 Insulator– Deep Post – 13 mm x2 19155 Rail Pad – Studded Rubber x1 11368 M24 Nut x2 11242 M24 Disc Spring Washer x4 11244 M24 Flat Washer x4 11032–24 Top Hat Bush x2 11328 Serrated Washer x2 20676 Conforming Pad x1 11027–70 M24 Anchor Stud (pre-cast into concrete sleeper) x2
15155	<p>e-Clip SRS Baseplate Assembly for 60E1 Rail For Embedded Concrete Sleeper Applications 1000 mm Gauge. Gauge adjustment available ± 20 mm*</p> <p>Qty per Rail Seat</p> <ul style="list-style-type: none"> 15156 Baseplate – Cast x1 7997 e2091TAV Rail Clip x2 20779 Insulator– Deep Post – 8 mm x2 15157 Rail Pad – Studded Rubber x1 11368 M24 Nut x2 11242 M24 Disc Spring Washer x4 11244 M24 Flat Washer x4 11032–24 Top Hat Bush x2 11328 Serrated Washer x2 20676 Conforming Pad x1 20678 M24 Anchor Stud (grade 8.8) or 21273 M24 Anchor Stud (grade 12.9) (pre-cast into concrete sleeper) x2**

*Gauge adjustment through serrated washer.

*Gauge adjustment through serrated washer.

**Anchor Stud grade dependant on track parameters.

Interchangeable with VIPA DRS 20673.

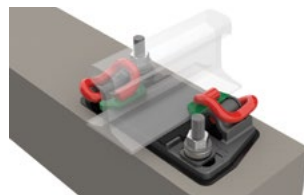


→ e-Clip SRS Baseplate Assemblies (Ballastless Track)

Pandrol Assembly Reference / Description

25857	e-Clip SRS Baseplate Assembly for BS100A Rail For Embedded Concrete Sleeper Applications 1000 mm Gauge. Gauge adjustment available ± 20mm*
Qty per Rail Seat	
15156	Baseplate - Cast x1
7997	e2091TAV Rail Clip x2
25847	Insulator - Deep Post - 16 mm x2
25846	Rail Pad - Studded Rubber x1
11368	M24 Nut x2
11242	M24 Disc Spring Washer x4
11244	M24 Flat Washer x4
11032-24	Top Hat Bush x2
11328	Serrated Washer x2
20676	Conforming Pad x1
11027-70	M24 Anchor Stud (pre-cast into concrete sleeper) x2

*Gauge adjustment through serrated washer.



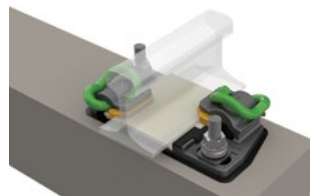
→ Special Applications: e-Clip SRS (ZLR)

Pandrol Assembly Reference / Description

19147	e-Clip SRS ZLR Baseplate assembly for 54E1 rail* For Embedded Concrete Sleeper Applications 1000 mm Gauge. Gauge adjustment available ± 20mm**
Qty per Rail Seat	
15156	Baseplate - Cast x1
15177	Support Plate x2
9543	e2071AV Rail Clip x2
19124	Insulator - Deep Post - 13 mm x2
19155	Rail Pad - Studded Rubber x1
19169	Rail Free Shim x1
11368	M24 Nut x2
11242	M24 Disc Spring Washer x4
11244	M24 Flat Washer x4
11032-24	Top Hat Bush x2
11328	Serrated Washer x2
20676	Conforming Pad x1

*See terminology. Converts standard e-Clip SRS assembly 19146 to a rail free ZLR assembly.

**Gauge adjustment through serrated washer.



→ Special Applications: e-Clip SRS (ZLR)

Pandrol Assembly Reference / Description

15163	e-Clip SRS ZLR Baseplate assembly for 60E1 rail* For Embedded Concrete Sleeper Applications 1000 mm Gauge. Gauge adjustment available ± 20 mm**
Qty per Rail Seat	
15156	Baseplate - Cast x1
15177	Support Plate x2
9543	e2071AV Rail Clip x2
20779	Insulator - Deep Post - 8 mm x2
15157	Rail Pad - Studded Rubber x1
15159	Rail Free Shim x1
11368	M24 Nut x2
11242	M24 Disc Spring Washer x4
11244	M24 Flat Washer x4
11032-24	Top Hat Bush x2
11328	Serrated Washer x2
20676	Conforming Pad x1

*See terminology. Converts standard e-Clip SRS assembly 15155 to a rail free ZLR assembly.

**Gauge adjustment through serrated washer.



→ e-Clip SRS Baseplates

Pandrol Part Reference / Description

15156	e-Clip SRS Baseplate
	Inclination 1:40
	Material: Cast Iron (SGI).




→ e-Clip SRS Rail Pads

Pandrol Part Reference	Description	
19155	<p>e-Clip SRS Studded Rubber Rail Pad (Black)</p> <p>Thickness: 10 mm Material: Natural Rubber</p> <p>Used on e-Clip SRS assemblies with 54E1 rail.</p>	
15157	<p>e-Clip SRS Studded Rubber Rail Pad (Black)</p> <p>Thickness: 10 mm Material: Natural Rubber</p> <p>Used on e-Clip SRS assemblies with 60E1 rail.</p>	
25846	<p>e-Clip SRS Studded Rubber Rail Pad (Black)</p> <p>Thickness: 10 mm Material: Natural Rubber</p> <p>Used on e-Clip SRS assemblies with BS100A rail.</p>	




→ e-Clips

Pandrol Part Reference	Description	
7997	<p>e2091TAV Clip Standard Finish: Red</p> <p>Standard toe load clip Material: Spring Steel.</p>	



→ e-Clips

Pandrol Part Reference	Description	
9543	<p>e2071AV Clip Standard Finish: Green or Black</p> <p>Material: Spring Steel Used in ZLR assemblies – see Terminology.</p>	



→ e-Clip Insulators for SRS Baseplates

Pandrol Part Reference	Description	
Insulators for e-Clip SRS – 54E1 Rail		
19124	<p>e-Clip Insulator 13 mm (Yellow) Deep Post</p> <p>Material: GRN For 54E1 Rail</p>	
Insulators for e-Clip SRS – 60E1 Rail		
20779	<p>e-Clip Insulator 8 mm (Black) Deep Post</p> <p>Material: GRN For 60E1 Rail</p>	
Insulators for e-Clip SRS – BS100A Rail		
25847	<p>e-Clip Insulator 16 mm (Dark green). Deep Post</p> <p>Material: GRN For BS100A Rail</p>	






→ e-Clip SRS Baseplate Anchors

Pandrol Part Reference	Description	
e-Clip SRS Anchor Assembly		
Not allocated	Anchor assembly for e-Clip SRS 19146	
Components per anchor assembly (2 per SRS baseplate required)		
11027-70	M24 Anchor Stud (pre-cast into concrete sleeper) x1	
11368	M24 Nut x1	
11242	M24 Disc Spring Washer x2	
11244	M24 Flat Washer x2	
11032-24	Top Hat Bush x1	
11328	Serrated Washer x1	
<hr/>		
Not allocated	Anchor assembly for e-Clip SRS 19155, 15163	
Components per anchor assembly (2 per SRS baseplate required)		
20678	M24 Anchor Stud (grade 8.8) or	
21273	M24 Anchor Stud (grade 12.9) (pre-cast into concrete sleeper) x1*	
11368	M24 Nut x1	
11242	M24 Disc Spring Washer x2	
11244	M24 Flat Washer x2	
11032-24	Top Hat Bush x1	
11328	Serrated Washer x1	
*Anchor stud grade dependant on track parameters. Refer to assembly drawing.		

e-Clip SRS Anchor Parts

20678	M24 Anchor Stud Splayed Material: H.T Steel Grade 8.8 Finish: Sheradized or Galvanised Length: 250 mm.	
21273	M24 Anchor Stud Splayed Material: H.T Steel Grade 12.9 Finish: Zinc Flake Coating Length: 250 mm.	

→ e-Clip SRS Baseplate Anchors

Pandrol Part Reference	Description	
e-Clip SRS Anchor Parts		
11027-70	M24 Anchor Stud Splayed Material: H.T Steel Grade 8.8 Finish: Sheradized or Galvanised Length: 230 mm.	
11368	M24 Plain Nut Finish: Galvanised Grade 8.	
11244	M24 Plain Flat Washer Finish: Galvanised.	
11242	M24 Disc Spring Washer Finish: Zinc Passivated.	
11032-24	Top Hat Bush 24 mm Material: Nylon Finish: Coloured Black.	

→ e-Clip SRS Baseplate Anchors

Pandrol Part Reference	Description
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e-Clip SRS Anchor Parts

11328	Serrated Washer Material: Cast Iron.
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→ Conforming Pads

Pandrol Part Reference	Description
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20676	Conforming Pad - 2 Hole (Black) Thickness: 3 mm Material: EVA For use with e-Clip SRS and VIPA DRS.
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→ e-Clip SRS Height Adjustment Shims

Pandrol Part Reference	Description
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15164-2	Height Adjustment Shim 2 mm (Black) Material: HDPE.
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15164-3	Height Adjustment Shim 3 mm (Black) Material: HDPE.
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→ e-Clip SRS Height Adjustment Shims

Pandrol Part Reference	Description
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15164-5	Height Adjustment Shim 5 mm (Black) Material: HDPE.
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15164-10	Height Adjustment Shim 10 mm (Black) Material: HDPE.
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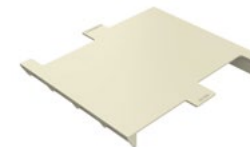
→ e-Clip SRS Special Applications (ZLR)

Pandrol Part Reference	Description
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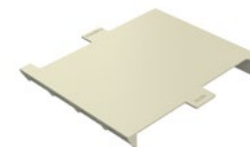
15177	ZLR Support Plate Material: Cast Iron (SGI) For ZLR Assembly only – see terminology.
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19169	Rail Free Shim (Natural - Cream) Material: Nylon For 64E1 ZLR Assembly only – see terminology.
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15159	Rail Free Shim (Natural - Cream) Material: Nylon For 60E1 ZLR Assembly only – see terminology.
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5



VIPA DRS

The VIPA DRS (Double Resilient System) fastening assembly incorporates an e-Clip baseplate mounted on a studded rubber pad, which provides resilience. It is intended for applications where a further degree of vibration mitigation is required and can be tuned for various axle loads and stiffness requirements.



→ VIPA DRS Baseplate Assemblies (Ballastless Track)

Pandrol Assembly Reference / Description

20673 **VIPA DRS Baseplate Assembly for 60E1 Rail For Embedded Concrete Sleeper Applications 1000 mm Gauge. Gauge adjustment available ± 20 mm***

Qty per Rail Seat

20676	Pad Conforming x1
20674	Pad Baseplate x1
20639	Baseplate – Cast x1
20675	Rail Pad – Studded EVA x1
20779	Insulator – Deep Post – 8 mm x2
7997	e2091TAV Rail clip x2
20679-0	Bush – M24 – Obround x2
19049	M24 Compression Spring x2
19050	Collared Washer x2
12425	M24 Nyloc Nut x2
20678	M24 Anchor Stud (grade 8.8) or
21273	M24 Anchor Stud (grade 12.9) (pre-cast into concrete sleeper) x2**

*Gauge adjustment through obround bush and insulator change.

**Anchor Stud grade dependant on track parameters.

Interchangeable with e-Clip SRS 15155.



→ e-Clips

Pandrol Part Reference / Description

7997 **e2091TAV Clip Standard Finish: Red**

Standard toe load clip
Material: Spring Steel.



→ VIPA DRS Baseplates

Pandrol Part Reference / Description

20639 **VIPA DRS Baseplate**
Inclination 1:40
Material: Cast Iron (SGI).



→ VIPA DRS Rail Pads

Pandrol Part Reference / Description

20675 **VIPA DRS Studded EVA Rail Pad (Black)**
Thickness: 10 mm
Material: EVA
Used on VIPA DRS assemblies with 60E1 rail.



→ VIPA DRS Baseplate Pads

Pandrol Part Reference / Description

20674 **VIPA DRS Studded Rubber Baseplate Pad (Black)**
Material: Natural Rubber.



→ e-Clip Insulators for VIPA DRS Baseplates

Pandrol Part Reference	Description
Insulators for VIPA DRS – 60E1 Rail	
20644	e-Clip Insulator 6 mm (Red) Deep Post Material: GRN For 60E1 Rail
20645	e-Clip Insulator 7 mm (Light Blue) Deep Post Material: GRN For 60E1 Rail
20779	e-Clip Insulator 8 mm (Black) Deep Post Material: GRN For 60E1 Rail
20646	e-Clip Insulator 9 mm (Dark Green) Deep Post Material: GRN For 60E1 Rail
20647	e-Clip Insulator 10 mm (Brown) Deep Post Material: GRN For 60E1 Rail








→ VIPA DRS Baseplate Anchors


Pandrol Part Reference	Description
VIPA DRS Anchor Assembly	
Not allocated	Anchor assembly for VIPA DRS 20673. For initial build Components per anchor assembly (2 per DRS baseplate required) 20678 M24 Anchor Stud (grade 8.8) or 21273 M24 Anchor Stud (grade 12.9) (pre-cast into concrete sleeper) x1* 20679-0 Bush – M24 – Obround x1 19049 M24 Compression Spring x1 19050 Collared Washer x1 12425 M24 Nyloc nut x1 <i>*Anchor stud grade dependant on track parameters. Refer to assembly drawing.</i>
VIPA DRS Anchor Parts	
20678	M24 Anchor Stud Splayed Material: H.T Steel Grade 8.8 Finish: Sheradized or Galvanised Length: 250 mm.
21273	M24 Anchor Stud Splayed Material: H.T Steel Grade 12.9 Finish: Zinc Flake Coating Length: 250 mm.
12425	M24 Nyloc Nut Finish: Galvanised Grade 6.



→ VIPA DRS Baseplate Anchors

Pandrol Part Reference	Description	
VIPA DRS Anchor Parts		
19050	Plastic Collared Washer Material: Nylon Colour: Light Blue.	
19049	M24 Compression Spring Finish: Sheradized.	
20679-0	M24 Obround Bush - Offset 0 mm Material: Nylon Colour: Natural.	
20679-5	M24 Obround Bush - Offset 5 mm Material: Nylon Colour: Light Green.	
20679-8	M24 Obround Bush - Offset 8 mm Material: Nylon Colour: Dark Blue.	

→ Conforming Pads

Pandrol Part Reference	Description	
20676	Conforming Pad - 2 Hole (Black) Thickness: 3 mm Material: EVA For use with e-Clip SRS and VIPA DRS.	

→ VIPA DRS Height Adjustment Shims

Pandrol Part Reference	Description	
20692	Height Adjustment Shim 1 mm (Black) Material: Stainless Steel.	
20693-2	Height Adjustment Shim 2 mm (Black) Material: HDPE.	
20693-3	Height Adjustment Shim 3 mm (Black) Material: HDPE.	
20693-5	Height Adjustment Shim 5 mm (Black) Material: HDPE.	
20693-10	Height Adjustment Shim 10 mm (Black) Material: HDPE.	

→ Handtools for e-Clip baseplate assemblies

Pandrol Tool Reference	Description
Handtools for Anti Vandal e-Clip baseplate assemblies incorporating cast-in anchor studs	
AE21689	<p>e-Clip Installer (Yellow)</p> <p>Suitable for installing e2091TAV clips on e-Clip SRS and VIPA DRS.</p> <p>It is recommended that the hook of the handtool should be checked with a Go / No Go gauge periodically, to minimise the risk of slippage. A wear gauge is available to assess the condition of the hooks: Pandrol No. AE17260.</p> <p>Replacement hooks are available: Pandrol No. AE21691.</p>
AE21691	<p>e-Clip Installer replacement hook (Yellow)</p> <p>For use with AE21689 handtool.</p>
AE22636	<p>e-Clip Installer (Yellow)</p> <p>Suitable for installing e2071AV clips on e-Clip SRS ZLR assembly.</p> <p>It is recommended that the hook of the handtool should be checked with a Go / No Go gauge periodically, to minimise the risk of slippage. A wear gauge is available to assess the condition of the hooks: Pandrol No. AE17260.</p> <p>Replacement hooks are available: Pandrol No. AE22637.</p>
AE22637	<p>e-Clip Installer replacement hook (Yellow)</p> <p>For use with AE22636 handtool.</p> <p>Converts AE21689 to AE22636 handtool.</p>



→ Handtools for e-Clip baseplate assemblies

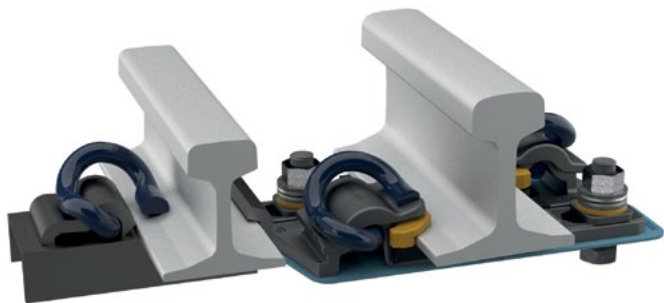
Pandrol Tool Reference	Description
Handtools for Anti Vandal e-Clip baseplate assemblies incorporating cast-in anchor studs	
AE21732	<p>e-Clip Extractor (Cream)</p> <p>Suitable for extracting e2091TAV and e2071AV clips on e-Clip SRS and VIPA DRS.</p> <p>Replacement hooks are available: Pandrol No. AE21763.</p>
AE21763	<p>e-Clip Extractor replacement hook (Cream)</p> <p>For use with AE21732 handtool.</p>



Fastening Systems for Steel Structures

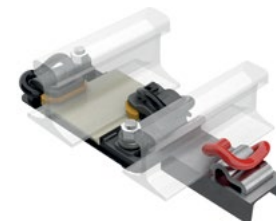
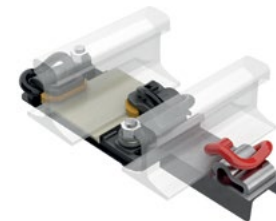
The SRT network counts thousands of steel bridges. The Pandrol Steel Bridge fastening system offers the flexibility to be adaptable to the two main types of running rail (BS100A and 54E1), as well as the two main types of guard rail (BS70A and BS80A). The unique Zero Longitudinal Restraint “ZLR” feature allows for differential thermal movement between the supporting structure and rail, thus avoiding unacceptable rail stress. The system also exists in full toe load version, if required.

The running rail baseplate of the Pandrol Steel Bridge fastening is directly attached to I-shaped transversal beams (steel sleepers) through a bolted anchor system, and the guard rail is fixed using a standard e-Clip and weld on shoulder. This technique is well known to all major steel structure contractors in the country.



→ Steel Structure Assemblies (Ballastless Track)

Pandrol Assembly Reference	Description
20243	Running Rail ZLR* Baseplate assembly for 54E1 rail Guard Rail Fixing Assembly for BS80A rail.
Qty per Rail Seat - Running Rail	
15156	Cast Baseplate x1
19155	Studded Rubber Rail Pad x1
19169	Rail Free Shim Slide Plate x1
19124	Insulator 13 mm, Deep Post x2
15177	Rail Free ZLR Support Plate x2
9543	Rail Clip, Type e2071AV x2
11328	Serrated washer 30 mm Diameter Hole x2
11032-24	Bush Top Hat M24 x2
N/A	Bolt M24 x 90 long Hex Head x2
11244	M24 Plain Flat Washer x4
11242	M24 Disc Spring Washer x4
11368	M24 Plain Nut x2
20676	Pad Conforming - 2 Hole x1
Qty per Rail Seat - Guard Rail	
PMP 41100	Guard Rail Weld-on Lug Assembly x1
7997	Rail Clip Type e2091TAV x1
<i>*See terminology.</i>	
22505	Running Rail ZLR* Baseplate assembly for 54E1 rail Guard Rail Fixing Assembly for BS70A rail.
Qty per Rail Seat - Running Rail	
15156	Cast Baseplate x1
19155	Studded Rubber Rail Pad x1
19169	Rail Free Shim Slide Plate x1
19124	Insulator 13 mm, Deep Post x2
15177	Rail Free ZLR Support Plate x2
9543	Rail Clip, Type e2071AV x2
11328	Serrated washer 30 mm Diameter Hole x2
11032-24	Bush Top Hat M24 x2
N/A	Bolt M24 x 90 long Hex Head x2
11244	M24 Plain Flat Washer x4
11242	M24 Disc Spring Washer x4
11368	M24 Plain Nut x2
20676	Pad Conforming - 2 Hole x1
Qty per Rail Seat - Guard Rail	
PMP 41103	Guard Rail Weld-on Lug Assembly x1
7997	Rail Clip Type e2091TAV x1
<i>*See terminology.</i>	



→ Steel Structure Assemblies (Ballastless Track)

Pandrol Assembly Reference / Description

8019

Running Rail ZLR* Baseplate assembly for BS100A rail
Guard Rail Fixing Assembly for BS80A rail

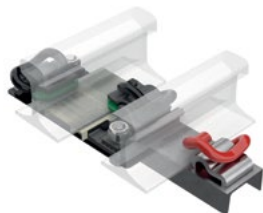
Qty per Rail Seat - Running Rail assembly 8388

8111	Cast Baseplate x1
7993	Shim, ZLR Slide Plate x1
7992	Rail Pad, 10 mm Studded Rubber x1
8364	Insulator, 8 mm x2
7994	Cover Plate, Rail Free ZLR x2
8375	Rail Clip, Type e20117AV x2
7991	Conforming Pad 3 mm x1
12371	Serrated Washer x2
10009-24-75	Bolt Hex Head ISO 14014-M24x75-8.8 x2
10008	Washer, Spring M24 x2
11197-24	Nut, M24 Nyloc x2

Qty per Rail Seat - Guard Rail

PMP 41100	Guard Rail Weld-on Lug Assembly x1
7997	Rail Clip Type e2091TAV x1

*See terminology.



11860

Baseplate assembly for BS100A Running Rail

Qty per Rail Seat

8111	Cast Baseplate, 1:40 inclination x1
7992	Rail Pad, 10 mm Studded Rubber x1
8364	Insulator, 8 mm x2
7997	Rail Clip, Type e2091TAV x2
7991	Conforming Pad, 3 mm x1
12371	Serrated Washer x2
10009-24-110	Bolt Hex Head ISO 14014-M24x110-8.8 x2
10008	Washer, Spring M24 x2
11197-24	Nut, M24 Nyloc x2



→ e-Clips for Steel Structure Assemblies

Pandrol Part Reference / Description

7997

e2091TAV Clip
Standard Finish: Red

Standard toe load clip
 Material: Spring Steel.



9543

e2071AV Clip
Standard Finish: Black

Material: Spring Steel
 Used in 54E1 Rail ZLR assemblies – see Terminology.





8375

e20117AV Clip
Standard Finish: Black


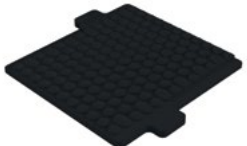
Material: Spring Steel
 Used in BS100A Rail ZLR assemblies – see Terminology.





→ e-Clip Baseplates for Running Rail

Pandrol Part Reference	Description	
15156	e-Clip Baseplate for 54E1 Rail Inclination 1:40 Material: Cast Iron (SGI).	
8111	e-Clip Baseplate for BS100A Rail Inclination 1:40 Material: Cast Iron (SGI).	

→ e-Clip Rail Pads

Pandrol Part Reference	Description	
19155	Studded Rubber Rail Pad (Black) Thickness: 10 mm Material: Natural Rubber Used with 54E1 rail.	
7992	Studded Rubber Rail Pad (Black) Thickness: 10 mm Material: Natural Rubber Used with BS100A rail.	

→ e-Clip Insulators

Pandrol Part Reference	Description	
19124	Insulator 13 mm (Yellow) Deep Post Used with 15156 Baseplate and 54E1 Rail.	
8364	Insulator 8 mm (Green) Used with 8111 Baseplate and BS100A Rail.	

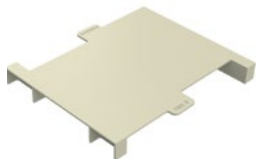
→ Special Components for ZLR

Pandrol Part Reference	Description	
15177	ZLR Support Plate Material: Cast Iron (SGI) Used with 15156 Baseplate and e2071AV Clip for ZLR assembly – see terminology.	
7994	ZLR Support Plate Material: Cast Iron (SGI) Used with 8111 Baseplate and e20117AV Clip for ZLR assembly – see terminology.	
19169	Rail Free Shim Slide Plate to suit 54E1 Rail Material: Nylon Colour: Natural.	

→ Special Components for ZLR

Pandrol Part Reference	Description
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7993	Rail Free Shim Slide Plate to suit BS100A Rail Material: Nylon Colour: Natural.
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→ e-Clip Baseplate Conforming Pads

Pandrol Part Reference	Description
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20676	Conforming Pad - 2 Hole (Black) Thickness: 3 mm Material: EVA.
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7991	Conforming Pad - 2 Hole (Black) Thickness: 3 mm Material: HDPE.
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→ e-Clip Baseplate Height Adjustment Shims

Pandrol Part Reference	Description
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15164-2	Height Adjustment Shim 2 mm (Black) Material: HDPE Used with 15156 Baseplate.
15164-3	Height Adjustment Shim 3 mm (Black) Material: HDPE Used with 15156 Baseplate.
15164-5	Height Adjustment Shim 5 mm (Black) Material: HDPE Used with 15156 Baseplate.
15164-10	Height Adjustment Shim 10 mm (Black) Material: HDPE Used with 15156 Baseplate.



→ Anchor Assemblies

Pandrol Part Reference	Description
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Not allocated	Anchor Bolt Assembly for Baseplate 15156 Components per anchor assembly (2 per baseplate required) N/A Bolt M24 x 90 long Hex Head x1 11244 M24 Plain Flat Washer x2 11242 M24 Disc Spring Washer x2 11032-24 Bush Top Hat M24 x1 11328 Serrated washer 30 mm Diameter Hole x1 11368 M24 Plain Nut x1
Not allocated	Anchor Bolt Assembly for Baseplate 8111 Components per anchor assembly (2 per baseplate required) 12371 Serrated Washer x1 10009-24-75 Bolt Hex Head ISO 14014-M24x75-8.8 x1 10008 Washer, Spring M24 x1 11197-24 Nut, M24 Nyloc x1



→ Anchor Parts

Pandrol Part Reference	Description	
Not supplied by Pandrol	Bolt M24 x 90 long Hex Head Finish: Galvanised.	
10009-24-75	Bolt Hex Head ISO 14014-M24 x 75- 8.8 Finish: Galvanised.	
11368	M24 Plain Nut Finish: Galvanised.	
11197-24	M24 Nyloc Nut Finish: Galvanised.	
11244	M24 Plain Flat Washer Finish: Galvanised.	

→ Anchor Parts

Pandrol Part Reference	Description	
11242	M24 Disc Spring Washer Finish: Zinc Passivated.	
10008	M24 Spring Washer Finish: Galvanised or Zinc Coated.	
11328	Serrated Washer Material: Cast Iron.	
12371	Serrated Washer Material: Cast Iron.	
11032-24	Top Hat Bush 24 mm Material: Nylon Finish: Coloured Black.	

→ Guard Rail Weld-On Lug Assemblies

Pandrol Assembly Reference / Description

PMP41103	Guard Rail Weld-on Lug Assembly for BS70A Rail
	Qty per Rail Seat
PL70081-01 8020	Pressed Steel Lug x1 Weld-on Hook x1 Channel. 100 x 50 x 220 mm long x1
PMP41100	Guard Rail Weld-on Lug Assembly for BS80A Rail
	Qty per Rail Seat
PL70081-01 8020	Pressed Steel Lug x1 Weld-on Hook x1 Channel. 100 x 50 x 220 mm long x1



→ Guard Rail Weld-On Lug Assembly Components

Pandrol Part Reference / Description

PL70081-01	Pressed Steel Lug
8020	Weld-on Hook
Not supplied by Pandrol	Channel. 100 x 50 x 220 mm long



7



Depot Fastenings

The Pandrol depot fastening, sometimes named “pit track fastening”, is a simple and efficient fastening system which can be adapted to all types of depot track. It can be accommodated on steel or concrete pedestals and steel beams and is suitable for all the major rail types.

The use of smart polyamide insulators, together with the insulation plate, ensure high level of electrical resistance. The high electrical resistance generally allows for a spacing of 1m between fastenings (to be verified per Pandrol calculation notes) helping reduce track construction costs.



→ Depot Fastenings

Pandrol Assembly Reference / Description

E360/301

**Depot Track Fastening for 54E1 Rail on Concrete Pillar
For drill and grout fixation applications**

Qty per Rail Seat

C152/028	Nylon Locking Nut H FR M22 x2
C323/031	Flat Washer ULS6 x2
C228/003	Double Coil Spring Washer x2
C226/077	Spring Washer AP77 x2
C362/240	Insulator AP240 Type 1 x2
C120/002	Grooved Rail Pad x1
C120/649	Insulating Plate x1
C153/072	Compressible Washer x2
C323/054	Flat Washer x2
EN ISO 4035	Low Nut H M22 x2
C322/053	M22 Threaded Rod L=336 mm x2



→ Depot Fastening Anchors

Pandrol Part Reference / Description

Depot Fastening Anchor Assembly

Not allocated

**Anchor assembly for E360/301.
For initial build.**Components per anchor assembly
(2 per Rail Seat required)

C152/028	Nylon Locking Nut H FR M22 x1
C323/031	Flat Washer ULS6 x1
C226/077	Spring Washer AP77 x1
C362/240	Insulator AP240 Type 1 x1
C153/072	Compressible Washer* x1
C323/054	Flat Washer* x1
EN ISO 4035	Low Nut H M22* x1
C322/053	M22 Threaded Rod L=336 mm* x1

*Embedded component.



→ Depot Fastening Anchors

Pandrol Part Reference / Description

Depot Assembly Anchor Parts

C322/053

M22 Threaded RodFor drill and grout fixation into concrete pillar.
Length = 336 mm
Finish = Zinc Plated / Zinc Coated.

C152/028

Nylon Locking Nut H FR M22

Finish = Zinc Plated / Zinc Coated.



C323/031

Flat Washer ULS6Size: Outer Diameter 47 mm, Inside Diameter 23 mm
Finish = Zinc Plated / Zinc Coated.

C228/003

Double Coil Spring Washer x2

C226/077

Spring Washer AP77

Size: Outer Diameter 56 mm, Inside Diameter 24 mm.



→ Depot Fastening Anchors

Pandrol Part Reference	Description
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Depot Assembly Anchor Parts

C362/240	Insulator AP240 Type 1 (Black) Material: Polyamide - Glass Reinforced.
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C153/072	Compressible Washer Size: Outer Diameter 45 mm, Inside Diameter 23 mm Material: Elastomer.
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C323/054	Flat Washer Size: Outer Diameter 39 mm, Inside Diameter 23 mm.
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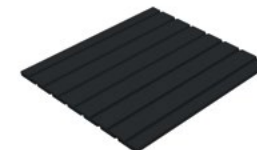
Not allocated	Low Nut H M22 - EN ISO 4035 Width across flats = 34 mm.
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→ Depot Fastening Rail Pads

Pandrol Part Reference	Description
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C120/002	Grooved Rail Pad Working Thickness: 4.5 mm Material: Natural Rubber.
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→ Depot Fastening Insulating Plates

Pandrol Part Reference	Description
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C120/649	Insulating Plate Thickness: 15 mm Material: Permal.
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DSA

Discontinued/Serviceable Concrete Sleepers

The DSA fastening is a historical Pandrol product similar to the e-Clip system. It is based on the same concept of a spring clip secured to the sleeper through a cast-in shoulder or baseplate, for fixation to concrete or timber sleepers. The DSA fasteners have been integrated in the e-Clip family and spare parts are available upon request.

→ DSA Assemblies (Ballast)

Pandrol Assembly Reference	Description
E600/118	<p>DSA Concrete Sleeper Assembly for BS70A rail 1000 mm Gauge. Gauge widening available up to + 20 mm*</p> <p>Qty per Sleeper Set</p> <p>C620024 Clip DSA 24 x4 E120/346 E120/346 Rail Pad x2 C630/77 Insulator 14 mm (Sky Blue) Gauge Side x1 C630/77 Insulator 26 mm (Green) Field Side x1 C630/77 Insulator 12 mm (Black) Gauge Side x1 C630/77 Insulator 28 mm (Orange) Field Side x1</p> <p><i>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. Main Sleeper = 0 - 8 mm gauge widening. Complementary Sleeper = 10 - 20 mm gauge widening.</i></p>
	<p>DSA Concrete Sleeper Assembly for BS70R rail 1000 mm Gauge. Gauge widening available up to + 20 mm*</p> <p>Qty per Sleeper Set</p> <p>C620024 Clip DSA 24 x4 E120/346 Rail Pad x2 C630/79 Insulator 10 mm (Black) Gauge Side x2 C630/79 Insulator 24 mm (Natural) Field Side x2</p> <p><i>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. Main Sleeper = 0 - 8 mm gauge widening. Complementary Sleeper = 10 - 20 mm gauge widening.</i></p>
	<p>DSA Concrete Sleeper Assembly for BS75R rail 1000 mm Gauge. Gauge widening available up to + 20 mm*</p> <p>Qty per Sleeper Set</p> <p>C620024 Clip DSA 24 x4 E120/346 Rail Pad x2 C630/79 Insulator 8 mm (Dark Blue) Gauge Side x2 C630/79 Insulator 20 mm (Brown) Field Side x2</p> <p><i>* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change. Main Sleeper = 0 - 8 mm gauge widening. Complementary Sleeper = 10 - 20 mm gauge widening.</i></p>



→ DSA Assemblies (Ballast)

Pandrol Assembly Reference / Description

E600/118

**DSA Concrete Sleeper Assembly for BS80R rail
1000 mm Gauge. Gauge widening available up to +20 mm***

Qty per Sleeper Set

C620024	Clip DSA 24 x4
E120/346	E120/346 Rail Pad x2
C630/79	Insulator 6 mm (Dark Green) Gauge Side x1
C630/79	Insulator 18 mm (Green) Field Side x1
C630/79	Insulator 8 mm (Dark Blue) Gauge Side x1
C630/79	Insulator 16 mm (Yellow) Field Side x1

* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change.
Main Sleeper = 0 – 8 mm gauge widening.
Complementary Sleeper = 10 – 20 mm gauge widening.

**DSA Concrete Sleeper Assembly for BS70ASCE rail
1000 mm Gauge. Gauge widening available up to +20 mm***

Qty per Sleeper Set

C620024	Clip DSA 24 x4
E120/346	Rail Pad x2
C630/78	Insulator 11 mm (Black) Gauge Side x2
C630/78	Insulator 23 mm (Natural) Field Side x2

* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change.
Main Sleeper = 0 – 8 mm gauge widening.
Complementary Sleeper = 10 – 20 mm gauge widening.

**DSA Concrete Sleeper Assembly for BS80A rail
1000 mm Gauge. Gauge widening available up to +20 mm***

Qty per Sleeper Set

C620024	Clip DSA 24 x4
E120/346	Rail Pad x2
C630/77	Insulator 12 mm (Black) Gauge Side x2
C630/77	Insulator 22 mm (Natural) Field Side x2

* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change.
Main Sleeper = 0 – 8 mm gauge widening.
Complementary Sleeper = 10 – 20 mm gauge widening.



→ DSA Assemblies (Ballast)

Pandrol Assembly Reference / Description

**DSA Concrete Sleeper Assembly for BS100A rail
1000 mm Gauge. Gauge widening available up to +18 mm***

Qty per Sleeper Set

C620024	Clip DSA 24 x4
E120/346	Rail Pad x2
C630/76	Insulator 8 mm (Black) Gauge Side x2
C630/76	Insulator 10 mm (Natural) Field Side x2

* Gauge widening achieved through combination of sleeper type (shoulder setting) and insulator change.
Main Sleeper = 0 – 8 mm gauge widening.
Complementary Sleeper = 10 – 18 mm gauge widening.

→ DSA Baseplate Assemblies

Pandrol Assembly Reference / Description

For fixation to timber sleepers

E670/38

**DSA Baseplate Assembly for BS80A rail
Timber Sleepers**

Qty per Sleeper Set

E622/29	Baseplate DSA 29–P117.5–40 x2
C620005	Clip DSA 5 x4
E120/257	Grooved Rubber Pad x2
E225/23FV	Coach Screw FV23–135 No.9 x4
E228/3	Spring Washer ID26 mm OD46 mm x4

E670/19

**DSA Baseplate Assembly for BS100A rail
Timber Sleepers**

Qty per Sleeper Set

E622/14	Baseplate DSA 14–P133.5–40 x2
C620005	Clip DSA 5 x4
E120/257	Grooved Rubber Pad x2
E225/23FV	Coach Screw FV23–135 No.9 x4
E228/3	Spring Washer ID26 mm OD46 mm x4

→ DSA Serviceable Components

Pandrol Part Reference	Description
Rail Clips	
C620024	<p>DSA Rail Clip 24 Standard Finish: Red</p> <hr/> <p>Standard toe load clip Material: Spring Steel For use with concrete sleeper assemblies.</p>
C620005	<p>DSA Rail Clip 5 Standard Finish: Red</p> <hr/> <p>Standard toe load clip Material: Spring Steel For use with baseplates on timber sleepers.</p>
Rail Pads	
E120/346	<p>HDPE Rail Pad (Black)</p> <hr/> <p>Thickness: 7 mm Material: HDPE Used with BS70A, BS70R, BS75R, BS80R, BS70ASCE, BS80A, BS100A Rails on concrete sleepers.</p>
E120/257	<p>Grooved Rubber Pad (Black)</p> <hr/> <p>Thickness: 4.5 mm Used with BS80A and BS100A rails on baseplates for timber sleepers.</p>
Insulators for Concrete Sleeper Assemblies - BS100A Rail	
C630/76	<p>Insulator 76</p> <hr/> <p>Material: GRN 6 mm - Grey 8 mm - Black 10 mm - Natural 12 mm - Sky Blue</p>

→ DSA Serviceable Components

Pandrol Part Reference	Description
Insulators for Concrete Sleeper Assemblies - BS70A Rail	
C630/77	<p>Insulator 77</p> <hr/> <p>Material: GRN 12 mm - Black 14 mm - Sky Blue 16 mm - Violet 18 mm - Brown 20 mm - Grey 22 mm - Natural 24 mm - Yellow 26 mm - Green 28 mm - Orange.</p>
Insulators for Concrete Sleeper Assemblies - BS80A Rail	
C630/77	<p>Insulator 77</p> <hr/> <p>Material: GRN 12 mm - Black 14 mm - Sky Blue 16 mm - Violet 18 mm - Brown 20 mm - Grey 22 mm - Natural.</p>
Insulators for Concrete Sleeper Assemblies - BS70R Rail	
C630/79	<p>Insulator 79</p> <hr/> <p>Material: GRN 10 mm - Black 12 mm - Sky Blue 14 mm - Violet 16 mm - Yellow 18 mm - Green 20 mm - Brown 22 mm - Grey 24 mm - Natural.</p>
Insulators for Concrete Sleeper Assemblies - BS75R Rail	
C630/79	<p>Insulator 79</p> <hr/> <p>Material: GRN 8 mm - Dark Blue 10 mm - Black 12 mm - Sky Blue 14 mm - Violet 16 mm - Yellow 18 mm - Green 20 mm - Brown.</p>

→ DSA Serviceable Components

Pandrol Part Reference	Description
Insulators for BS80R Rail	
C630/79	Insulator 79 6 mm – Dark Green 8 mm – Dark Blue 10 mm – Black 12 mm – Sky Blue 14 mm – Violet 16 mm – Yellow 18 mm – Green.
DSA Shoulders	
C610/15	Cast shoulder DSA 15 Material: Cast Iron (SGI) Precast in supplied DSA sleeper.

→ DSA Baseplates for Timber Sleepers

Pandrol Part Reference	Description
E622/29	Baseplate DSA 29-P117.5-40 Baseplate for BS80A rail Inclination 1:40 Material: Cast Iron (SGI).
E622/14	Baseplate DSA 14-P133.5-40 Baseplate for BS100A rail Inclination 1:40 Material: Cast Iron (SGI).

→ DSA Baseplate Fixings for Timber Sleepers

Pandrol Part Reference	Description
E225/23FV	Coach Screw FV23-135 No.9
E228/3	Spring Washer ID26 mm OD46 mm

Terminology

ZLR

Zero Longitudinal Restraint assemblies allow longitudinal movement of the rail. Used to provide differential movement between the rails and long bridge structures, or stressing relief for ground subsidence. ZLR assemblies use normal toe-load clips but divert the clamping force in other directions providing a gap over the rail foot and allowing the rail to slide longitudinally in the gap. In the event of the rail moving to close the gap (such as rail roll) the nominal toe-load is immediately available to prevent further overturning movement. This component can be used with existing sleeper configurations to alter the fastening assembly into a ZLR assembly.

Change Log

Changes from 2024 edition.

Page	Description
26	Assembly 18912. Gauge widening increased to +19mm
27	Added assembly 25680. e-Clip 54E1 rail assembly interchangeable with BS100A rail. Gauge widening +20mm
28	Assembly 11564. e1819AV clip added as an option
29	Added BS100A assembly 15763. e-Clip BS100A assembly interchangeable with 54E1 rail. Gauge widening +20mm
31	Added rail pad 25643 for 54E1 rail
31	Added rail pads 25641 and 2061/37 for BS100A rail
32	Added insulators 25705, 25706, 25707 for 54E1 rail
38	Added insulators 23289, 25640, 25633, 25634, 25635, 25636, 25637 for BS100A rail
39	Added insulators 25638, 25639 for BS100A rail
48	Added SRS assembly 25857 for BS100A rail
48	Added SRS ZLR 19147 54E1 assembly
50	Added 25846 rail pad for BS100A SRS assembly 25857
51	Added 25847 insulator for BS100A SRS assembly 25857
55	Added 19169 rail free shim for 54E1 SRS ZLR assembly 19147
58	Correction of 20675 rail pad material in 20673 parts list
59	Correction of 20675 rail pad material

Partners in excellence

Contact us to discuss your track requirements

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