

PANDROL

BONDED DFF: ADH



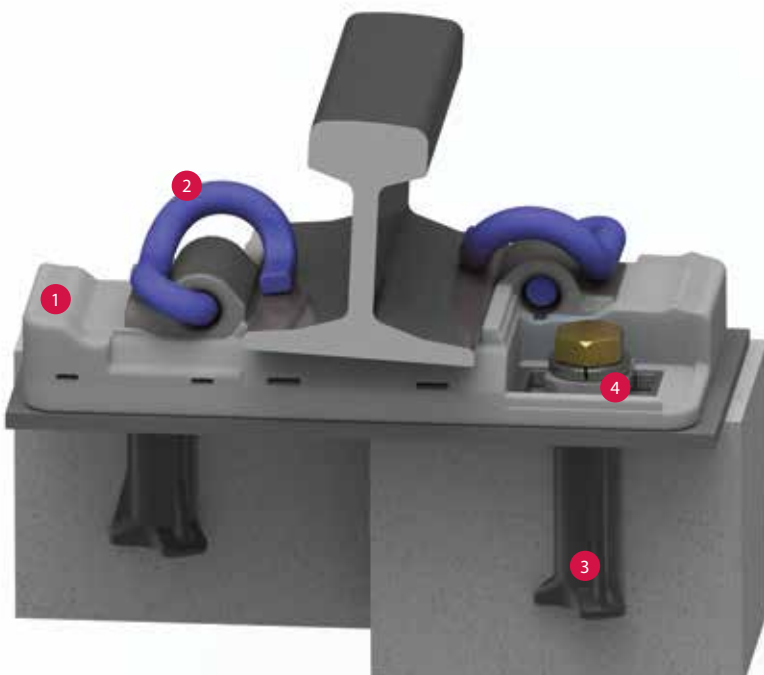
PRODUCT INFORMATION



DIRECT FIXATION FASTENING SYSTEM:

BONDED DFF: ADH

The PANDROL BONDED DFF: ADH system directly combats corrugation and vibration problems, caused by major dynamic forces generated by passing trains.



The BONDED DFF: ADH system is built upon 30 years of experience and feedback from over 400,000 units fitted worldwide. The system is suitable for laying on concrete sleepers and slabs. It is also compatible with PANDROL rail fastening products of varying resilience including SD, e-CLIP, FASTCLIP, SKL and G4.

Find more information about PANDROL fastening systems at Pandrol.com

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The PANDROL BONDED DFF: ADH system provides solutions for two kinds of track. The standard model is designed for running track, and customised models are designed for switching zones.

Deployment of the BONDED DFF: ADH system significantly reduces vibration from passing trains and mitigates development of many types of corrugation.

Components:

1. Vulcanised DFF baseplate
2. Elastic fasteners (Pandrol e-CLIP shown)
3. High resistance anchoring systems
4. Adjustable washers for lateral adjustment
5. Rail pad. Requirement dependent on configuration. (under rail - not shown)
6. Adjustment shims (under rail - not shown)



INSTALLATIONS



Switches and crossings.



Top-down DFF installation.



Installation on ballasted track.

FEATURES OF ASSEMBLY

VERTICAL AND LATERAL STIFFNESS

The BONDED DFF: ADH system provides both vertical and lateral stiffness, via two independent cast baseplates that are bonded with vulcanised rubber.

VIBRATION ATTENUATION

Excellent vibration isolation is provided via a range of stiffnesses down to 10.5 kN/mm. Standard stiffness is typically 20 kN/mm. For custom requirements, please consult PANDROL.

ELECTRICAL INSULATION

The system's unique bonding process achieves very high levels of electrical resistance. This provides long electrical leakage paths. EN standards test results show electrical insulation performance several times higher than the minimum required.

LATERAL FORCE TRANSFER

Lateral forces are transferred from the rail through the baseplate and into the rubber. Forces transferred into the anchor bolts are minimised. Risk of bolt failure is reduced.

SINGLE UNIT CONSTRUCTION

The BONDED DFF: ADH baseplate comprises a single unit. It can be installed by top-down method or installed on pre-cast blocks, sleepers or slabs. Vertical adjustment of 30 mm and lateral adjustment +/-12 mm are typically provided.

MANY APPLICATIONS

The BONDED DFF: ADH system can be provided in a variety of lengths to suit turnout applications. The system is also suitable for steel bridges and ballasted tracks.

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BONDED DFF: ADH

- For use on slab tracks, concrete sleepers, steel bridges, ballasted tracks, turnouts and crossings
- Suitable for top-down and bottom-up construction
- Provides exceptional vibration mitigation

Applications Data

	Standard EN 13481-5
Application	Metro and railway network
Typical rail sections	50E6, 54E1, 60E1
Dimensions	L 407 x W 192 x H 53mm
Type of anchors	Ø27 mm
Suited to Switches and crossings	YES
Weight per DFF baseplate	13.6 kg
Corrosion resistance	ASTM B 117/ EN 13146-6

Typical performance data	Metro	Network
Static stiffness (PrEN 13146 -9)	18 (kN/mm)	28.5 (kN/mm)
Measurement range	1-34.4 kN	1-51.2 kN
Dynamic stiffness (EN 13146 - 9)	21 kN/mm	51 kN/mm
Measurement Range	5-34.4 kN	5-51.2 kN
Electrical Insulation	>40 (kΩ)	
Lateral adjustment per DFF ADH	±12 mm per increments of 3 mm	
Vertical adjustment	0 - 30 mm	

NOTE:

PANDROL is a provider of innovative custom rail fastenings. Data in this document indicates typical performance. Actual performance is dependent on a range of external factors. Please contact us to discuss how PANDROL can tailor products to suit local operating conditions and specific requirements. Technical information in this document was correct at time of printing. Improvements may since have been introduced as a result of our continuous research and development programmes.

PANDROL TRACK SYSTEMS

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