

PANDROL

# FASTCLIP FD



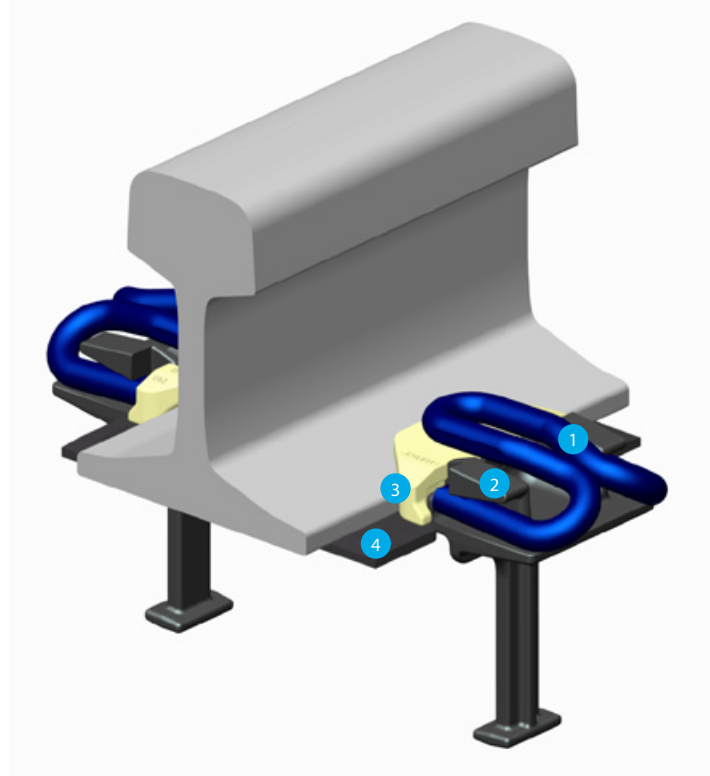
PRODUCT INFORMATION



PANDROL PRESENTS:

# FASTCLIP FD

The PANDROL FASTCLIP FD railway fastening has been designed to support mainline track and traffic conditions where levels of dynamic loading and tractive and thermal forces are not as high as those found on typical high speed and heavy haul railways.



It is typically suited to railways who operate low or medium density operations on rail sections up to 50 kg, speeds up to 120 m/hr, and maximum axle loads of 20 tonnes.

Visit [Pandrol.com](https://www.pandrol.com) for more information about the FASTCLIP range

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PANDROL FASTCLIP FD system is available in 13 mm and 14 mm diameter clips and generate clamping forces of >13 kN and >15 kN

**Components:**

1. PANDROL FASTCLIP FD clip
2. Cast SGI shoulder
3. Insulator – High viscosity nylon
4. EVA rail pad

For other operating environments please contact PANDROL. Installation and extraction of PANDROL FASTCLIP FD can be undertaken using hand tools, or simple hydraulic machines. PANDROL FASTCLIP FD is suitable for use on concrete and steel sleepers.



## INSTALLATIONS



### SRI LANKA

FD1300 installed in Sri Lanka 1999.



### CAMBODIA

Construction of North-South Railway, Cambodia.



FD1408 on steel sleepers, Sri Lanka.



FD1408 on concrete sleeper.



FD1300 on trial on steel sleepers in Vietnam.



FD1408 on steel sleepers, Sri Lanka.



Machine installation in Corsica.

## FEATURES OF ASSEMBLY

### ECONOMICAL

The PANDROL FASTCLIP FD system provides a low cost solution for medium density railways operating typically 20 T axle loads or less.

### DUAL RAIL/GAUGE WIDENING

The system can accommodate generous amounts of lateral adjustment for gauge widening or accommodate different rail sizes in the rail seat.

### THREADLESS

The FD system is a threadless, low maintenance fastening system.

### CONCRETE/STEEL/TIMBER APPLICATIONS

The FD system is ideally suited to both steel and concrete sleepers but can also be applied to baseplates for timber application.

### INSTALLATION/HANDLING

FD clips can be installed by hand tools or by machine installation. Lifting hooks and chains can be used over cast shoulders to assist handling of sleepers.

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# FASTCLIP FD SYSTEM

- Suitable for use on general main line track, secondary lines or lines carrying light traffic.
- Suitable for use on concrete and steel sleepers
- For all other applications, please consult with PANDROL

## Application data (Standard products – special variants may differ)

Rail inclination	As provided in the sleeper	
Pad type	Typically HDPE or EVA	
Typical applications		
Clip Type	PANDROL FASTCLIP FD1300/FD1400 Series	
EN 13481-21-4 Track Category	Cat A	Cat B
Maximum Axle Load*	130 kN	180 kN
Minimum Curve Radius*	40 m	80 m

\* For Special applications consult PANDROL

## Typical performance data\* As identified by Track Category in EN13481-1

	Cat A	Cat B	Test method	Remarks
Assembly static stiffness	>90 kN/mm	>100 kN/mm	EN 13146-9:2011	Dependent upon pad selection
Assembly dynamic stiffness	>100 kN/mm	>110 kN/mm	EN 13146-9:2011	
Impact load attenuation	≤ 30%		EN 13146-3:2012	
Electrical insulation	>5 kΩ		EN 13146-5:2012	
	FD1300 Series	FD1400 Series		
Nominal toe load	750 kgf	850 kgf	Clip driving fixture	
Clamping force	>13 kN	>15 kN	EN 13146-7:2012	
Creep resistance	>7 kN	>7 kN	EN 13146-1:2012	

## COMPLIANCE WITH STANDARDS:

PANDROL FASTCLIP FD SERIES fastenings are fully compliant with the requirements of EN 13481-2:2012 and 13481-4:2012 for track category A and B.

## 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.

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## PANDROL TRACK SYSTEMS

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