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FASTCLIP FC

PRODUCT INFORMATION
The PANDROL FASTCLIP FC system is designed for all categories of track, and specifically engineered to be capable of rapid installation by mechanised equipment. FASTCLIP FC is a threadless Fastening, with low maintenance and pre-assembly of the fastening which remains captive on the sleeper.

PANDROL FASTCLIP has been designed as a total system, in which all components are delivered to site pre-assembled on the sleeper. Once the sleepers are laid, and the rail installed, the clip is simply switched onto the rail by means of a simple drive action.

Components:
1. Clip and toe insulator
2. Cast SGI shoulder
3. Side post insulation
4. Rail pad*

* Pad types, such as studded EVA, studded rubber, grooved rubber, PU and HDPE are available.

The FASTCLIP FC product has substantial global references on both concrete and steel applications.
FEATURES OF ASSEMBLY

FULLY PRE-ASSEMBLED
All FASTCLIP FC components leave the sleeper factory fully pre-assembled on the sleeper. This provides huge savings in manpower, as well as reduced distribution and handling costs during track laying, stressing and rail changing.

THREADLESS
The FASTCLIP FC system has no threaded components, eliminating costly maintenance.

REPLACEABLE COMPONENTS
FASTCLIP FC is virtually maintenance free. In the rare event that a component requires replacement, the clip can be withdrawn easily, without the need to unscrew bolts.

MECHANISED INSTALLATION
Installing rail fastenings by mechanised equipment reduces the installed cost of the rail fastenings and can provide further savings during the life of the fastening each time the clips are removed and installed for rail maintenance activities. Clip application units can either be incorporated directly into the frame of a track laying train (no manpower required) or in free standing clipping equipment with small, medium and high output options available.

AUTOMATIC TENSIONING
Correct tensioning is automatically achieved when the clip is driven into the working position. FASTCLIP FC provides excellent creep resistance.

CAST SHOULDER ANCHORAGE
Cast-in shoulders hold the rail at the correct gauge and set the correct FASTCLIP deflection. The shoulders are cast into the sleeper during the manufacturing process.

SIMPLIFIED STRESSING
All components remain captive during the rail stressing procedure. The clip is simply withdrawn back to the parked position to release the rail. Stressing rollers are available for use if required. The PANDROL FASTCLIP system is optimised when used with Rosenqvist clamping.
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FASTCLIP FC

- Rapid installation capability (up to 70 sleepers per minute)
- Pre-assembly and captive on sleeper
- Threadless, self tensioned fastening
- Suitable for all track categories

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

| Rail inclination | As provided in the sleeper |
| Pad type         | Please consult PANDROL for appropriate pad types against operating requirements |
| Typical applications | Light rail, Metro, general main line, mixed traffic, heavy haul and high speed |
| Clip type         | PANDROL Fastclip FC1500 | PANDROL Fastclip FC1600 |
| EN13481-2 fastening category | Cat A | Cat B | Cat C | Cat D | Cat E | Cat E or Greater |
| Maximum axle load* | 130 kN | 180 kN | 260 kN | 260 kN | 350 kN | For max axle load/radius please consult PANDROL |
| Minimum curve radius* | 40 m | 80 m | 150 m | 400 m | 150 m |

*T for special applications please consult PANDROL

**Typical performance data** As identified by Track Category in EN13481-2

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<thead>
<tr>
<th>Test method</th>
<th>Remarks</th>
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<tr>
<td>EN 13146-9:2011</td>
<td>Dependent upon pad selection</td>
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<tr>
<td>EN 13146-3:2012</td>
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**COMPLIANCE WITH STANDARDS:**
PANDROL FASTCLIP FC1500 series fastenings are compliant with the requirements of EN13481-2:2012 and the High Speed Interoperability Directive (TSI). PANDROL Fastclip FC1600 series fastenings are compliant with the requirements of EN13481-2:2012 – ‘Fastening systems for track with heavy axle loads’. Some configurations of PANDROL Fastclip FC1500 and FC1600 series fastenings are compliant with the requirements of AREMA Manual Chapter 30 Part 4.

**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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