BASEPLATE SYSTEM:

FASTCLIP SFC

The PANDROL FASTCLIP (SFC) baseplate system enables use of the PANDROL FASTCLIP rail fastening system in slab track applications.

The product allows non-ballasted trackforms to take full advantage of the PANDROL FASTCLIP captive fastening system, which offers high levels of vertical and lateral adjustment.

Components:
1. Clip and toe insulator
   - 250-1250 kgf nominal clamping force, high deflection
   - Zero toe load (rail free) option available
   - Integral toe insulator reduces rail contact stresses and improves electrical resistance
2. High-viscosity nylon side-post insulator
3. Cast SGI baseplate
4. Studded natural rubber rail pad
5. Under baseplate conforming shim
6. Anchors with/without inserts

PANDROL FASTCLIP SFC baseplates are designed for use on wet-pour top-down slabs, pre-cast blocks, sleepers and plinths. The product is available in three variants:

- 2-hole offset baseplate: For medium axle load and shallow curve applications. Proven on high speed systems.
- 2-hole in-line baseplate: For concrete sleepers embedded in pre-cast concrete. Proven on high speed systems.
- 4-hole baseplates: For installation on slab track with high axle loads, tight curves, and where compatibility with 4-hole PANDROL VIPA or PANDROL VANGUARD baseplates are required.

Shown above: 4-hole baseplate with two anchors. Other combinations are available.
FULLY PRE-ASSEMBLED
PANDROL FASTCLIP SFC baseplates are supplied to site as fully pre-assembled units.

HIGHLY ADJUSTABLE
PANDROL FASTCLIP SFC baseplates provide exceptional room for adjustment. Adjustment range is typically +/- 15 mm lateral per baseplate, and + 30 mm vertical. For additional requirements please consult PANDROL.

DUAL RAIL/GAUGE CHANGE
FASTCLIP SFC makes changes of rail section possible, using side post insulators of different thicknesses.

TIMBER SUPPORT
A non-adjustable version of the 4-hole FASTCLIP SFC baseplate is available for timber sleepers.

RAIL-FREE & STRUCTURE INTERACTION
Low-toe load and zero longitudinal restraint (ZLR) options are available for use on structures.

EXCELLENT ANCHORAGE
The PANDROL “hold down” method is an integral part of the rail fastening design and can be provided for specific applications.

ELECTRICAL INSULATION
FASTCLIP SFC electrically insulates the rail from the baseplate and clips, using its rubber rail pad and nylon side-post insulators. A second level of insulation can be provided between the baseplate and slab.

INSTALLATION METHODS
Track can be constructed conventionally by top down (wet pour) or bottom up methods.
PANDROL

FASTCLIP SFC

- For use on light rail, metro, general main line and high speed tracks
- Suitable for concrete non-ballasted tracks (slab tracks)
- Also for use with concrete or wooden sleepers or bearers
- For heavy haul applications, please consult PANDROL

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail inclination</td>
<td>Provided in the baseplate or concrete as required</td>
</tr>
<tr>
<td>Typical applications</td>
<td>LRT/Metro, general main line and high speed non ballasted tracks</td>
</tr>
<tr>
<td>Clip Type</td>
<td>PANDROL FASTCLIP FC1501, FC1504</td>
</tr>
<tr>
<td>EN 13481-5 Track Category</td>
<td>Cat A</td>
</tr>
<tr>
<td>Maximum Axle Load*</td>
<td>130 kN</td>
</tr>
<tr>
<td>Minimum Curve Radius*</td>
<td>40 m</td>
</tr>
</tbody>
</table>

* For special applications consult PANDROL.

**Typical performance data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Test Method</th>
</tr>
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<tbody>
<tr>
<td>Assembly static stiffness</td>
<td>$\approx 40 \text{kN/mm minimum}$</td>
<td>EN 13146-9:2011</td>
</tr>
<tr>
<td>Assembly dynamic stiffness</td>
<td>$\approx 60 \text{kN/mm minimum}$</td>
<td>EN 13146-9:2011</td>
</tr>
<tr>
<td>Electrical Insulation</td>
<td>$&gt;10 \text{k}\Omega$</td>
<td>EN 13146-5:2012</td>
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<tr>
<td>Nominal toe load</td>
<td>1000 kgf</td>
<td></td>
</tr>
<tr>
<td>Clamping force</td>
<td>$&gt;16 \text{kN}$</td>
<td>EN 13146-7:2012</td>
</tr>
<tr>
<td>Creep resistance</td>
<td>$&gt;9 \text{kN}$</td>
<td>EN 13146-1:2012</td>
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<tr>
<td>Lateral adjustment</td>
<td>+/- 20 mm</td>
<td></td>
</tr>
<tr>
<td>Vertical adjustment</td>
<td>+ 30 mm</td>
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</tbody>
</table>

**COMPLIANCE WITH STANDARDS:**
PANDROL FASTCLIP SFC has been tested against the requirements of EN 13481-5:2012 ‘Fastening systems for slab tracks’. The system meets the requirements of the European High Speed TSI (Technical Standards for Interoperability).

**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.