PANDROL

VIPA DRS

PRODUCT INFORMATION
The PANDROL e-clip baseplate is mounted on a studded natural rubber pad which provides resilience. This can be tuned, within limits, for axle loads and stiffness requirements. There is no need to grease or re-tighten the fastening elements as the rail fastening elements are non-threaded to provide low maintenance.

The PANDROL VIPA DRS is typically suited for installation on non-ballasted tracks and areas where a reduction in ground borne noise and vibration is required. The system suits either top down or bottom up construction techniques.

As with all PANDROL fastenings, the PANDROL resilient baseplate system is backed by many years of worldwide experience and an unmatched depth of technical understanding from PANDROL’s technical engineers.

1. Nylon sidepost insulators
2. PANDROL brand e-clip
3. Studded rubber baseplate pad
4. Cast iron baseplate
5. Studded EVA rail pad
6. Anchors
   - Different variants of anchors may be supplied depending on the construction method
   - Assemblies may have 2 or 4 anchors depending on track conditions
EXPERIENCE
Systems like this have been in use since the mid 1980s and are installed on MRT and LRT systems in major cities such as Hong Kong, Singapore, Sao Paulo, Dubai and Istanbul. It is also installed on main line slab applications and steel bridges on axle loads up to 22.5 tonnes.

ADJUSTABILITY
Typical lateral adjustment of ±3 mm can be achieved using an eccentric bush, in 1 mm locked steps (additional lateral adjustment can be provided against specific requirements). Typical vertical adjustment of up to 20 mm can be achieved using shims.

MAINTENANCE
All resilient parts and wear components are fully replaceable in-situ. The system has two independent levels of electrical insulation and uses PANDROL threadless fastening technology, providing low maintenance throughout the life of the system.

INSTALLATIONS
PANDROL resilient baseplate assemblies can be installed using either top down or bottom up construction methods.
TECHNICAL SPECIFICATION

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VIPA DRS

• Normally for use on concrete, non-ballasted tracks
• Intended for applications where a degree of vibration mitigation is required
• Suitable for all rail inclinations and rail types

Application data (standard products – special variants may be supplied for other applications)

| Application | At grade, bridges, tunnels and viaducts for metro/LRT and mainline slab tracks |
| Clip type   | PANDROL brand e-clip |
| Pad type    | Typically studded/Flat EVA rail pad with studded rubber baseplate pad * |
| EN13481 Track category | Cat A, B, C, D |
| Maximum axle load | 26 tonnes |

* For special applications consult PANDROL.

Typical performance data

<table>
<thead>
<tr>
<th>Value</th>
<th>Test method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly static stiffness</td>
<td>Typically 20 kN/mm</td>
<td>EN13481-5:2012 cat B</td>
</tr>
<tr>
<td></td>
<td>Typically 22.5 kN/mm</td>
<td>EN13481-5:2012 cat C/D</td>
</tr>
<tr>
<td>Clamping force</td>
<td>&gt; 16 kN</td>
<td>EN13146-7:2012</td>
</tr>
<tr>
<td>Creep resistance</td>
<td>&gt; 7 kN</td>
<td>EN13146-1:2012</td>
</tr>
<tr>
<td>Electrical insulation</td>
<td>&gt;10 kΩ</td>
<td>EN13146-5:2012</td>
</tr>
</tbody>
</table>

COMPLIANCE WITH STANDARDS:
All PANDROL fastenings are tested against European CEN standards.

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.

PANDROL TRACK SYSTEMS

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