PANDROL

SD SYSTEM

PRODUCT INFORMATION
RAIL FASTENING SYSTEM:

SD SYSTEM

SD SYSTEMS have been developed by PANDROL Track Systems in order to offer a threaded solution optimising track construction costs and offering very high technical performances. SD means 'Safely Driven', referring to the controlled clip guidance from the parked to the in-service position.

In addition to its ability of pre-assembly in the concrete sleeper manufacturing plant, SD SYSTEMS have also been designed in order to offer high productivity with mechanised installation.

Components:
1. Clip
2. Plastic shoulder
3. Pad
4. Screw spike

Tightening to refusal is the standard method used on SD SYSTEMS. Together with this feature, the high elasticity of the SD clip ensures a regular clamping force and consequently a constant longitudinal restraint.

Find more information about the SD range at Pandrol.com

LEARN MORE >
FULLY PRE-ASSEMBLED
All SD 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.

CONTACT TIGHTENING
Large range of acceptable torque between 250 and 400 Nm allows coachscrew to be tightened to refusal. Toe load is achieved automatically once screw is tightened to refusal.

REPLACEABLE COMPONENTS
The SD SYSTEM is virtually maintenance free. In the rare event that a component requires replacement, the clip can be withdrawn easily.

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 The clip is simply withdrawn back to the parked position to release the rail.

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.

SUITABLE FOR RETROFIT
The SD SYSTEM can be installed in an SKL standard rail seat providing a retrofit upgrade.
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SD SYSTEM

- Optimised for use on concrete sleepers
- Suitable for retrofit
- Suitable for mechanised/automated installation
- Arrives pre-assembled and captive on sleeper

Application data (Standard products – special variants may differ)

<table>
<thead>
<tr>
<th>Rail inclination</th>
<th>As provided in the sleeper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pad type</td>
<td>Please consult PANDROL for appropriate pad types against operating requirements</td>
</tr>
<tr>
<td>Typical applications</td>
<td>LRT/Metro, Main Line, High Speed</td>
</tr>
<tr>
<td>Clip type</td>
<td>SD</td>
</tr>
<tr>
<td>EN13481-2 fastening 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 please consult PANDROL

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

<table>
<thead>
<tr>
<th>Test method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assembly static stiffness</td>
<td>&gt;70-210</td>
</tr>
<tr>
<td>Assembly dynamic stiffness</td>
<td>&gt;80-280</td>
</tr>
<tr>
<td>Impact load attenuation</td>
<td>≤ 30-50%</td>
</tr>
<tr>
<td>Electrical Resistance</td>
<td>&gt; 5 kΩ</td>
</tr>
<tr>
<td>Nominal toe load</td>
<td>1000 kgf</td>
</tr>
<tr>
<td>Clamping force</td>
<td>&gt;16 kN</td>
</tr>
<tr>
<td>Creep resistance</td>
<td>&gt;7 kN</td>
</tr>
</tbody>
</table>

COMPLIANCE WITH STANDARDS:
Pandrol Fastenings are tested against standards published by the European Committee for Standardisation (CEN).

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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