Designed for applications which demand that the scale be removed easily, the track system consists of aluminium guide rails available in 1 m and 2 m sections and a scale clamp element. It securely retains the magnetic scale whilst allowing it to expand and contract freely.

The scale clamp provides a fixed point from which the MS scale can expand.

If damaged, the scale can be pulled out of the guide rails and replaced even where access is limited, thus reducing machine downtime. This feature also makes the system ideal for large machines that need to be sectioned for transportation.

The system also allows the user to easily join the ends of two magnetic scales and reach lengths longer than 100 m.

The design of the track section allows installation next to most standard guide rails or freely on any surface. Therefore it is suitable for many applications, such as automated assembly equipment, packaging equipment, printing and other machines that require the scale to be installed/removed for transit, or simply for any application where thermal expansion of the scale must be independent of the machine structure.

- Aluminium carrier for easy magnetic scale refitting
- Allows the scale to freely expand with almost zero hysteresis
- Allows joining the ends of magnetic scales to reach lengths longer than 100 m
- Available section lengths: 1 m, 2 m
- Two different installation methods to fit your application
- Compatible with all RLS® readheads and magnetic scales
TRS technical specifications

<table>
<thead>
<tr>
<th>Material</th>
<th>Aluminium, EN AW-6060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass (per m)</td>
<td>157 g/m</td>
</tr>
<tr>
<td>Thermal expansion</td>
<td>~25 µm/m/°C</td>
</tr>
<tr>
<td>Dimensions - cross section</td>
<td>20 mm × 4 mm</td>
</tr>
<tr>
<td>Available section lengths</td>
<td>1 m, 2 m</td>
</tr>
<tr>
<td>Mounting</td>
<td>With screws</td>
</tr>
</tbody>
</table>

TRS installation tips

**Thermal expansion control** - The scale can be fixed either at the left/right end or at the center depending on the thermal expansion scheme.

**Joining MS scale sections** - Scales can be joined by using the TRE004A01 joining element to reach lengths longer than 100 m.

**Alignment of different-level-substrate** - The TRS system helps secure the level alignment of the scale across the whole axis.

Installation methods

<table>
<thead>
<tr>
<th>Installation method 1</th>
<th>Installation method 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>No reference surface available.</td>
<td>Reference surface available for alignment of track section.</td>
</tr>
</tbody>
</table>
TRS installation drawings

Dimensions in mm

Installation method 1

joining element TRE004A01

scale clamp TRE004A00

thread M3 × 8 on base

aluminium section TRS100A00 or TRS200A00

thread M3 × 8

aluminium section TRS099A00

section anchor (screw M3 × 10 with ultra low head torx cap)

1st section anchor

screw M2 × 4 for magnetic scale fixing

A : A cut scaled ×2

detail B cut scaled ×2

section anchor (screw M3 × 10 with ultra low head torx cap)

1st section anchor

screw M2 × 4 for magnetic scale fixing

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Installation method 2

joining element TRE004A01

scale clamp TRE004A00

aluminium section TRS100A00 or TRS200A00

aluminium section TRS099A00

thread M3 × 8 on base

N × 250 ± 20

thread M3 × 8 20 ± 5 20 ± 5 20 ± 5

scale length

scale clamp TRE004A00

section anchor (screw M6 × 10 with ultra low head torx cap)

2nd or last section anchor

screw M2 × 4 for magnetic scale fixing

1st section anchor

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TRS part numbering

<table>
<thead>
<tr>
<th>Part numbering</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRS100A00</td>
<td>Track section, 1.00 m</td>
</tr>
<tr>
<td>TRS200A00</td>
<td>Track section, 2.00 m</td>
</tr>
<tr>
<td>TRE004A00</td>
<td>Scale clamp, 0.04 m</td>
</tr>
<tr>
<td>TRE004A01</td>
<td>Joining element, 0.04 m</td>
</tr>
<tr>
<td>TRC00</td>
<td>Screw and washer</td>
</tr>
</tbody>
</table>

Number of TRC00 (screws and washers) required

<table>
<thead>
<tr>
<th>Track section</th>
<th>Mounting method 1</th>
<th>Mounting method 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRS100A00</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>TRS200A00</td>
<td>16</td>
<td>8</td>
</tr>
</tbody>
</table>

Magnetic scale for TRS part numbering

- **Series**
  - MS10 - 2 mm pole pitch (standard)
  - MS15 - 5 mm pole pitch

- **Precision class**
  - B - ±40 µm/m (for MS10)
  - C - ±100 µm/m (for MS15)

- **Scale length**
  - xxxx - Where xxxx equals scale length in cm

- **Reference mark**
  - 0000 - No reference mark
  - xxxx - Where xxxx equals position of machined reference mark in cm (reference mark position will be within ±1 cm from requested position)
  - Dxxx - Distance coded reference mark; where xxx equals basic increment (K) in mm

- **Options**
  - G - Track system; sides prepared for insertion into track system

Measuring length = scale length - 10 mm

Min. distance of Ri from left edge

Min. distance of Ri from right edge

30

Position of reference mark

Positive counting

Cut or magnetised reference mark (Ri)
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Document issues

<table>
<thead>
<tr>
<th>Issue</th>
<th>Date</th>
<th>Page</th>
<th>Corrections made</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>7.12.2009</td>
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<td>New document</td>
</tr>
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</table>

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