Field of application
- Tolerance compensating fastening and adjustment of large plastic add-on parts, i.e. rear spoiler BMW X5, X6, 3 and 5 series Touring, BMW MCV.
- Fastening and adjustment of add-on parts (bumper, spoiler etc.)

Advantages of adjustment element
- Captive pre-assembly to the add-on part possible
- Fast assembly at the production line without additional tools
- Pre-adjusted, ready-to-install element
- Permanent tolerance compensation over the length of add-on part
- Subsequent adjustment possible
- Splash-waterproof fastening
- Large adjusting range

The assembly of large plastic add-on parts are subject to high demands on the used fastening elements. In particular the joining of different materials requires new solutions.

The major difficulty when joining long plastic parts to a steel car body is caused by different material properties, which expand differently under the influence of changing temperatures. If the components are fastened rigidly, the part with the larger linear extension will distort when the temperature increases.

Thus it is necessary to design joints that are sufficiently strong and enable a shifting of the components due to linear expansion - that means a fastening solution that is strong yet flexible.

EJOT has developed a 3D adjustment element, which can be adjusted over three axes, compensates for the linear expansion and ensures tight fastening of the plastic add-on part to the supporting part.
Technical information

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Total length of the component [mm]</th>
<th>Connection auto body</th>
<th>Adjustment drive</th>
<th>Pre-adjustment [mm]</th>
<th>Adjusting range [mm]</th>
<th>Installation length [mm]</th>
<th>Support auto body</th>
<th>Width slotted hole [mm]</th>
<th>Length slotted hole [mm]</th>
<th>Component weight [g/pc.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>M6x36/17.2</td>
<td>36</td>
<td>M6</td>
<td>TORX® E5</td>
<td>8.4 ± 0.5</td>
<td>max. 8.3</td>
<td>17.2</td>
<td>Ø 27</td>
<td>6.5</td>
<td>7.5</td>
<td>17.0</td>
</tr>
<tr>
<td>M6x26/10</td>
<td>26</td>
<td>M8</td>
<td>TORX® T20</td>
<td>5 ± 0.5</td>
<td>max. 8.3</td>
<td>7.6</td>
<td>Ø 27</td>
<td>8.5</td>
<td>6.5</td>
<td>16.6</td>
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<tr>
<td>M6x36/17.2</td>
<td>36</td>
<td>M6</td>
<td>TORX® E5</td>
<td>9.5 ± 0.5</td>
<td>max. 8.3</td>
<td>17.2</td>
<td>Ø 29</td>
<td>6.5</td>
<td>7.5</td>
<td>18.4</td>
</tr>
</tbody>
</table>

Installation instructions

- **Connection geometry of the add-on part:**
  - Installation width (H) = 26 mm
  - Installation length (J) = 27 mm
  - Sliding range width (K) = 11 mm

- **Fastening element:**
  - Hex nut, preferred according to DIN 6923