HIGHLIGHTS

- Flexible and modularly designed product line
- Compatible with LEICA prisms
- Gimballed mounting of the prisms and reflectors
- Robust construction
- Highly accurate CNC manufacturing

Field of Application

The GEODATA reflector and marking system is a cost-effective and versatile product line for many geodetic applications. It is particularly suited for application in deformation and monitoring measurements in tunnelling, due to the high precision of the individual components. It can, however, also be profitably deployed for many other surveying tasks.

Principle of Operation

Due to the gimballed bearings of the targets they can be rotated in any arbitrary direction of objects to be measured. This allows the creation of optimal visibility conditions also where instrument locations are changing. The low manufacturing tolerances allow arbitrary replacement of targets without loss of accuracy when measurements are repeated. This is of importance particularly in displacement measurements in tunnel construction where the targets must be removed temporarily to protect them against damage.

A variety of marking material is available for affixing the targets. The range includes convergence bolts for mounting in shotcrete, various wall plugs for concrete or bolts for mounting on steel parts. The scope of delivery also includes optimally suited adapters for the specific application.
Technical Specification

**Bireflex - Target** ①
Recording distances from approx. 12 m to 140 m
Material The reflector support is plastic, mounted on universal joints with foil coating on both sides.
Addition constant 34,4 mm
Manufacturing accuracy ± 0,1 mm

**Prism - Target** ②
Recording distances from approx. 0,3 m to 600 m
Material The reflector support is plastic, mounted on universal joints and prism with metal mounting.
Addition constant 18,0 mm
Manufacturing accuracy ± 0,1 mm

**Convergence Bolts** ③
Material Tenax Tx 55, galvanised R 3/8” threads,
Standard length 250 mm,
other length on demand

**Protective Cap** ④
Material PVC
### Targets and Marking Material

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Break-off point</strong></td>
<td>For mounting a target on the convergence bolt</td>
</tr>
<tr>
<td><strong>Material</strong></td>
<td>Plastic</td>
</tr>
<tr>
<td><strong>Hilti DX-KWIK direct mounting system</strong></td>
<td>M8 H15 threaded bolts</td>
</tr>
<tr>
<td><strong>Material</strong></td>
<td>galvanised or niro</td>
</tr>
<tr>
<td><strong>Wall bolt with M8 - threaded bolt</strong></td>
<td>Plastic, brass and niro</td>
</tr>
<tr>
<td><strong>Material</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Adapter M8</strong></td>
<td>For mounting a target on Hilti threaded bolts</td>
</tr>
<tr>
<td><strong>Material</strong></td>
<td>Plastic</td>
</tr>
<tr>
<td><strong>Magnet clamp (no picture)</strong></td>
<td>For fixing targets on machine parts</td>
</tr>
</tbody>
</table>

The following other data sheets are associated with this data sheet:

**Services:**
- Optical 3D-Deformation Monitoring
- Heading Survey