

# Targets and Marking Material

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## HIGHLIGHTS

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



*Bireflex and prism targets with miscellaneous marking material*

## 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

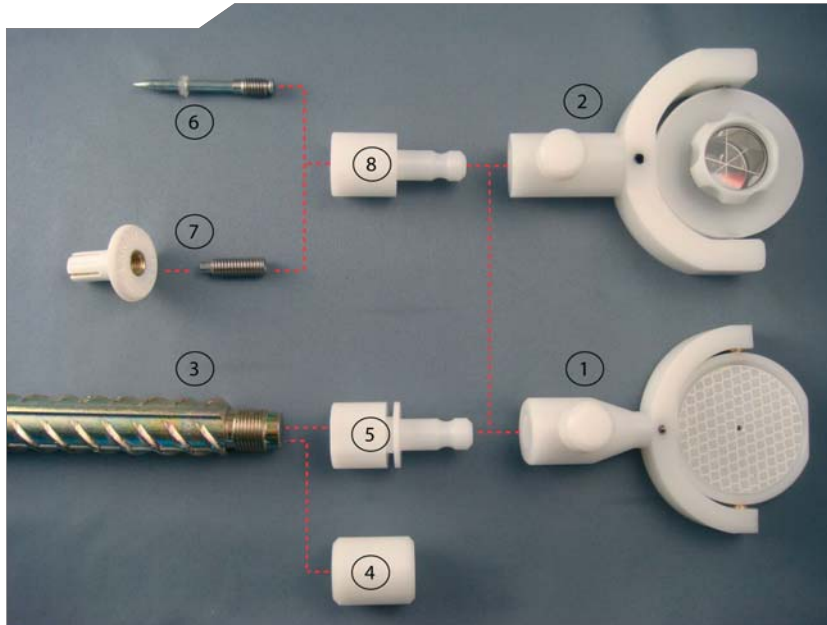
Due to the gimballed bearings of the targets they can be rotated in any arbitrary direction of objects to be measured. This allows the creation of optimal visibility conditions also where instrument locations are changing. The low manufacturing tolerances allow arbitrary replacement of targets without 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.



*Monitoring sections with Birefle-targets for displacement measurements in the inner lining of a tunnel*

## Targets and Marking Material



## Technical Specification

### Bireflex - Target ①

Recording distances  
Material

from approx. 12 m to 140 m  
The reflector support is plastic,  
mounted on universal joints with  
foil coating on both sides.

Addition constant  
Manufacturing accuracy

34,4 mm  
± 0,1 mm

### Prism - Target ②

Recording distances  
Material

from approx. 0,3 m to 600 m  
The reflector support is plastic,  
mounted on universal joints and  
prism with metal mounting.

Addition constant  
Manufacturing accuracy

18,0 mm  
± 0,1 mm

### Convergence Bolts ③

Material

TenaxTx 55, galvanised  
R 3/8" threads,  
Standard length 250 mm,  
other length on demand

### Protective Cap ④

Material

PVC

## Targets and Marking Material

Break-off point ⑤

Material

For mounting a target on the convergence bolt  
Plastic

Hilti DX-KWIK direct mounting system

Material

M8 H15 threaded bolts galvanised or niro ⑥

Wall bolt with M8 - threaded bolt ⑦

Material

Plastic, brass and niro

Adapter M8 ⑧

Material

For mounting a target on Hilti threaded bolts  
Plastic

Magnet clamp (no picture)

For fixing targets on machine parts

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

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