

## Prism



### Description

The range of a prism results from, among other things, its coating and the glass geometry. A number of Original prisms from Leica Geosystems have a special coating on the reflective surfaces – the Anti-Reflex Coating, and a copper coating on the reverse side. Without these, the range of distance measuring, ATR and Power search would be reduced by up to 30%. The workmanship and the durability of the copper coating are decisive for a long life. The glass dimensions, the position in the holder and with it the areal orientation, are important for measuring accuracy.

### Benefits

- **Transparent choice** : We offer a transparent selection of prisms in various sizes for different areas of application. These are standard prisms, special prisms, mini prisms as well as monitoring prisms.
  - ✓ Professional 5000: HIGHEST ACCURACY
  - ✓ Professional 3000: MAXIMUM LIFETIME
  - ✓ Professional 1000: COST EFFECTIVE MEASURING
- **Centering Accuracy** : Measurement errors occur if Original prism holders are not used. Substitutes are not configured according to Leica Geosystems criterion and often exhibit displacement between prism, holder and recording pin. The holder and the prism constitute a unit with which the centering and repeat accuracy is defined.
- **Range** : The beam deviation of a prism defines the its maximum range, according to the principle “entering beam should equal the exiting beam”. The smaller the beam deviation (measured in angle seconds), the greater the directly reflected signal strength to the sender optic. The returned signal quality defines the maximum range of a measurement.
- **Lifetime** : In contrast to many conventional prisms, the reflective copper coating on the reverse side of Original prisms consists of a support coating, a vacuum-metalized copper coating, a protective coating and an overlying coat of lacquer. The special adhesive lacquer protects the underlying layers from corrosion and detachment.
- **Measurement Accuracy** : Measurement errors occur frequently at close ranges when prisms without anti-reflex coating are used, as the front of a prism always directly reflects a certain percentage of a signal. Errors occur in the use of prisms without copper coating on the back side when moisture droplets accumulate or the prism becomes foggy.