

Original tribrachs

Accuracy through torsional rigidity



Similarly to the stability of the tripod, that of the tribrach is a significant factor in measurement accuracy. The torsional rigidity, the most important criterion of a tribrach, is constantly controlled and tested during its production. The maintenance-free foot screws of the Leica Geosystems tribrach provide movement that is always smooth and free of play, even after years of use. The precise alignment of the support area to the base plate of the instrument assures extremely accurate forced centring. The optical plummet is so robust that the need for adjustment during the entire lifetime of the tribrach is practically unnecessary. Its construction predestines the tribrach for all applications, including extreme temperatures and high dust and humidity.

Transparent choice

The ideal tribrach for your application

All original tribrachs comply with the strict specifications and quality standards of Leica Geosystems. Your choice should ideally be made according to your individual accuracy requirements.

PROFESSIONAL 5000



GDF321
GDF322

- The hysteresis of the Professional 5000 Series tribrachs is guaranteed to a maximum of 1" (0.3 mgon) or better.
- The foot screws are maintenance-free and ensure a movement that is smooth and free of play, even in the most severe environmental conditions.
- The tribrachs in this series are recommended for all tasks that require angle measurements of under 3".
- Due to the minimal hysteresis, we recommend use of the Professional 5000 Series for all motorised instruments.

PROFESSIONAL 3000



GDF311
GDF312

- The hysteresis of the Professional 3000 Series tribrachs amounts to a maximum of 3" (1.0 mgon).
- The foot screws are maintenance-free and have a larger diameter. This allows for fine adjustments, even when wearing work gloves under difficult environmental conditions.
- These tribrachs are suitable for non-motorised TPS instruments with angle accuracy from 5" to 7" and GNSS antenna stations as well as backsights and control points.

PROFESSIONAL 1000



GDF301
GDF302

- The hysteresis of the Professional 1000 Series tribrachs amounts to a maximum of 5" (1.5 mgon).
- The GDF101 and GDF102 are cost effective tribrachs which prove themselves in use under normal environmental conditions.
- These tribrachs are suitable for non-motorised TPS instruments with angle accuracy of 7" and single frequency GNSS antenna stations.



The torsional rigidity of the original

The accuracy with which a tribrach returns to its starting position once the instrument has stopped, is called torsional rigidity or hysteresis. This hysteresis is the relative movement between the top plate and the base plate of a tribrach that occurs through the rotation of a TPS instrument. The hysteresis has direct influence on the angular accuracy of the instrument – and that speaks for the original. To optimise the hysteresis as Leica Geosystems has done is complex and calls for the highest precision: a movement of the top plate to the base plate of 0.3 µm corresponds to an angle error of 1". Especially motorised instruments with their high acceleration and brake power require tribrachs with very high torsional rigidity.