

GYROMAT 6000

The Most Accurate Precision-Surveying Gyroscope in the World



Optimized performances for tunneling,
mining and shipyard applications

Learn more at [topconpositioning.com](https://www.topconpositioning.com)

 **TOPCON**



Measure true north regardless of environmental factors

The GYROMAT instrument series is a range of high precision surveying gyroscopes with band suspension, which are the result of more than 60 years of experience in the development and manufacture of gyroscopic measuring instruments. The fully automatic measuring procedure and measurement technique that has no any preliminary orientation provide the greatest accuracy in determining direction in those areas in which other methods cannot be efficiently used, for example in mining and tunnelling.

The GYROMAT 6000 is the latest product for high precision direction measurement with an accuracy of 0.8 mgon, which corresponds to a deviation in arc of about 1.2 cm over a distance of one kilometer. The time needed for measuring a single direction is only about 6 to 9 minutes.

- » Utmost accuracy
- » Shorter measuring time
- » Fully automatic measurement
- » No pre-alignment necessary
- » Model versions with removable or permanently installed total station
- » Individual MS AXII mounting
- » Spare Battery

The GYROMAT 6000 is fully compatible with Topcon MS AXII solutions, providing optimal performance for tunnelling and mining applications.

Laser Collimation Control

The new Laser Collimation Control system (LCC) makes it possible to detach the total station from the GYROMAT 6000. Model variants with detachable or permanently installed total station are available, allowing the device to be used universally and conveniently for geodetic applications or control work. In addition, the LCC can be used to perform internal stability tests under field conditions to provide the user with reliable measurement data with greater certainty.



Laser

Built-in laser collimation control (LCC) for setting up and stability checks



Battery

Ergonomic design with only one rechargeable battery



Precise

More precise piezoelectric drive with high resolution angle encoder



Gyro

Gyro measuring system with a reliable intermediate energy storage system



Wireless

Wireless remote control and data transfer



Connections

Wired interfaces (USB / RS-232) for control and data transfer



Display

Graphic display with extended visualization and functional scope



Removable batteries



Model with removable total station



Easy to carry on-site

Technical specifications

Measuring modes

Mode	1	2	3
Measuring accuracy in mgon*	0.8 (1.6**)	5	2
Measuring time in minutes (approx.)	6-9	3-5	4-7
Measurements per battery charging	25	50	35

Environmental

Operating temperature	-20 °C up to + 50 °C (-12 °C up to + 45 °C calibrated)
Area of application	Between 80° south latitude and 80° north latitude
Laser Collimation Control	Laser: Green (520 nm) - Class 2

Physical

Dimension and weight	11.5 kg, 215 mm centering diameter (GYROMAT 6000 without theodolite)
Transport case	Weight: 26 kg / Dimensions: (L x W x H) 460 x 460 x 800 mm
Tripod	Weight: 8 kg / Dimensions: 300 mm diameter

* Standard deviation ($\pm 1\sigma$) under lab conditions
in accordance with DIN 18723

** Version with detachable Total Station

Specifications subject to change without notice.

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