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Tecnologie per le Scienze della Terra

CG-6 Autograv™
Survey Gravity Meter

The CG-6 Autograv™ is the next generation land gravity meter combining a modern, intuitive user interface with our renowned quartz sensor technology housed in a rugged yet lightweight enclosure.

The new CG-6 offers fast, reliable and precise gravity measurements and includes an array of mapping and post processing functionality with our new Lynx LG software conveniently installed on a tablet computer and provided as a standard feature.

The new CG-6 offers you dependable gravity survey data with ease and efficiency making surveying more cost effective than ever before.

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System Features

Portable light-weight survey gravity meter

- High-Visibility Console
- All-Weather Operation (-40 to +45 °C)
- Dust-Proof, Water Resistant Meter
- Intuitive Survey-Driven Interface
- Backlit Inclined Display
- Robust Fused-Quartz Sensor
- No Clamping Required
- On-Board GPS Receiver
- Bluetooth Connectivity
- Simplified Leveling Interface
- On-Board Mass Storage (4 GB)
- Hot-Swappable Dual High-Capacity Batteries (24 hr at 25 °C)
- 5 microGal Repeatability
- Tares Under 5 microGal for up to 20 g Shocks
- Low Drift Sensor (Uncorrected: < 200 microGal/day)
- Low Residual Drift (< 20 microGal/day)
- Automated Corrections (Tides, Tilts, Drift, Temperature)

Ruggedized smart tablet accessory

- Lynx LG Land Gravity Survey Software
- Touch-Free Field Operation of Gravimeter
- Built-in GPS and Camera
- Windows Operating System
- Daylight Readable Multi-Touch Screen
- Real-Time Position Maps
- In-Field Simple Bouguer Maps

Applications

Oil & gas exploration

Gravity can be used to determine the location of a Salt dome in which oil or gas could be present. Measuring the density change in an oil reservoir can assist in the oil and gas recovery process.

Mineral exploration

Gravity can detect Volcanic Massive Sulphides deposits associated with nickel deposits, diamond bearing Kimberlites, Banded Iron Formations, and Impact Basins. Gravity can also be used to determine the size of the deposit.

Geological mapping

Gravity can be used to complement the results of geological mapping.

Civil engineering

Gravity can be used to study integrity of roads, dams, and dykes, looking for areas of weakness in the subsurface.

Geotechnical

Gravity can detect Voids or Cavities whether they are tunnels, washouts or sink holes.

Regional gravity studies

Gravity can determine the rock type, soil compaction and presence of water.

Geoid mapping

By measuring gravity changes on the Earth's surface, a more accurate correction can be applied to GPS data to obtain better height location.

Archaeology

Gravity can be used to locate buried walls, buildings, and tombs.

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Remote tablet control with Lynx LG software

Lynx LG land gravity processing software features

- High-Visibility Console
- Bluetooth connectivity for hands-free operation
- Real-time position maps
- Simple Bouguer mapping
- Previous survey/station recall
- Station/Route import capabilities (KML, GPX, Delimited ASCII)
- Searchable survey database
- Advanced corrections
- Tilt and drift calibration interface
- GPS integration/synchronization

* Tablet software features are subject to change without notice.

Minimum hardware specifications

Windows based operating system, multi processor controlled, Wi-Fi, Bluetooth, GPS

CG-6 Advancements

Improved sensor performance

- Reduced long-term drift
- Compact design with reduced warm-up and stabilization time)

Also available

- CG-5/CG-6 Trident Vertical Gravity Gradient Tripod

Smaller, sleeker packaging

- 35% weight reduction: 5.2 kg (11.5 lbs) with 2 batteries
- 32% height reduction: 21.6 cm (8.5 in) freestanding height
- Re-engineered leveling tripod: 40% lighter, 25% stronger
- 20% reduced power consumption
- Reduced profile improves performance in windy conditions

Completely redesigned user experience

- Faster, easier levelling with improved tilt sensors, visual feedback and a lighter tripod with levelling screws ergonomically placed at the front of the meter
- Improved on-board interface and new table compatibility
- New tablet enables remote operation and advanced data processing with acquisition up to 10 Hz and many other features
- Intuitive on-board user interface for faster surveying, backlit inclined display for easy readability and 4GB of on-board memory
- Bluetooth and USB connectivity

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CG6 Technical specifications

Sensor type	Fused quartz using electrostatic nulling
Reading resolution	1 microGal
Standard deviation	< 5 microGal
Operating range	World-wide (8,000 mGal without resetting)
Residual drift	< 20 microGal/day
Uncompensated drift	< 200 microGal/day
Range of automatic tilt compensation	±200 arcseconds
Tares	Typically < 5 microGal for shocks up to 20 g
Automated corrections	Tide, instrument tilt, temperature, noisy sample filter, seismic noise filter, drift
Data Output Rate	User selectable up to 10 Hz
GPS Accuracy	Standard < 15 m; DGPS (WAAS) < 3 m
Touch-free operation	Handheld Tablet with Bluetooth
Battery capacity	2 X 6.8 Ah (10.8 V) rechargeable lithium smart batteries. Full day operation at 25 °C (77 °F)
Power consumption	5.2 Watts at 25 °C (77 °F)
Operating temperature	-40 °C to + 45 °C (-40 °F to 113 °F); Optional high temperature version to +55 °C (131 °F)
Digital data output	USB and Bluetooth
Dimensions	21.5 cm(H) x21 cm x 24 cm (8.5 in x 8.2 in x 9.4 in)
Weight	5.2 kg (11.5 lbs) including batteries

Standard system contains	> CG-6 Autograv™ Gravity Meter
	> CG-6 Tripod
	> 2 Rechargeable Smart Batteries
	> Battery Charger
	> Tablet Computer w/GPS + accessories
	> Lynx LG Land Gravity Software
	> Power Supply and USB Cable
	> Transit Case
	> Shoulder Strap
	> User Manual
	> Spare Parts Kit
	> Carry Bag
Available options and accessories	> High-Temperature (HT) Meter Option
	> Cold Weather Survey Accessories
	> Surveyor's Backpack
	> Spare Meter Batteries
	> Spare Tablet Batteries
	> Trident Gradient Tripod
	> Spare Battery Caps

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