

Our strenght, Your value

- One stop shop: availability of a comprehensive range of instrumentation for all the main application within the geotechnical sector
- Reliable monitoring instrumentation
- Proprietary Vibrating Wire technology
- High products' differentiation
- High technical customization capability - based on project specifications
- Availability of products for both static and dynamic monitoring
- Short production lead times
- Wide availability of products in stock
- Competitive pricing



in



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Gestecno

Grounded by Design

Company Overview

Since 1992, Gestecno has been designing, engineering, and manufacturing advanced instrumentation for geotechnical, structural, hydrological, and geomechanical monitoring, establishing itself among the leading manufacturers in the sector both nationally and internationally.

At the company headquarters in Castelraimondo (MC) — a facility spanning over 1,000 square meters and integrating technical offices, production departments, calibration laboratories, and logistics — the entire product life cycle is managed in-house. The direct control over the supply chain ensures high standards of precision, durability, and compliance with the most demanding project specifications.

The in-house R&D department develops solutions that combine state-of-the-art technological innovation with the flexibility required for complex tailor-made customizations, enabling rapid responses to the engineering challenges of any construction site or infrastructure project.

With a growing global presence, an ISO 9001-certified quality management system, and a constant focus on product improvement, Gestecno is a trusted reference point for industry professionals and companies seeking practical, efficiency-oriented solutions with an excellent value for money.

Hydraulic Settlement Gages

Hydraulic settlement gauges are used to monitor settlement or differential displacement in buildings, soil, and other structures such as embankments, earth-filled dams, and road fills. Each gage is hydraulically connected to a reference tank in a stable zone. The integrated sensor detects the hydrostatic pressure generated by the elevation difference between the gauge and the reference reservoir (placed in a stable zone), due to ground or structural settlement/heave. Available with 4-20mA and digitized RS-485 outputs.



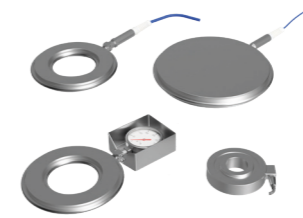
Surface Tiltmeters

Tiltmeters (or Surface Clinometers) are precision instruments used in geotechnical and structural monitoring to detect small and punctual angular changes of structures or ground surfaces. They are employed to track even minor inclinations in buildings, heritage structures, dams, bridges, load bearing beams and other structures, enabling to detect early signs of instabilities such as settlement, subsidence, ground deformation, or maintenance needs.



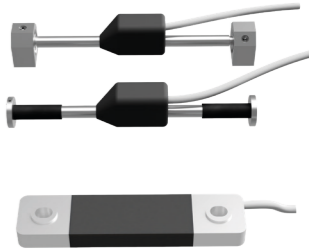
Load Cells

Load Cells are commonly applied to monitor loads in anchors, piles, struts, tunnel linings, and various structures such as retaining walls, foundations, dams, and bridges. In particular, they allow continuous assessment of load variations due to soil pressure or changes in working conditions, helping detect loss of tension or load increases over time.



Strain Gages

Strain gauges, available in both vibrating wire and resistive types, are used in structural and geotechnical monitoring to measure stress and strain in load-bearing elements. They are capable of working in both tension and compression, and can be installed on structural surfaces or embedded in concrete. Common applications include tunnels, foundations, pile load tests, bridges, buildings, and concrete dams, as well as temporary and permanent retaining structures.



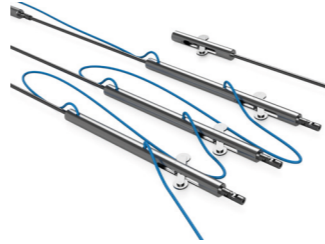
Fixed Settlement Gages

Fixed extensometers are instruments installed in embankments or boreholes to detect vertical ground movements between two fixed points. Settlement Platforms and Tell-Tale extensometers employ a metal riser rod placed into a corrugated sleeve to isolate it from soil friction. The deep end of the rod is anchored to the ground either by means of a grouted anchor or through a buried plate. Readings can be taken through optical levelling or automatized by using electrical sensors.



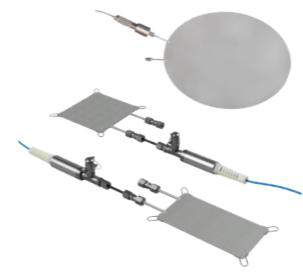
In-Place Inclinerometers

In-place inclinometer (IPI) gages are used in geotechnical monitoring for automated, or high-frequency interval measurement of lateral displacements in soil or structures. The typical configuration consist of a series of gages installed within an inclinometer casing and arranged in either continuous or discontinuous arrays. IPIs can be installed vertically or horizontally and are widely applied to monitor slopes, excavations, tunnels, embankments, diaphragms, slurry walls and various civil engineering structures.



Pressure Cells

Pressure cells are instruments used to measure contact pressure between soil and structural elements. They typically consist of a fluid-filled pressure pad connected via a hydraulic line to a pressure transducer, with geometry and size selected based on the application and expected pressure. They are widely used in tunnel construction and embankment dams, particularly to monitor ground or ground-structure contact pressures.



Universal Readout Unit

Multipurpose handheld readout unit designed to take measurements from most of the analog sensors currently available on the market. Measurements can be displayed either in electrical or engineering units. CLU-100 is a high-precision portable datalogger capable of reading one or two sensors simultaneously, with onboard data storage and USB download of field measurements.



MPBX

The Multi-Point Borehole Extensometer is used to measure deformations in a borehole between anchors and a reference head at the surface. The anchors, typically installed at different depths, are connected to the measuring head through rods (in fiber glass or s/steel), placed inside a plastic sleeve to isolate them from soil friction. The instrument is suitable for several applications such as Tunnel, Retaining Walls or Dam monitoring. Measurements are taken using micrometers or electric displacement transducer.



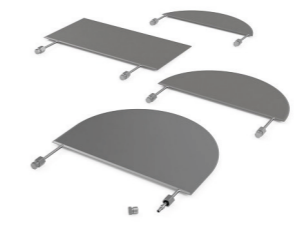
VTA

The Vector Tilt Array is an instrument designed to measure punctual tilting along a line, while ensuring alignment, spacing, and orientation of the measurement axis between sensors. The standard segment consists of a 2 meters long L-shaped aluminum profile with a waterproof sensor mounted at mid-length; upon request, the segment can be configured in different lengths and with multiple sensors per rod. VTA gauges are mechanically connected through rigid joints and electrically via signal cable assembled at factory. They can be installed in boreholes, placed in trenches, embedded in concrete.



Flat Jacks

Flat jacks are devices used in structural diagnostics to evaluate in-situ stress conditions and load-bearing capacity of masonry, concrete, or rock structures. They consist of a thin, flat hydraulic pad inserted into a cut within the structure, which is then pressurized to assess stress levels. They are commonly used to determine the actual static condition of existing buildings, and can be manufactured in standard or customized sizes depending on project requirements.



Data Acquisition Unit

The URS-100 data acquisition is a highly versatile product designed for the automated measurements of multiple instruments, suitable for both small-scale projects and as part of more complex monitoring networks. The device features a flexible architecture that can be expanded with additional modules for the acquisition of both analog and RS-485 digital output signals. It is capable of autonomously transmitting data to a remote server through an integrated modem and data connection. The server receives, stores, and makes the data available through a dedicated web portal.



Crackmeters

Crackmeters are instruments used to measure linear displacement across surface cracks or joints, especially in concrete or rock structures. They are made of a stainless-steel telescopic body with two fixing points and include a vibrating wire, potentiometric. They integrate a vibrating wire or potentiometric sensor. All major types of analog and digital outputs are available (0-5 V, 4-20 mA, RS485).



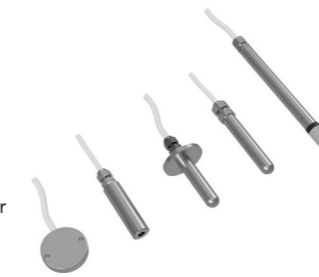
VW and Electrical Piezometers

Piezometers are key geotechnical instruments used to measure groundwater levels and pore water pressure in soil and rock. They are commonly applied in dams, foundations, retaining structures, slopes, tunnels, and mining projects. By providing reliable data on subsurface water conditions, they help engineers assess stability and evaluate hydrogeological and geotechnical risks.



Temperature Sensors

Temperature sensors are essential in geotechnical and structural monitoring. They are used in a wide range of applications and for multiple purposes. For example, they are employed to correlate the variation of the measured quantities with the temperature excursion. They are used to track temperature development during concrete curing, to monitor temperature variations that can cause thermal expansion of structures or structural elements, to assess the state of hydration, and to control thermal gradients within a single structure.



NB-IoT Datalogger

Low-consumption data acquisition module powered by a long-life battery. The module is equipped with five analog inputs and two digital inputs and can be expanded with additional analog channels. Wireless data transmission via NB-IoT to a dedicated web portal for data visualization, download, and alarm management. Its compact design significantly reduces on-site installation time.

