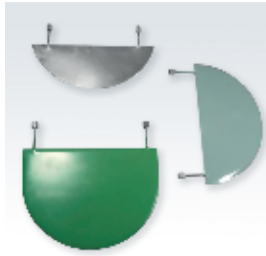


Flat Jacks



The flat jacks are primarily used in diagnostics of buildings and walls to determine experimentally what the static conditions of the structures under investigation are. Gestecno produces various jacks, having standard dimension and shape and has a well-stocked warehouse. At request it is possible to produce special versions, with customized shape and dimension.

Flat Jacks



The mechanical strain gauge consists of a highly repeatable measuring tool that is also removable. During deformability tests by using flat jacks, the mechanical strain gauge is used for the detection of convergence measures across the cutting in which the jacks are introduced.

Mechanical strain gauge



The system consists of a hydraulic hand pump unit connected to a flexible full of quick couplings and a high precision manometer to display the pressure value.

Hydraulic hand pump

Strain Gauges



The vibrating wire strain gauges are used to measure the stress in load-bearing structures or to monitor the tensions. The gauge can work both in tension and compression, and is also watertight and can be installed externally in stressed structures or embedded in concrete castings for stress measurements.

Vibrating wire strain gauges



Resistive strain gauges have four extensimetric grids, connected by a full bridge. They are a good replacement to the vibrating wire strain gauges when a high frequency monitoring is needed.

Resistive strain gauge

Weather Sensors



The rain gauge consists of a cylindrical body, inside the rain gauge a funnel-shaped opening is mounted, it conveys precipitation through a filter, towards a stainless steel weighbridge. A reed contact detects every change on the weighbridge.

Rain gauge



Wind direction sensors are compact low consumption sensors, made of anodized aluminum alloy, easy to connect to any datalogger. They are used for weather and environmental monitoring.

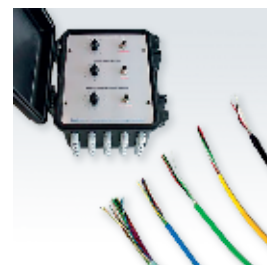
Wind direction sensors



The temperature measurement is performed to control phenomena with strong temperature variations, such as the day/night cycle on structures, or to compensate for the thermal errors of some instruments. The sensitive element (platinum resistance thermometer) is protected against rain and incident solar radiation by means of four overlapping circular screens arranged to guarantee natural internal ventilation.

Air temperature sensor

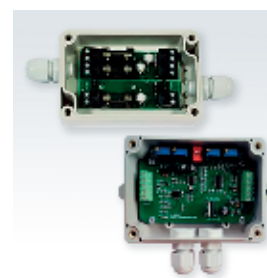
Cables and Accessories



The cables are the trickiest part of any network monitoring. They must be guaranteed totally waterproof in connection with tools and must resist the installation both within concrete products and in soil.

Measuring and switch terminal boxes collect the signals of two or more sensors. This way you can display data from all sensors installed, connecting with the portable reading unit.

Cables and measuring and switch terminal boxes



Overvoltage protections provided by Gestecno come in three types and are used to prevent unwanted lightning strikes to the tools which they are connected to.

Signal converters are electronic boards that convert the output signal of the sensors. Gestecno provides various types in order to convert the signal of the load cells (mV/V) in more widespread 4-2 mA, signal converters from voltage to current, from current to voltage, etc.

Overvoltage protections and signal converters

Our story

The Gestecno is a company that has been working from 1992. In these running years it has been confirmed as a reference company in an international panorama, for the "100% made in Italy" production of a wide range of equipment in the geotechnical, hydrological, civil engineering, geomechanic monitoring fields.

Our Headquarter is in Castelraimondo, in the heart of Marche, located in a new facility 800 sm wide. At the inside, wide spaces are dedicated to the projection, production activity and storage and in which a young staff composed by high skilled and strongly motivated people work.

Every instrument is designed, projected and assembled in our company laboratories with high professional accuracy and customisation ability, according to the specific demands of our clients. We are constantly investing in R&D so to improve the quality of our products and their competitiveness. We are ISO9001:2015 certified as proof of an accurate attention to the quality and the respect of defined protocols.

With time we managed to confirm us in the trade market complementing us also to the market abroad thanks to our high price quality rate and to our capacity to wisely combine competences, experience, with slenderness in the operative processes, flexibility and ability to create tailor-made solutions. These are the strengths that have allowed us to collaborate in these years with big and prestigious clients, not to mention many

Public Bodies and other professional companies of the field.

However our aim, is not to propose ourselves directly to the end customer, but to cooperate with dealers, manufacturers, sales agents, systems and service providers in Italy and abroad. Our intent is to become a privileged interlocutor for our partners, a reference point for one or more products. We would like to become a company you can count on for your special needs. Each project is an opportunity for us to demonstrate our skills and to make the most of our resources, we always face it as a challenge and an unmissable opportunity for growth.

Using and laying our systems is very simple and intuitive since we provide our products already set up according our specific client needs. We guarantee, in any case, a customer service and support even post sale, remaining always available and glad to follow our Partners even in the post-sale providing instructions and any sort of clarification.

This brochure represents the results of our hard working and experience gained in these years. By leafing it you will have a general view on the instrumentation that we produce, which is generally available in stock.

If we can THINK it
we can MAKE it

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INSTRUMENTS FOR GEOTECHNICAL AND STRUCTURAL MONITORING

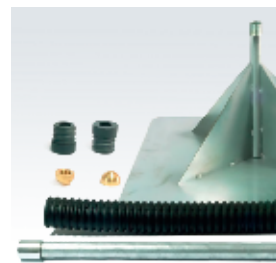
Gestecno

Settlement gauges



Settlement gauges are used to monitor land settlements or landslides, banks, dams. The operating principle of the system is based on the concept that a column of liquid exerts a certain pressure according to its height.

Multipoint settlement gauges



The strain gauge is used to monitor the subsidence of foundations, settlement monitoring in earth-fill dams. Measurements are taken on the surface, measuring the distance of the cap placed on the top of the rod.

Settlement platform



Magnetic extensometers are used to monitor failures and settlements, often associated with the construction of embankments, embankments and barriers. Checking their position by means of a probe, it is possible to know the lowering of every section between two rings and the lowering in comparison to the reference point.

Magnetic extensometer



A hydrostatic profile gauge allows for manual measurements of failures that occur in foundations, embankments, landfills, etc. Profile is pulled through the tube and measures the hydrostatic pressure of the measuring point compared to the level of the fluid contained in the reference tank placed outside.

Hydrostatic profile gauge



The use of topography accessories such as targets, levelling rods, bolts, prisms is ideal for monitoring. They are applied in geotechnical and structural monitoring, they are fixed on place, and keep long time excellent performance and accuracy.

Topographic accessories

Stress Cells and Load Cells



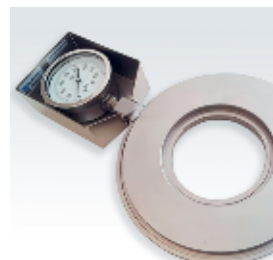
NATM stress cells are used to control the pressure acting between a support (for example, a bending in a tunnel) and a prompting soil. The cells are made with the sealed union of two special steel sheets and filled with a special oil.

NATM stress cells



The electric toroidal load cell is a special pressure sensor, that measures the variations of work load tie rods and anchorings are subjected to. This way it allows to evaluate the possible losses for release during the exercise or the pressure increase caused by the thrust of the ground on the containment structures.

Electric anchor load cell



The hydraulic toroidal load cell measures the variations of load to which tension rods and anchors are subjected, this way it allows to evaluate the possible losses for release during the exercise or the pressure increase caused by the thrust of the ground on the containment structures. They are supplied either with a manometer or with a pressure transducer.

Hydraulic anchor load cell



The hydraulic load cell has been designed to be located at the base of reinforcement structures to measure the load that they transmit to the basement. This control is essential to ensure the safety of temporary or permanent reinforcement structures.

Load cells for steel linings



This type of load cells detect changes in workload to which they are subjected in different applications. Tension load cells are used to control the tension of the metal ropes, in order to keep under control the effectiveness of the work.

Compression/Tension load cells

Extensometers and Crackmeters



Extensometers are used for subsidence problems, foundation failures, convergence measurements during the digging, landslides, wall deformations, bulkheads and pilings, control on deep movements of clusters and rocky walls. Furtherly they are used everytime high precision surveying is needed, even at great distances.

Borehole rod extensometers



The displacement transducers are commonly used to run on automatically and continuously the measurements of borehole rod extensometers. They are entirely made of stainless steel and they are also available in a variety of ranges.

Displacement transducers



The Electric Crackmeter consists of a potentiometric type of displacement transducer, that detects the variations of position between two points set between an injury or a joint. The electric Crackmeter is a valuable tool for continuous monitoring and the automation of small movement measurements.

Electrical crackmeters



Wire displacement sensors are used to detect and control any movements that occur in landslides or in unstable rock masses. A steel cable is stretched with constant voltage between the two reference points of the instrument. The maximum length of the steel cable may be up to 30 metres.

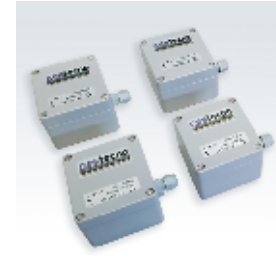
Wire crackmeters



It is used by immersing it into the water, placed under the ground or embedded in concrete to control phenomena with high temperature range, such as the day / night cycle on structures, or to compare thermal errors made by some instruments. The type of sensor (platinum resistance thermometer) is protected by an IP68 stainless steel container.

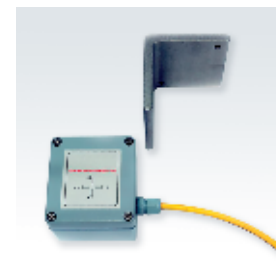
Submersible temperature sensor

Inclinometer



Surface inclinometers are used for monitoring inclination changings of structures, retaining walls, rock masses and for evaluating behaviour of bridges and loaded beams. Endowed with a high sensitive and electrolytic inclinometer sensor, this tool detects angular variations of structures with extreme precision and accuracy.

Surface Clinometer (electrolytic type)



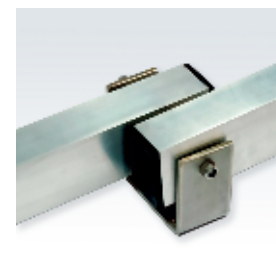
Surface Clinometers are designed to be permanently installed in order to monitor changing in structure inclination, retaining walls, rock masses and to evaluate behaviour of bridges and loaded beams. Endowed with biaxial MEMS sensing, this tool detects angular variations in structures, providing information concerning rotational movements of that same structure.

Surface Clinometer (MEMS)



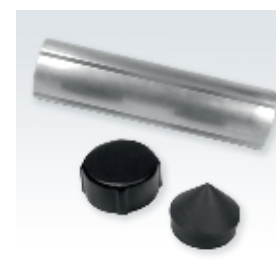
Generally connected to each other by a stainless steel wire or by rigid rods so to form a tool column, permanent depth clinometers are mainly employed in constant soil movements and landslide monitoring but, generally, also in structural control of dam, bulkheads, poles and pillars, etc.

In place Inclinometer



The electrolevels are metallic bars of different length made of aluminium on which a high sensitive inclinometer sensor (electrolytic type) has been assembled. They are usually installed in series, so that the end of a bar coincides with the beginning of the following one until the requested distance is covered. Differential movements in structures determine a different rotation of each single bar and this provides a profile of differential movements or structural failure that the user wants to monitor.

Electrolevel



The inclinometer casing tube is a special pipe provided with four guiding grooves especially designed for the inclinometer probe. It is usually installed in probing holes or pre-placed during the building phase in case of remediation works, poles, headbulks, diaphragm etc.

Inclinometer casing tube

Piezometers



Electric resistive Piezometer is a pressure transmitter which allows to detect the piezometer highness by measuring the hydrostatic pressure which is affecting the submerged sensor. Used for checking and monitoring water levels in piezometer, wells, canals, tanks, rivers, lakes etc.

Electric resistive Piezometer



The sensor is made by two parts connected to each other through a wire of variable length, according to the required depth of installation. The lower part, in which the sensor is located, is immersed into the water; the upper part contains the data acquisition board, the battery and the connector to interact with computers. It is used for checking and for monitoring water levels in piezometer, wells, canals, tanks, rivers, lakes etc.

Electric Piezometer with datalogger



Dipmeters are used to measure the level of the groundwater in open standpipe piezometer, Casagrande and wells. Gestecon produces both round centimeter and flat millimeter cables, beside the version endowed with a temperature sensor integrated in the ferrule.

Dipmeters and Thermo-Dipmeters



A radar level sensor is used for rate measurements in open canals, level measurement of rivers and canals, level measurements in wells or cistern, rate measurement of weirs etc. The Radar technique remains completely unfazed by environmental agents and this allows highly reliable values and high precision in logging water levels.

Radar level sensor



Rate measurements in open canals is widely used in the environmental and gas technical field. The Gestecon company provides thin-walled weirs made of stainless steel in different shapes according to the rate measurement required (triangular, trapezoidal, etc.)

Weir Rate Measurements

Control and Data Acquisition Unit



The single-channel Control unit is an instrument able to supply energy to the sensors and to display data that it transmits. It is generally used when you do not want or is not possible to acquire data from transducer automatically and constantly (by means of a remote data acquisition unit). A wide variety of models are available and able to read the most commercially known sensors in the trade market.

Single-channel Control Unit



The handheld unit control has been designed to take readings from the great majority of sensors commercially available. High precision, wide range of measurement field and a very attractive price make this control unit a very unique product in the trade market, able to satisfy any need in measurement field.

Universal Control Unit



The 1-2 channel datalogger by Gestecon company is powered by a lithium battery which is long lasting and internally installed. Endowed with an internal non-volatile memory so to guarantee data storage also without powering it on. It is a very unique tool for the acquisition of long term data or for data acquisition in unattended locations or place hardly reachable.

1-2 channel datalogger



The peculiarity of this instrument is detecting data coming from the sensors and to be autonomously able to transmit them to a server through a built-in GPRS modem and a data connection. The server receives data and it ensures also their electronic storing, elaboration and to make data available in a specific protected area which the user can access by entering a username and password.

Data Acquisition Unit with GPRS



Alarm management system is used in case it is necessary to report an alert signal, in that case one of the two sensors, connected to the system, changes its value overcoming the pre-set threshold. The system is able to send an SMS or to enable a relay, that can be used, for example, to turn on a stoplight system, sirens or flashing lights etc.

Alarm Management System