3Dim. Gauge

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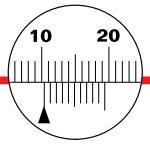
This is the universal gauge.

It measures millimetric variations in structures, whether of metal, stonework or in concrete, over time and in the 3 dimensions. The 3Dim. gauge can also be used to find out how rocks or fault lines in cliffs are changing.

Simple to use, the 3Dim. gauge is reusable. A software program supplied helps understand the resulting movement.

This 3Dim Saugnac gauge is based on the same two concepts:

- Measurements are made using three (3) 1/10th of a mm verniers
- The installation baseplates are fixed using double-sided self-adhesive tabs or by mechanical means.



The tools, measurements, expertise, and service

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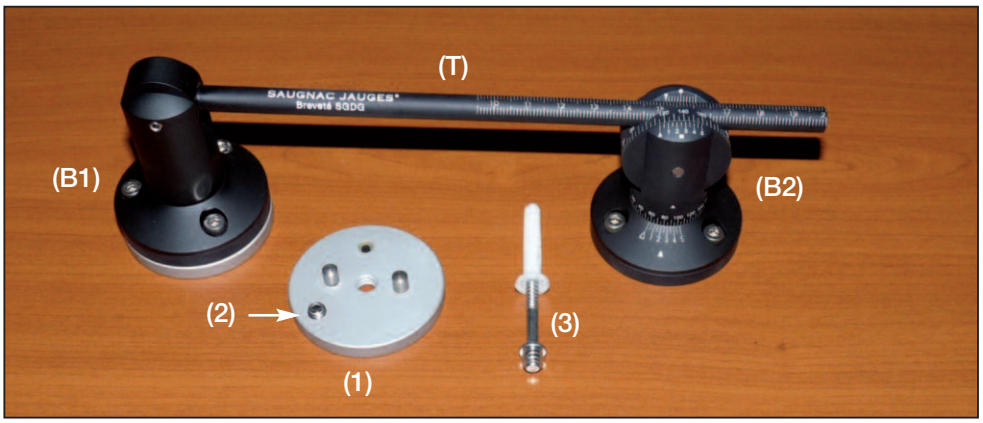
The brand for the expert

The 3Dim. gauge, the device

Description

The gauge consists of a base with a sliding rod that moves in 3 dimensions.
The gauge is in microbead blasted, anodised aluminium alloy.



Basically, the 3Dim. gauge comprises 2 posts B1 and B2, linked by a graduated rod T, fixed to B1 and sliding on B2. Post B1 is the fixed point. Post B2 is the satellite and its movement is detected by reading the 3 orthogonal 1/10th of a mm verniers.

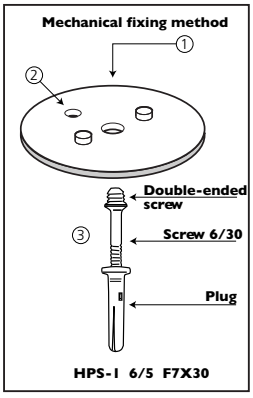
Posts B1 and B2 are centred by 2 lugs and held by magnets on the 2 standard baseplates (1). These standard baseplates are attached firmly to the structure by mechanical means using plugs and double-ended screws (3).

The baseplate is permantly fixed onto the structure with a setscrew (2).
Each post is 25 mm in diameter and 55 mm high. The diameter of the baseplate is 50 mm.
In its normal configuration the posts are 170 mm apart.
The 3Dim. gauge weighs 200 g.

The 3Dim. gauge can be left in place during the period of observation, or used as a removable measuring instrument. It is very carefully centred on the standard baseplates (1) placed in pairs on different observation sites. To make them inconspicuous these baseplates are masked by protective covers between 2 readings.

The 3Dim. gauge is an essential instrument for measuring and understanding situations and carrying out fully informed repairs on any structure that has become distorted following complex forms of stress, wether internal or external to the structure.

The reusable 3Dim. gauge is sold in a case with its accessories and one pair of baseplates. It is a basic investment. Additional baseplates are sold separately, in pairs with their protective covers and fixings.



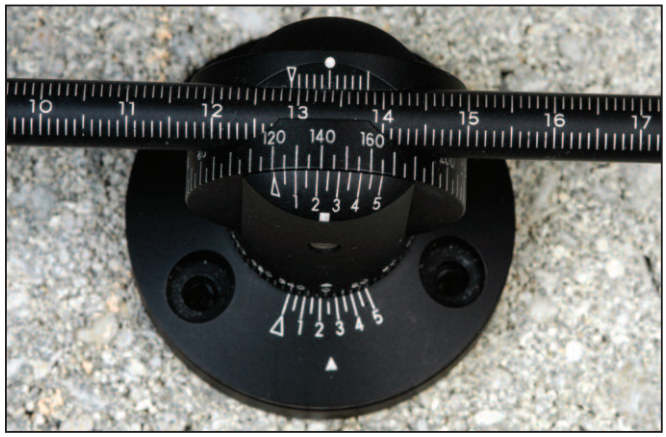
The 3Dim. gauge is supplied to you in its case with its accessories: heightening element, extension, double-ended screws, labels, Allen keys, marker etc. (Dimensions of the case: 28 X 22 X 9 cm)

Pack of a set of 2 baseplates for the 3Dim. gauge.

for measuring all types of distortion

Standard mounting

Example of installation of the 3Dim. gauge with extension. The baseplate of the post (B1) is attached onto the column by means of a wooden mount which has one concave surface.



The 3Dim. gauge is very easy to use and may be fitted to all types of surfaces:

1. Prepare 2 surfaces of 10 X 10 cm where the baseplates will be attached, either by mechanical means or using self-adhesive tabs.
2. Fix the 2 baseplates and position the posts of the gauge on them after marking the "reading terminal" with the label provided.
3. Read the 3 verniers:
4. Record the readings on the labels supplied, or in some other way.
5. As required, remove the gauge and put the protective covers over the baseplates.

For more details please see the installation instructions.

The 3Dim. gauge can be used by anyone. Using it requires no particular knowledge, except simply how to read a vernier.
See the installation instructions!

Protecting the baseplates

We do not advise leaving the 3Dim. gauge in situ throughout the period of observation.
After removing the gauge from the site, we recommend putting protective covers on the baseplates. (Fig. 1)
The baseplates are sold with plastic protective covers on which a reference
or the observation site can be noted. (Fig. 2)
In some public places, plastic covers are sometimes inadequate.
We would then advise using bolted or magnetic protective covers in aluminium. (Fig. 3)

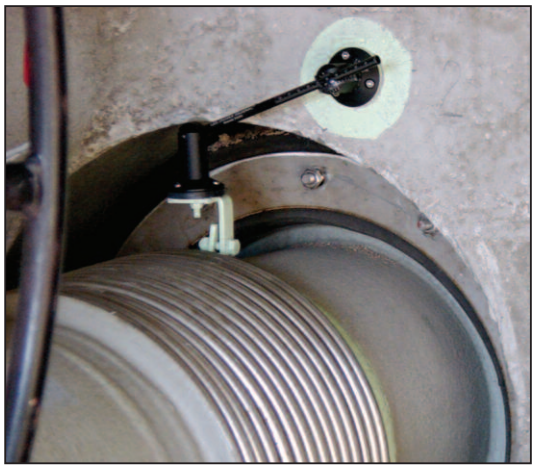
Fig. 1

Fig. 2

Fig. 3

Where the baseplates are in A4 stainless steel the covers can also be supplied in stainless steel (on request).

Examples of installation

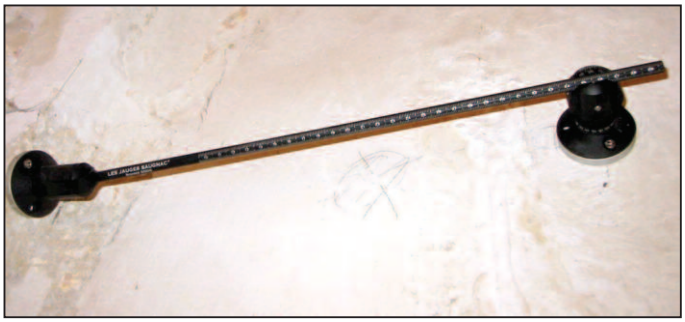


Installation and use of the 3Dim. gauge does not require a laboratory technician, since each of the 2 posts can be fixed to the structure using a double-ended screw.

The 3Dim. gauge can also be used in industry.

Example: Monitoring the evolution of the movements of a pipe passing through a structure in reinforced concrete (BP group).

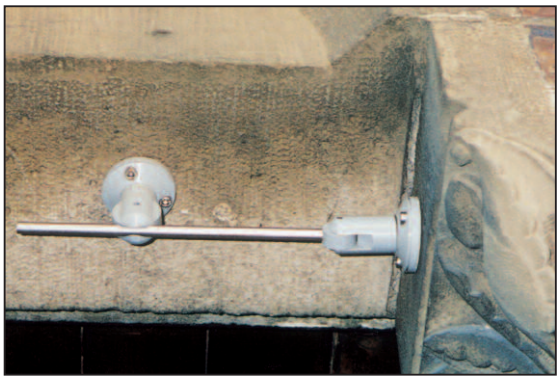
Measuring distortion at the foot of vaulting in a church.
The 3Dim. gauge is used with its extension.



Additional extensions:
We can supply additional extensions in treated aluminium, 0.50 m long, which are screwed into position between 2 graduated rods.
These extensions are not graduated.

Variations in using the 3Dim. gauge.

Use on an external angle



Use on an internal angle

Analysing the changes in cracking arising in pannelling within the framework plane.

Analysing the evolution of a compression joint