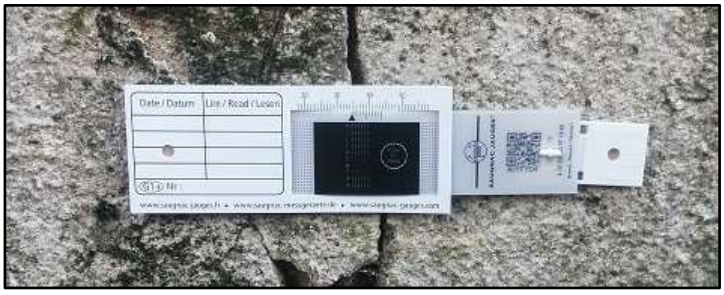
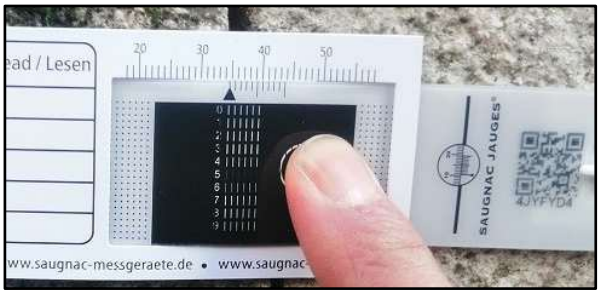
Direct-reading G1+ Gauge





The G1+ gauge is recommended for monitoring the gap between parallel-lipped cracks. It provides reliable measurements with 0.05 mm resolution.

The G1+ gauge offers the following advantages:

- **0.05 mm** measurement resolution
- Unique identification of each gauge with **QR code and identifier**
- Measurement tracking in the **Saugnac application** (more information at https://saugnac.app/help)
- **Direct reading of tenths of a millimetre**
- Maintenance-free mechanical gauge
- **Indoor or outdoor use**: resistant to weather, cold and UV rays
- Easy to fix to a smooth, clean surface **using the adhesive supplied**. Can be fixed mechanically using 4 mm drilled holes
- Flexibility for installation on substrates with uneven surfaces
- Folding bar with oblong hole to absorb parasitic movements
- Can be used to track **cracks in corners** without accessories, using the folding bar supplied
- Marking zone for readings

The G1+ gauge is designed, produced and assembled in France.

The main advantage of the G1+ gauge is its 'digital' readout of tenths of a millimetre: 10 lines of lines numbered 0 to 9 are closed off in turn to indicate the corresponding tenth of a millimetre.

This solution eliminates any reading errors caused by parallax and gives a reading accuracy of 0.05 mm (see "Reading the G1+").

Technical data

Resolution	0,05 mm
Dimensions	160 x 40 x 3 mm (in initial position)
Measuring range	Approx. 25 mm (variation possible between maximum and minimum measurement)
Weight	6,6 g
Material	PVC with UV stabiliser
Folding bar material	White homopolymer polypropylene with UV stabilisers
Coefficient of expansion	7.10^{-5} m/m/°C
Installation temperature with adhesives supplied	0°C to 35°C (-10°C acceptable*)
Operating temperature	From -40°C to 90°C

**heat the stickers on the gauge and bar for a few seconds in your hands.*

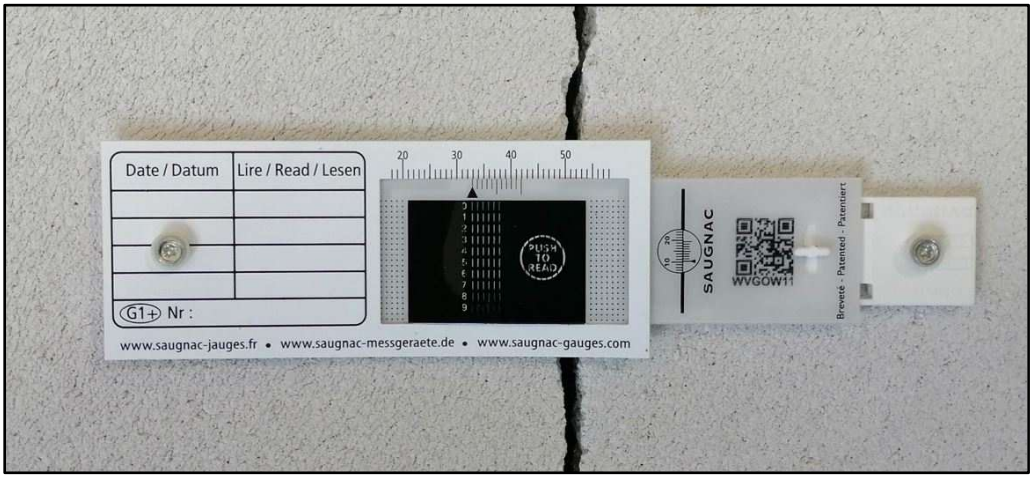
Fixing the G1+ gauge

- **By gluing**:
    - **With the adhesives supplied** on the gauge: we recommend bonding if the substrate is smooth, clean, dry and solid, and if the installation temperature is respected.
      Optimum bonding temperature is 0°C to +35°C. Bonding possible down to -10°C
      Stickers remain effective from -40°C to +80°C.
    - **With epoxy adhesive:** if the surface is not completely flat and has irregularities, we recommend reinforcing the bond with two-component adhesive.
- **With mechanical fixing**: for any difficult surface that crumbles, is dusty, damp or has asperities, or in cases where the installation temperature cannot be respected, mechanical fixing should be preferred.

  G1+ gauges are supplied with 2 Ø 4 mm holes. These holes facilitate mechanical fixing by means of impact anchors. The 4 mm diameter makes it very easy to drill the hole on any surface.

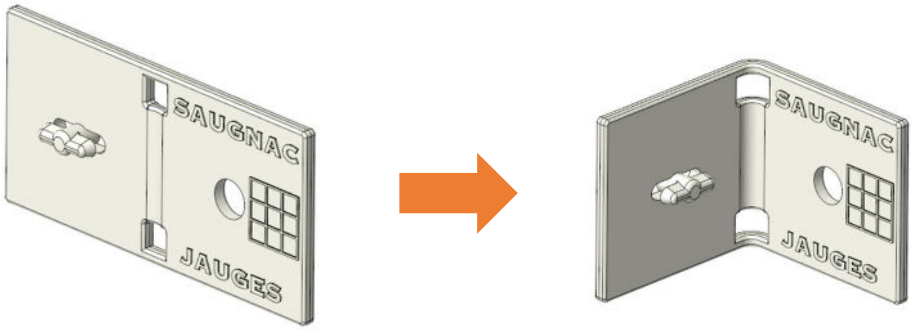
A: Impact anchors
B: Hole ø4 in the strip
C: Hole ø4 in bracket

Result of installation with mechanical fixing::

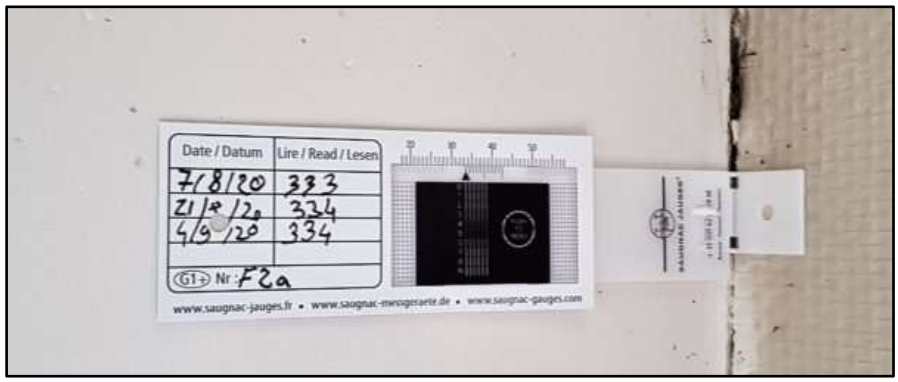


Corner mounting

Gauges in the G1+ family are supplied with a **folding bar** for angled mounting. The part has a thin section to guide and facilitate bending:

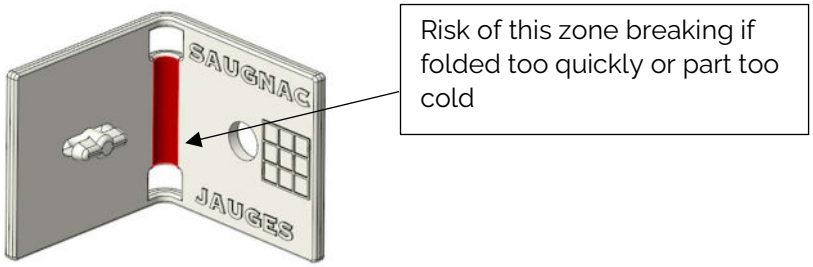


Example of corner fixing :



To avoid any risk of breakage when folding:

1. The temperature of the material to be bent should be at least 10°C. If the temperature is lower, we recommend warming the clip in your hand before bending.
2. Bending must be continuous (avoid jerking) and relatively slow (about 3s).



UV Resistance

Based on accelerated ageing tests, UV resistance is greater than 1200 Kilo-Langley, which corresponds to around 7 to 10 years' exposure in Europe.

Cold Resistance

The choice of materials (PVC Choc and Polypropylene) and the marking process ensure that the gauge can be used from -40°C to +80°C without any deterioration in measurement reliability.

Impact of expansion

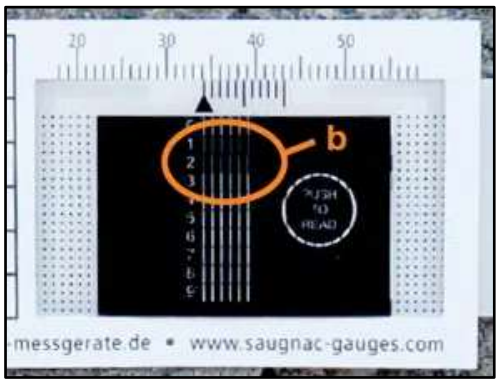
The coefficient of linear expansion of materials is 7.10-5 m/m/°C. So a variation of 1°C will have an impact of around 0.009 mm on the measurement.

In the event of significant temperature variations, we recommend using our application for monitoring measurements, available at https://saugnac.app, or our Excel monitoring file, available on our website: www.saugnac-gauges.com/product/g1plus-gauge/#fichier .

Both the application and the file can be used to correct the reading according to the expansion of the gauge.

Reading the G1+ gauge

Examples of gauge readings to 1/20th of a mm (0.05 mm)



The mark ▲ on the vernier is located between 34 and 35

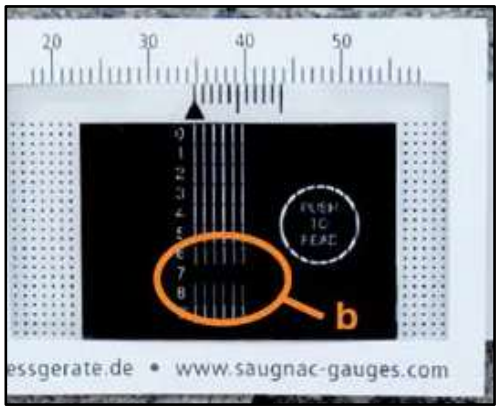
a) Reading the mm

The number of mm corresponds to the graduation to the left of the ▲ mark on the vernier: **34 in the example shown**

b) Reading the decimal

Identify the obstructed row(s). In this example, rows 1 and 2 are obstructed, meaning that the mark ▲ on the vernier is mid-way between the first and second tenth..

The reading is thus neither 34.10 mm, nor 34.20 mm but 34.15 mm



The mark ▲ on the vernier is located between 34 and 35

a) Reading the mm

The number of mm corresponds to the graduation to the left of the ▲ mark on the vernier: **34 in the example shown**

b) Reading the decimal

Identify the obstructed row(s) (black rows).

In this example, only row 7 is black, meaning that the mark on the vernier is positioned exactly on the seventh tenth.

The reading is thus 34.70 mm

The difference between the 2 readings shows that the crack has grown by 0.55 mm.

If necessary, the vernier scale on the top of the pull rod can be used to confirm these results (refer to the G1 gauge product sheet for the vernier scale reading).

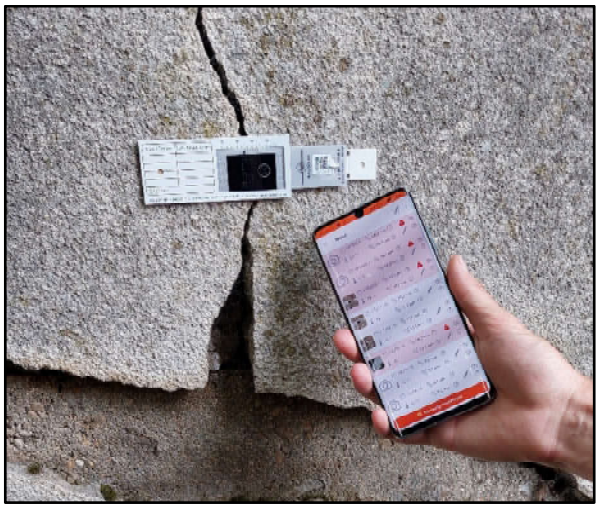
Protecting the G1+ gauge

The gauge can be protected to prevent damage in public places (tearing off, tags). The protection is made of PMMA and is fitted using the dowels supplied.

Monitoring measurements with the Saugnac application

The Saugnac web application, which is completely free with no restrictions, is available on PC or smartphone from https://saugnac.app/. It allows you to :

- identify each gauge and its measurements with a **unique QR code**
- save measurements in your space
- retrieve **temperature** and **humidity** levels using geolocation
- calculate **measurements with expansion** as a function of temperature
- **work with several people** on the same gauge
- manage **alert thresholds**
- classify gauges by location and locate them on a map
- download **data in Excel format**
- automatically display graphs
- **share data** with others without an account
- access the application from your **PC** or **smartphone**
- add measurements without a connection in offline mode



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