







**The DELTA L is ideal for precise manual monitoring of cracks along all measurement axes — opening, shear displacement and offset, as well as angle measurement.**

It is capable of measuring crack evolution with accuracy up to 0.01 mm.

Compact, robust and affordable, it is easy to use and accessible to everyone.



**Compact & Resistant**



**Precise**  
1/100 mm



**Plug & Play**  
Easy to use and install



**Digital**  
Digital reading for  
greater accuracy



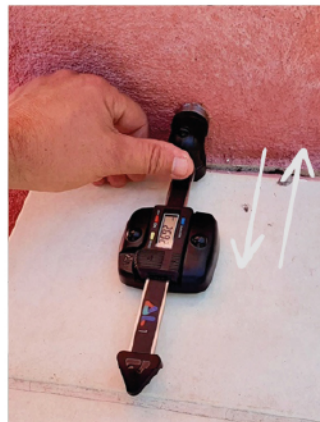
**4 measurement types**  
Opening, shear,  
offset and angle



**Opening**



**Shear displacement**



**Angle measurement**



**Offset**

## Features

<b>Battery</b> LR44 button cell- 1,5 V	<b>Weight</b> 0,85kg	<b>Dimensions</b> 22 x 4,5 x 7 cm
<b>Accuracy</b> 0.01 mm	<b>Electronics</b> - digital readout	<b>Maximum range</b> 14 cm
<b>Installation modes</b> adhesive, drive-in anchor	<b>4 measurement types</b>	<b>Fixing</b> suitable for all material types

*\*Depending on usage*

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# 01 Packing list

## EXPERT PACK

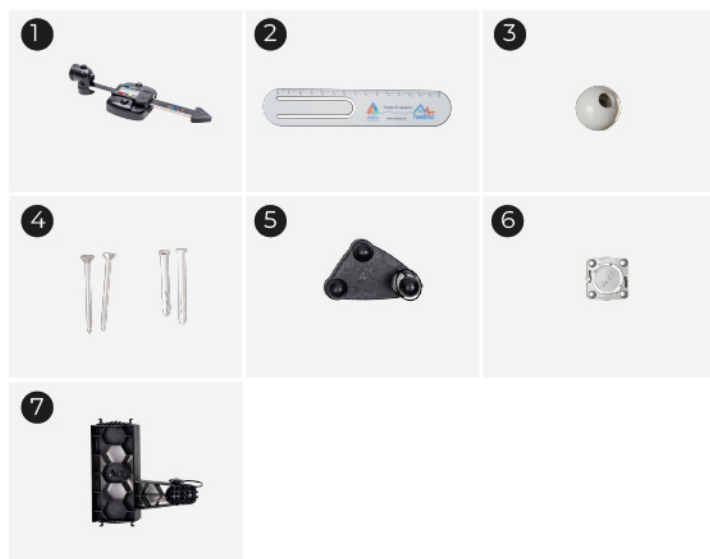


## ESSENTIAL PACK



## EXPERT PACK

Opening / closing, angle, shear displacement and offset



- 1 DELTA L1 electronic measuring gauge
- 2 FEELBAT graduated ruler
- 3 10 JC1 polycarbonate gauges
- 4 25 drive-in anchors
- 5 DELTA L0 block
- 6 3 JC2 gauges
- 7 DELTA L2 measuring tool

## ESSENTIAL PACK

Opening / closing and angle



- 1 DELTA L1 electronic measuring gauge
- 2 FEELBAT graduated ruler
- 3 10 JC1 polycarbonate gauges
- 4 10 drive-in anchors
- 5 DELTA L0 block



## 02 Recommendations



**This installation guide is also available as a video**

Watch the DELTA L installation video – Opening

DELTA L Essential pack

Watch the DELTA L installation video – Angle

DELTA L Essential pack

Watch the DELTA L installation – Shear displacement

DELTA L Expert pack

Watch the DELTA L installation video – Offset

DELTA L Expert pack

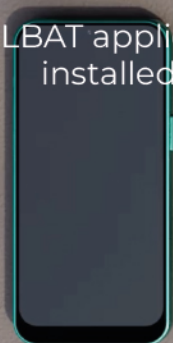
### Mounting advice

- Hand air blower to remove dust after drilling
- PH1 Phillips screwdriver
- Drill with a Ø5 mm bit suitable for the material
- Hammer
- Template

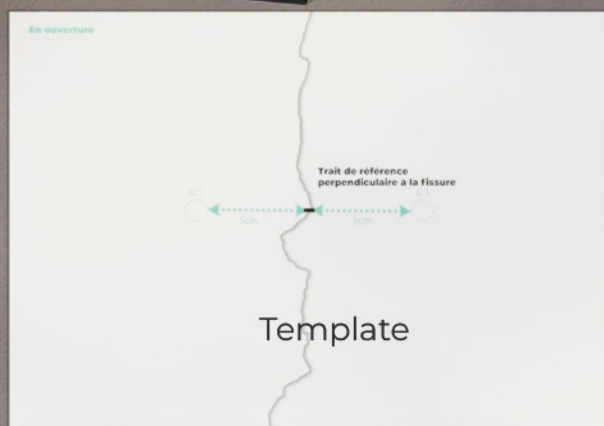


Mason's pencil

FEELBAT application installed



PH1 Phillips screwdriver



## 03 Templates to download

**To help you, you can download printable templates!**



[Or click here to download the templates](#)

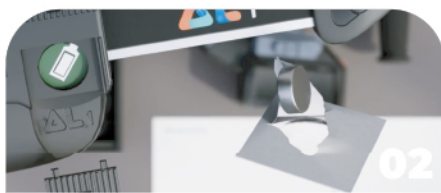


## 04 Powering on the DELTA L sensor



### Remove the battery cover.

Each pack includes a new battery to ensure reliable operation from first use.

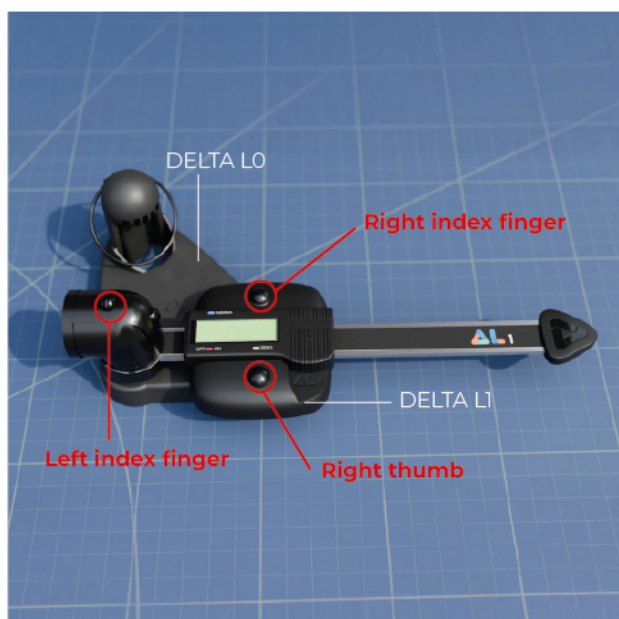


Remove the battery from its packaging.



**Insert the battery into the dedicated compartment, then replace the cover.**

## 04 Calibration

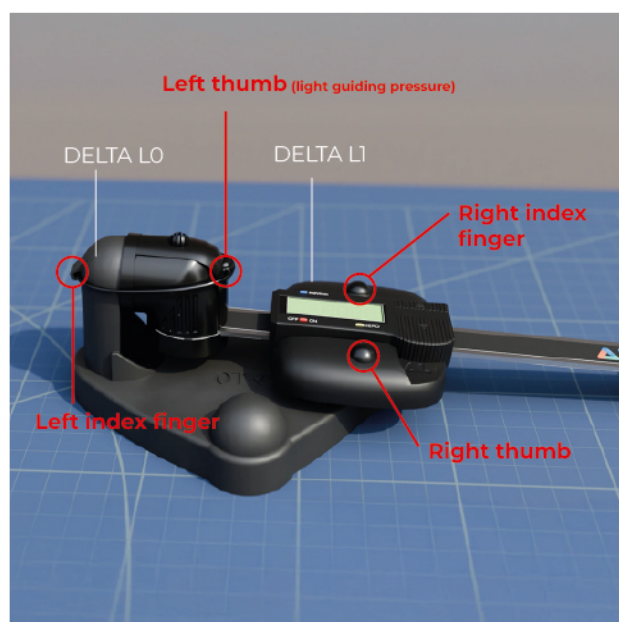


### ⚙️ CALIBRATION TYPE 1 — Opening / Closing

1. Place the DELTA L0 reference block on a flat, stable surface, then power on the DELTA L1.
2. Position the DELTA L1 on the DELTA L0, aligning the stainless-steel rings with the domes.
3. Hold the tool with your thumb and index finger on the smooth balls, and your left index finger on the grooved ball.
4. Perform a slight pivoting movement, then press the yellow "ZERO" button to calibrate.

✓ Your DELTA L1 is calibrated and ready for measurements with JCI gauges.

⚠️ Minor variations ( $\pm 0.01$  mm) are normal; they correspond to the thickness of a human hair divided by ten.



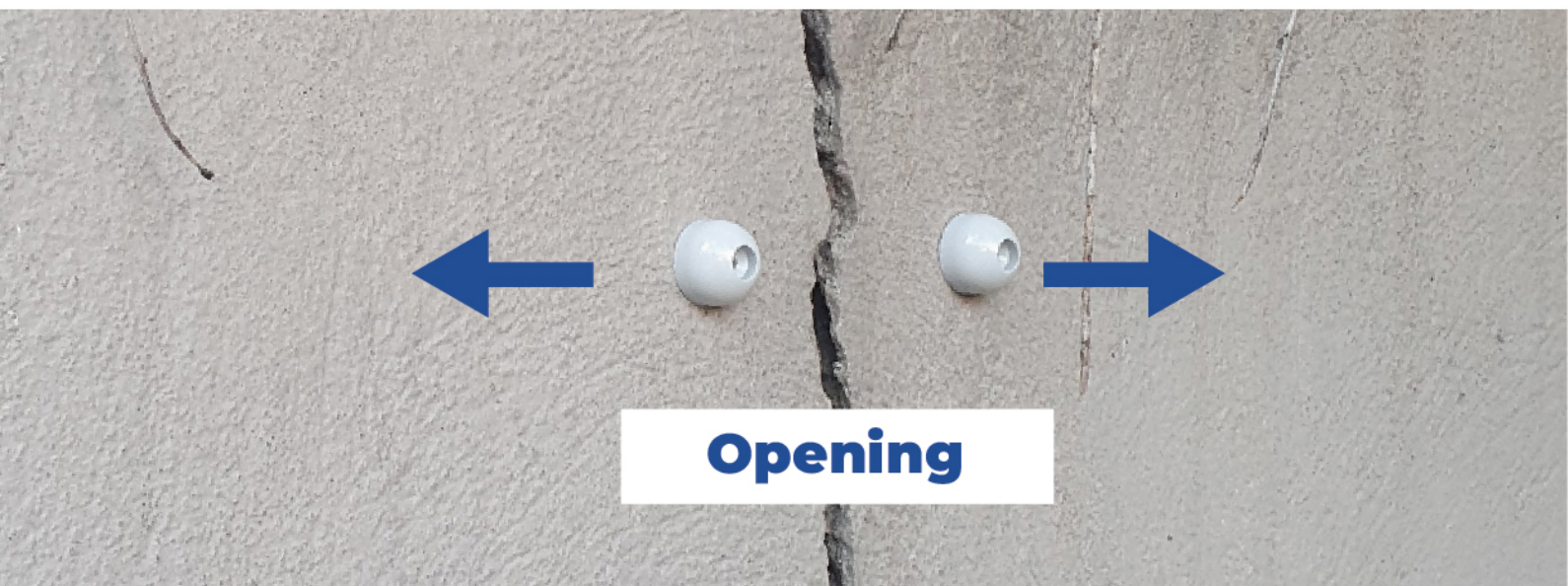
### ⚙️ CALIBRATION TYPE 2 — Shear displacement, offset and angle

1. Place the DELTA L0 reference block on a flat, stable surface, then power on the DELTA L1.
2. Position the end of the DELTA L1 vertically on the dome to place the elastic band in its groove without pulling upward.
3. Gently tilt the tool to position the elastic band on either side of the head.
4. Align the lower stainless-steel ring with the second dome of the DELTA L0.
5. Hold the tool with your thumb and index finger on the smooth balls, then perform a slight pivoting movement to position it correctly.
6. While maintaining light pressure, press the yellow "ZERO" button with your left index finger to calibrate.

✓ Your DELTA L1 is calibrated and ready for shear displacement, offset and angle measurements.

⚠️ Minor variations ( $\pm 0.02$  mm) are normal; they correspond to the thickness of a human hair divided by five.

## 05 Opening installation



### Rigid fixing: drive-in anchors

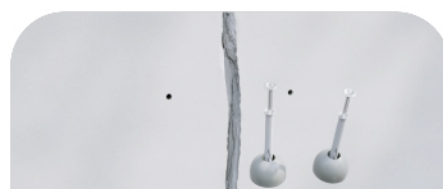


To begin, **mark your reference points using the template, 5 cm on each side of the crack.**

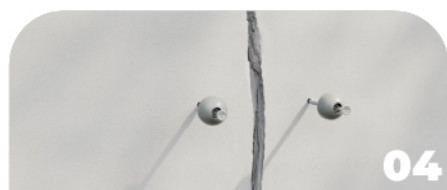


Using a drill with a Ø10 mm bit suitable for the material, **drill at the marked points** (≈ 6 cm drilling depth).

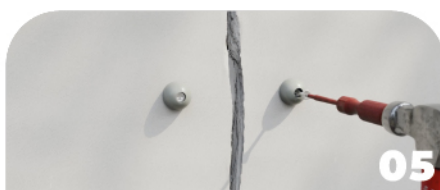
⚠ Remember to remove dust using a hand air blower.



**Insert the anchor + screw assembly (4) into the JC1 gauges (3).**



Place the assembly into the pre-drilled holes.



Then, using a PH1 Phillips screwdriver and a hammer, **drive the screws in firmly.**



You can then **take your measurements and record them directly** in the FEELBAT application.

JC1 gauges can also be fixed using a two-component adhesive (not included in the pack).  
**Important: remember to clean the area with an isopropyl alcohol wipe before bonding.**



## 05 JC1 gauge measurement in opening



Before each measurement, calibrate the DELTA L1 according to the Type 1 calibration procedure.



Turn on the DELTA L1 (7) and place the stainless-steel ring recesses under the JC1 gauges (3).



Place the thumb and index finger of your right hand on the two smooth balls located around the digital display, and the index finger of the other hand on the opposite side.



Initiate a slight forward and backward pivoting movement while in contact with the JC1 gauges (3) to correctly position the tool against the metal rings.

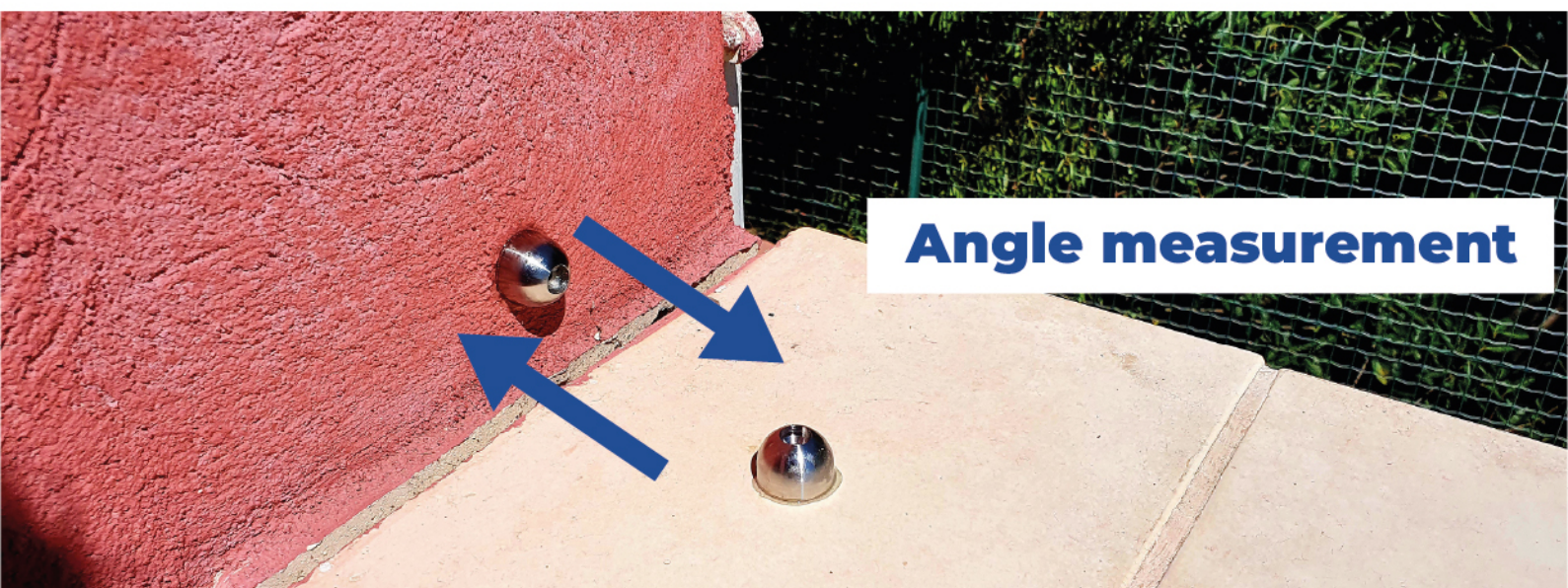


Stabilize the pressure on the tool and **read the displayed value.**



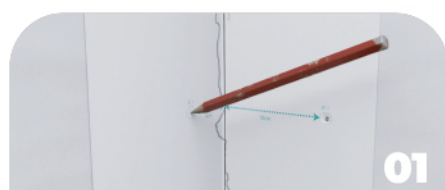
If this is your first measurement, it will serve as a reference value. Subsequent measurements will indicate the variation — the “delta” — corresponding to the evolution and displacement of the crack. You can also record the outdoor temperature.

## 06 Angle installation



### Angle measurement

#### Rigid fixing: drive-in anchors

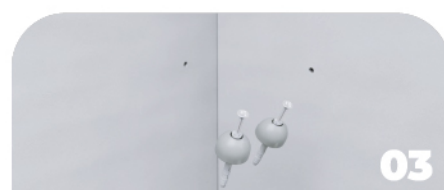


To begin, **mark your reference points using the template, 10 cm and 4 cm from the crack.**

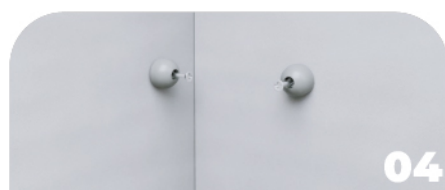


Using a drill with a  $\varnothing 10$  mm bit suitable for the material, **drill at the marked points** ( $\approx 6$  cm drilling depth).

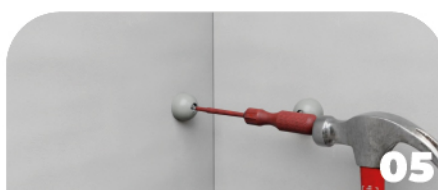
⚠ Remember to thoroughly remove dust using a hand air blower.



**Insert the anchor + screw assembly (4) into the JCI gauges (3).**



Place the assembly into the pre-drilled holes.



Then, using a PH1 Phillips screwdriver and a hammer, drive the screws in **until they reach the bottom of the dome.**



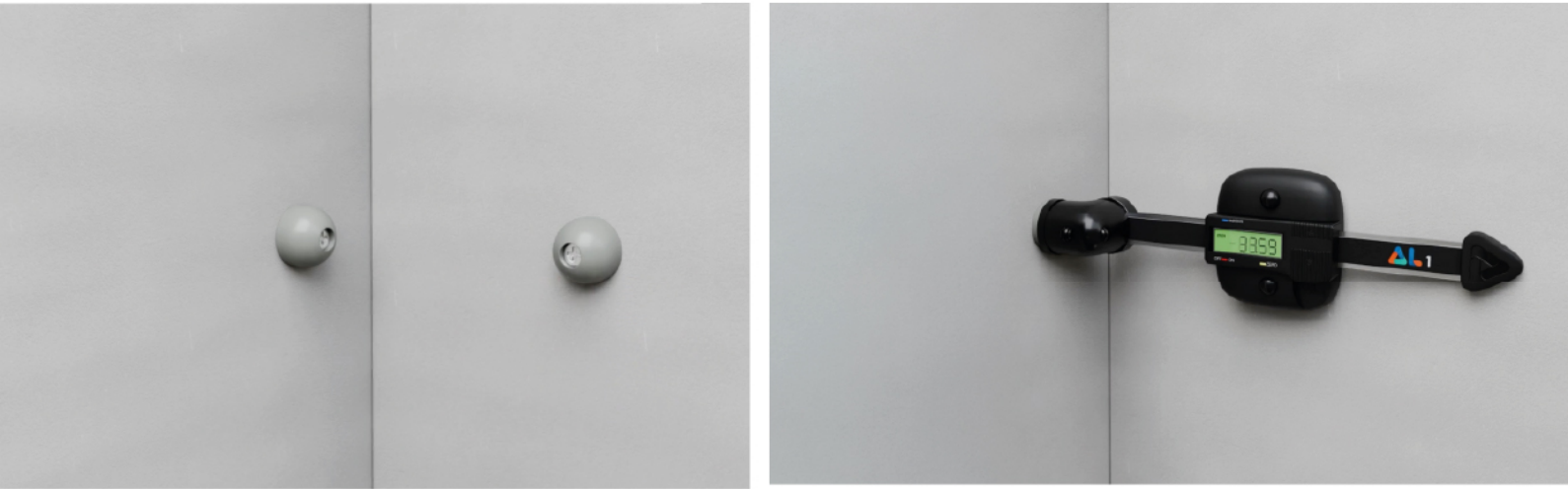
You can then **take your measurements and record them** directly in the FEELBAT application.

JCI gauges can also be fixed using a two-component adhesive (not included in the pack).

**Important: remember to clean the area with an isopropyl alcohol wipe before bonding.**



## 06 JCI gauge measurement in angle



Before each measurement, calibrate the DELTA L1 according to the Type 1 calibration procedure.



Turn on the DELTA L1 (1) and place the stainless-steel ring recesses under the JCI gauges (3), one positioned under the DELTA L1, the other on the vertical ring at the end of the tool.



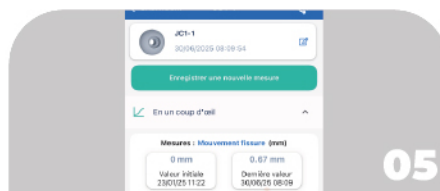
Place the thumb and index finger of your right hand on the two smooth balls located around the digital display, and the index finger of the other hand on the opposite side.



Initiate a slight forward and backward pivoting movement while maintaining contact with the JCI gauges (3) to correctly position the tool against the metal rings.

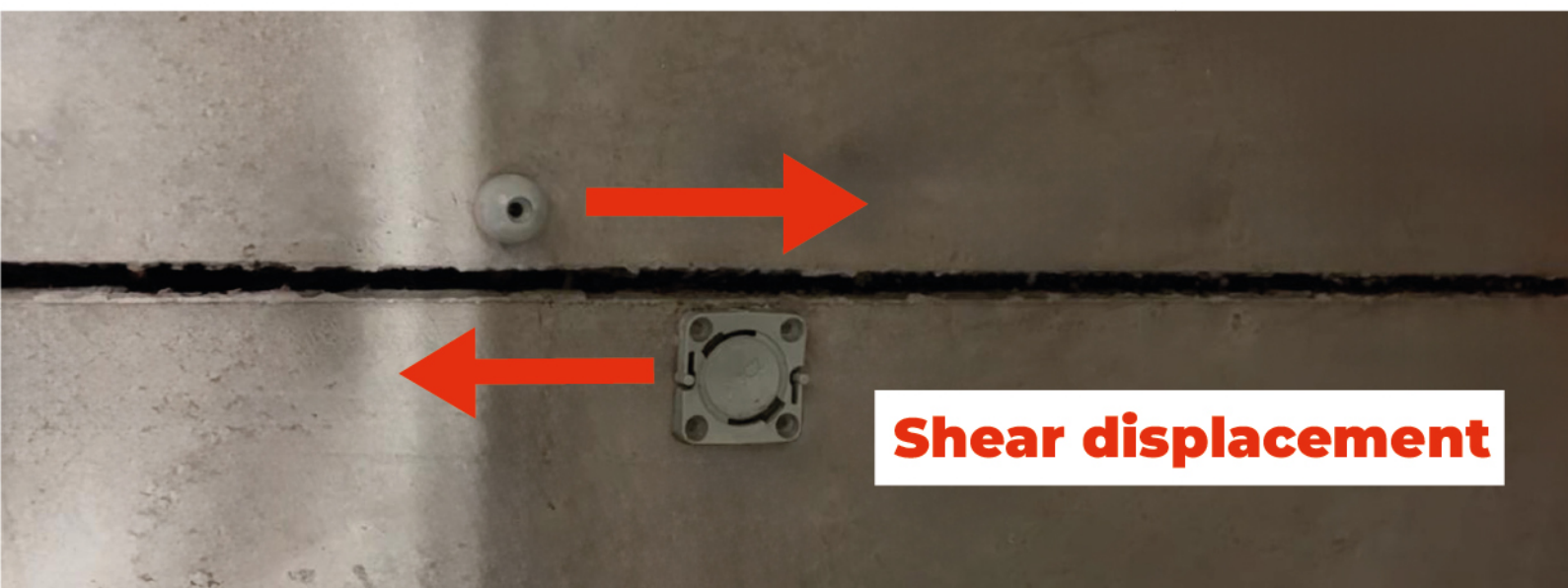


Stabilize the pressure on the tool and read the displayed value.



If this is your first measurement, it will serve as a reference value. Subsequent measurements will indicate the variation — the “delta” — corresponding to the evolution and displacement of the crack. You can also record the outdoor temperature.

## 07 Shear installation



### Rigid fixing: hammer-in anchor



To begin, **mark your reference points using the template, positioned 10 cm and 4 cm from the crack.**

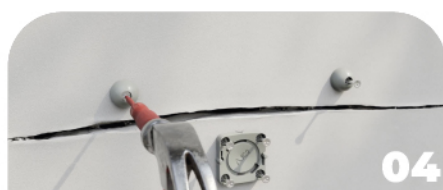


Using a drill with a bit suitable for the material ( $\varnothing$  10 mm), **drill at the marked points** to a depth of approximately 6 cm.

⚠ Remember to remove dust using a hand blower.



**Insert the anchor + screw assemblies (4) inside the JC1 gauges (3) as well as the anchor + screw assemblies (4) inside the JC2 gauges (6).**



Place the assemblies into the pre-drilled holes. Then, using a PH1 Phillips screwdriver and a hammer, **drive the screws fully into place.**



You can then **take your measurements and record them** directly in the FEELBAT application.

It is possible to fix the JC1 gauges using a two-component adhesive, not included in the pack.

**Warning: remember to clean the area with an isopropyl alcohol wipe beforehand.**



## 07 JC1 / JC2 Gauge Reading – Shear



Before each measurement, calibrate the DELTA L1 according to Calibration Type 2.



Switch on the DELTA L1 (1).



Place the DELTA L2 (7) on the JC2 gauge (6) and rotate it clockwise until a click is heard. Make sure to hold the DELTA L2 as close as possible to the wall to avoid any deformation or damage to the part.



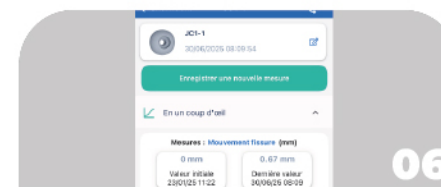
Place the elastic band into the recess of the ribbed ball, then gently tilt the head so that the stainless steel ring ("inox ring") comes into contact with the JC1



Place the base of the DELTA L1 (1) on the JC1 gauge (3), then hold the two smooth balls around the digital display without touching the sensor tip held by the elastic band.



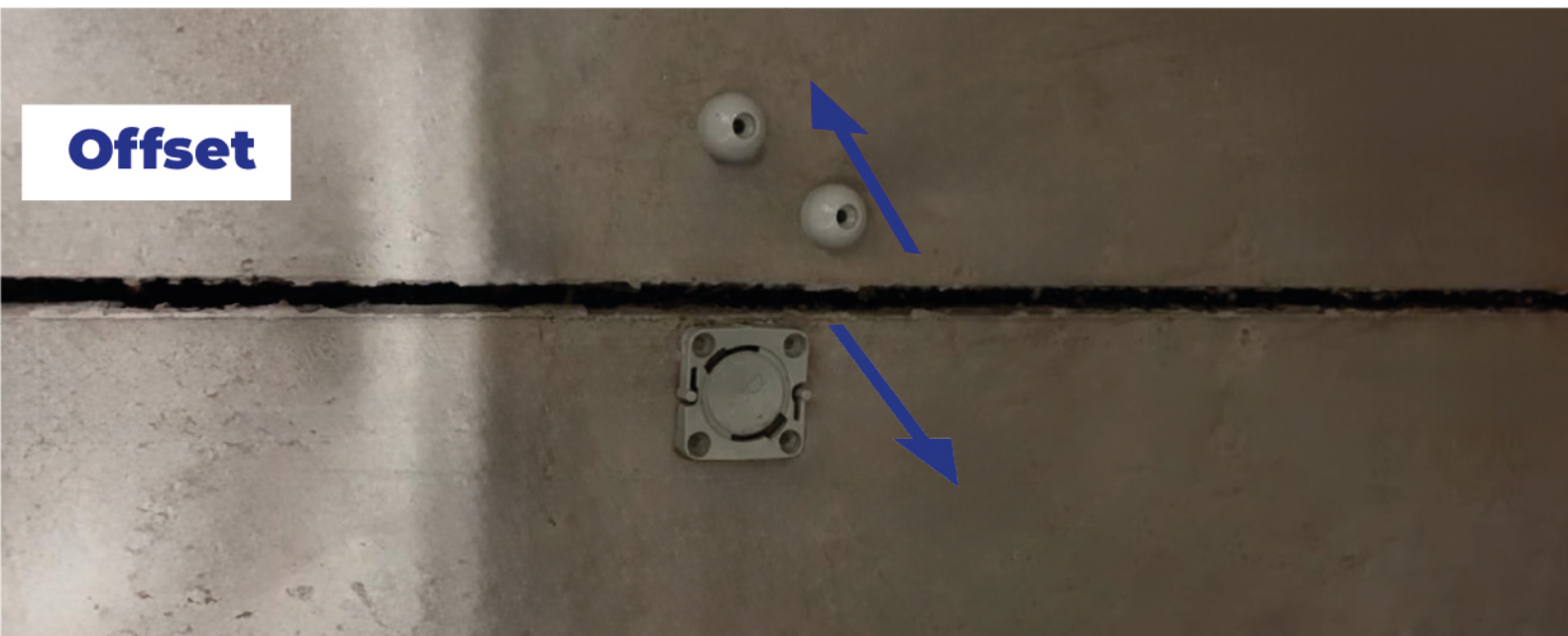
Gently pivot the tool to correctly position it on the stainless steel rings then stabilize it and read the displayed value.



If this is your first measurement, it will serve as a reference value. Subsequent measurements will indicate the variation — the "delta" — corresponding to the evolution and displacement of the crack. You can also record the outdoor temperature.

## 08 Offset Installation

### Offset



### Rigid fixing: hammer-in anchor



To begin, **mark your reference points using the template, 10 cm and 4 cm from the crack.**



Using a drill with a bit suitable for 10 mm material, **drill the reference points (6 cm depth).**

⚠ Make sure to remove dust using a blow-out bulb.



**Position the anchor + screw assembly (4) inside the JC1 (3) then insert the anchors + screws (4) inside the JC2 (6).**



Place the assembly into the pre-drilled holes. Then, using a PH1 Phillips screwdriver and a hammer, properly **drive the screws by tapping them in.**



You can then **take your measurements and record them** directly in the FEELBAT application.

It is possible to fix the JC1 using a two-component adhesive (not included in the pack).

**Warning: remember to clean the area with an isopropyl alcohol wipe.**



## 08 Gauge reading JC1 / JC2 – Offset



Before each measurement, calibrate the DELTA L1 according to the Type 2 calibration procedure.



Turn on the DELTA L1 tool. (1).



Place the DELTA L2 (7) on the JC2 gauge (6) turning it clockwise until you hear a click.

Make sure to hold the DELTA L2 as close to the wall as possible to avoid any deformation or damage to the part.



Place the stainless steel ring housings on the JC1 gauge (3), then align the DELTA L2 dome (7) under the DELTA L1 tool (1).

NB : The central body of the DELTA L2 must rest freely without being touched. Apply slight pressure only on the tool head.

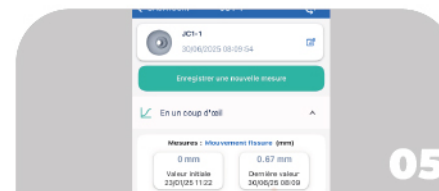


Place the thumb and index finger of the right hand on the two smooth balls positioned around the digital display, and the index finger of the other hand on the knurled ball parallel to the wall.



Initiate a slight forward and backward pivoting movement in contact with JC1 (3) to correctly position the tool against the metal rings.

Stabilize your pressure on the tool and read the displayed value.



If this is your first measurement, it will be used as a reference value. Subsequent measurements will indicate the variation - the "delta" - corresponding to the evolution and displacement of the crack. The external temperature can also be recorded.

## 09 Download the application

To connect your sensor, install the FEELBAT mobile application:



**Download the FEELBAT application** from your smartphone's app store.



**Accept all access requests** to fully use the application.



**Sign up**, then a confirmation email will be sent to you.

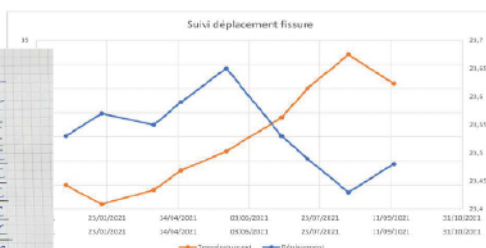
If you encounter any issues, please contact us at: (may appear in your spam folder)  
**SAV@feelbat.fr**





## 09 Measurement / Monitoring of displacements

Date	Déplacement	T°
25/01/21	23,53	5°C
19/02/21	23,57	1°C
28/03/21	23,55	4°C
16/04/21	23,53	8°C
18/05/21	23,65	12°C
26/06/21	23,55	13°C
14/07/21	23,49	25°C
12/08/21	23,45	32°C
13/09/21	23,48	26°C



### First basic method

Record the values on a blank sheet of paper starting with the first measurement, which will serve as a reference.

Then subtract the subsequent values recorded over the weeks or months to obtain the variation in opening or closing, and thus analyze the "delta" displacement of the crack.

You can use an Excel spreadsheet to plot a trend curve and get a clearer overview of the evolution of your crack.

### Second assisted and digital method

Feelbat offers a mobile application that allows you to monitor the movements of your cracks in a simple and fast way.

1. Download the application from the iOS or Android store
2. Open the application, click on the "create a project" tab, and add the gauges to your project
3. Take a photo of your sensor once installed
4. Repeat the operation for each installed sensor
5. Go to the "plans" tab and add a plan or a photo of the area to position your gauges

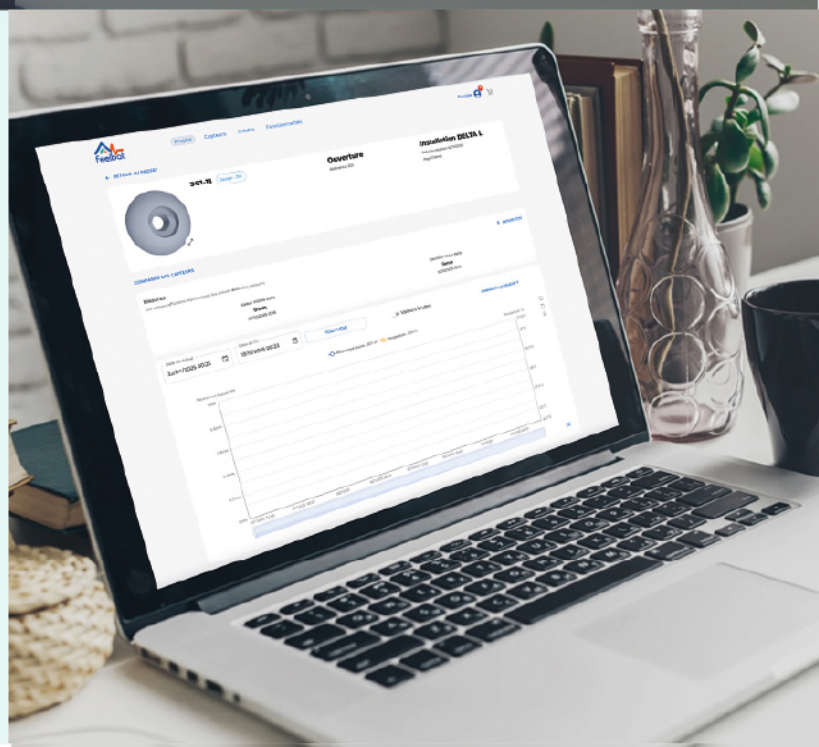
From now on, you can monitor your cracks over time; the data is securely stored in our cloud.

## To go further!

All the features available on the application are also accessible via the web, making it easier to analyze and compare graphs.

- ✓ SIMPLIFIED PROJECT MANAGEMENT
- ✓ ZONE VISUALIZATION
- ✓ CURVE ANALYSIS
- ✓ PDF REPORT GENERATION

Access the Web application



## 10 Useful Information

### **FEELBAT products are covered by the legal warranty of conformity.**

This warranty covers defects of conformity with respect to the sales contract that appear within two years following delivery of the product.

They are also covered by the warranty against hidden defects, which applies to defects not apparent at the time of sale and which render the product unfit for use or significantly reduce its use.

**As such, the warranty does NOT apply in the following cases:**



The sensor has fallen



The housing is damaged  
(impacts, cracks, marks)



The sensor is used for  
non-compliant purposes



The sensor has been  
immersed in water



The sensor is stored or used  
outside the temperature  
range (-25 °C to +70 °C)



The fixings restrict the  
linear operation of the  
sensor



The sensor is used beyond  
its measurement range



The sensor was purchased  
more than 2 years ago



### **Have a question?**

Visit our FAQ: it gathers answers to the most frequently asked questions and guides you step by step in using our solutions.

[Access the FAQ](#)





# If you have a crack You **FEELBAT**

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