
3-D JOINTMETER

Model VINCHON

APPLICATIONS

The VINCHON jointmeter (also crackmeter or fissurometer) is a mechanical instrument used to measure the relative displacement of two adjacent surfaces in three orthogonal directions.

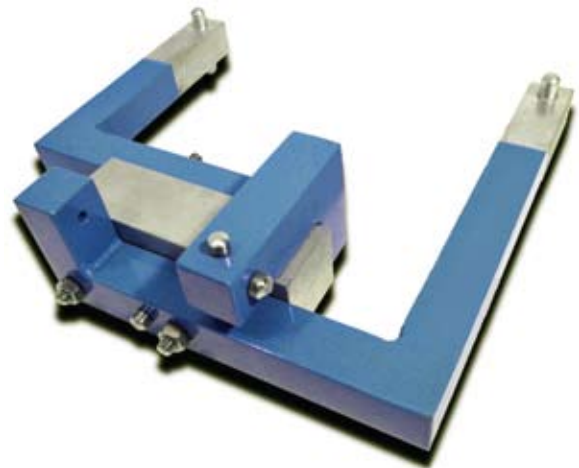
The two-part jointmeter is used to monitor:

- Surface movements at construction joints in concrete
- Widening of surface cracks in concrete, masonry or other structures
- Displacement of rock blocks in three dimensions

DESCRIPTION

The VINCHON three-dimensional jointmeter consists of two mating elbow-shaped brackets. Each bracket is fitted with three spherically-tipped precision reference studs mounted in three orthogonal planes.

Measurements are taken between opposing studs on each bracket using a caliper. Relative displacement between the studs is determined by comparing changes in displacement over time.



FEATURES

- Robust three-dimensional jointmeter
- Caliper provides direct readings
- Easy installation and monitoring
- Used on all types of surfaces
- Recoverable and reusable

READINGS AND INTERPRETATION

Displacement readings are carried out with either a vernier or digital caliper. Once the instrument is in place, the initial reading is taken by successively measuring the X, Y and Z distances between each pair of studs. More highly accurate results are obtained by taking the average of two or three consecutive readings.

To take a reading, the caliper jaws are positioned perpendicular to the axis containing a pair of studs and then closed until contact with the apex of the pair of reference studs is made. The vernier is rotated 90° from the initial position and another reading is taken. The procedure is repeated until the difference between two consecutive readings is within the instrument accuracy.

Subsequent XYZ measurements carried out under the same conditions provide displacement of the measurement points relative to their initial position.

ORDERING INFORMATION

Please specify:

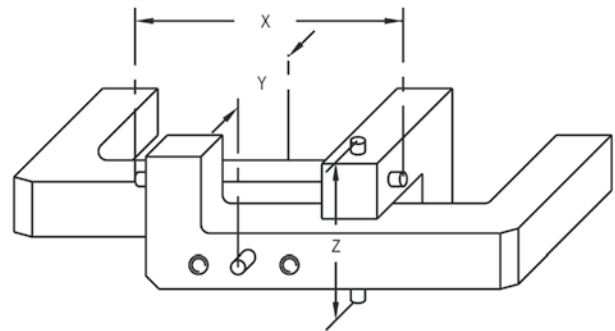
- Type of caliper

SPECIFICATIONS

Accuracy (overall)	
With digital caliper	±0.02 mm
With vernier caliper	±0.04 mm
Maximum relative displacement	
X axis (convergence/divergence)	50 mm / 40 mm
Y axis (convergence/divergence)	30 mm / ∞
Z axis (convergence/divergence)	10 mm / ∞
Initial readings (nominal)	
X axis	100 mm
Y axis	82 mm
Z axis	65 mm

DIMENSIONS

Width	210 mm
Length	180 mm
Depth	60 mm
Weight	2.9 kg



Jointmeter measuring axes