LAS 2 – the fast responding hydrostatic measuring tool

Vessel 1 Membrane Unit

Vessel 2

Measuring Principle

The LAS – Meter (Large Area Settlement) uses the pressure difference between two liquid columns. In the middle of the tubes a diaphragm is inserted which deforms according to the equalisation of the liquid. As a result of pressure differences between the liquid columns, the diaphragm is deflected. The movement of this diaphragm is transformed to an electrical signal, which is a measure of the level difference between the "chambers" at the end of the tube.

Specifications of the Membrane Unit:

- Time constant < 0.2 sec
- Long term accuracy < 0.18 mm
- Range = +/- 100 mm
- Programmable range turn down = 1:100
- Output signal = 4 20 mA (Standard)
- Digital output available
- Resolution = 1 MicroAmpere
- · Manual zero and span control feature

Applications:

- · Load effects on bridges
- Deformation of constructions
- Monitoring when tunneling
- Landslides
- Consolidation of soils
- Waste disposal monitoring

Cdi Meier + Dartner

