

GLÖTZL Baumeßtechnik

PLUMB WIRE MEASUR. SYSTEMS

Type: GA . . .
Art. No.: 82.01/05

Measuring principle

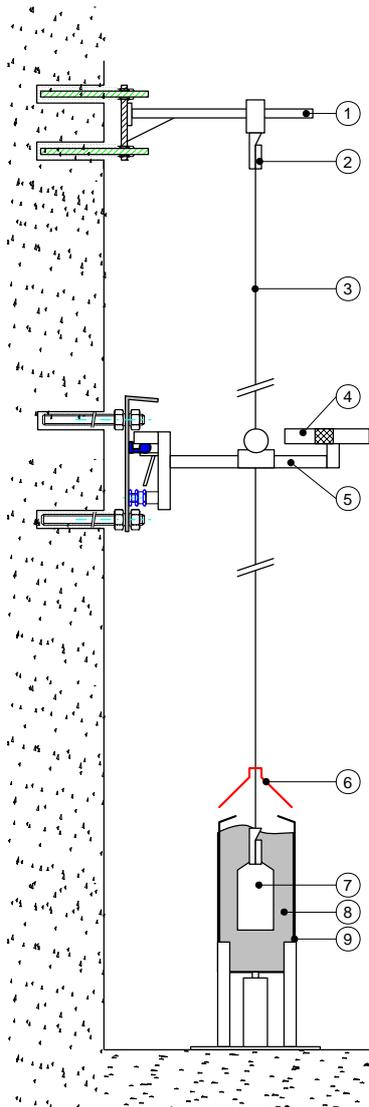
Pendulum plumb type GAGL

- Fixed point of plumb wire: at the top
- Strain of plumb wire by traction to bottom

Floating plumb type GARS

- Fixed point of plumb wire: at the bottom
- Strain of plumb wire by traction to top

In both cases, the plumb wire is aligning along the gravity effective at the measuring location, namely independently from environmental influences (temperature-, humidity-, barometric pressure changes a.s.o.).



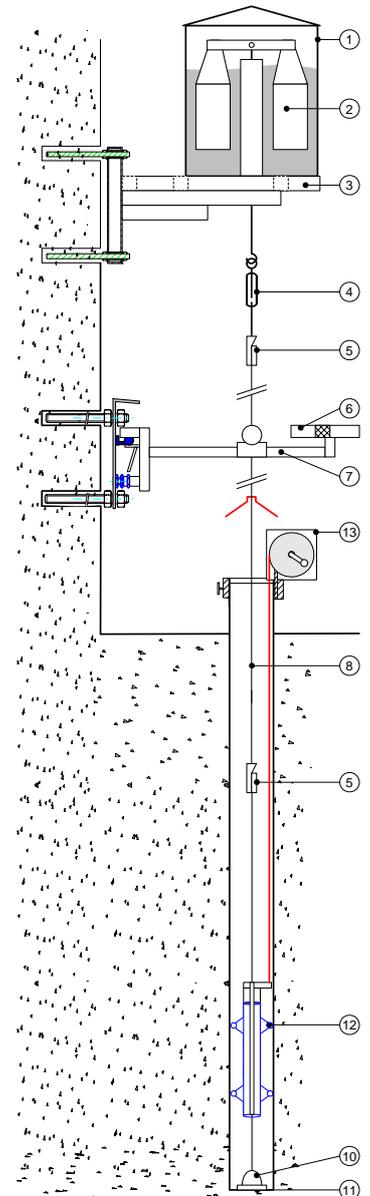
Scheme of a weight plumb device

- 1 Anchoring console
- 2 Plumb wire clamp
- 3 Plumb wire
- 4 Plumb wire meas. device el./opt.
- 5 Console for pl. wire meas. system
- 6 Drop screen
- 7 Weight
- 8 Dampening fluid
- 9 Dampening vessel

For barrages, it is generally the objective to unite the pendulum plumb measurements with the geodetic measurements. For this purpose, the horizontal displacement of the wall top is recorded with a weight plumb, whereby the elongation of the measuring line is done with a floating plumb for getting an undisplaceable reference point in the underground. Floating plumb-plumb wires are anchored in the stable underground in stainless steel pipings, the most appropriate exchangeable ones. The spatial bending line of piping in the underground can be recorded for an installed plumb wire by means of a plumb wire deviation probe with the existing optical or electrical plumb wire measuring instruments. Plumb devices are operating with a high accuracy because its mechanism are nearly not subject to friction- and temperature influences. Inclination movements of a construction can be recorded without any problems by measurement of the horizontal displacement of the construction - relatively to the free hanging plumb wire. A continuous bending line can be determined if the relative displacements are measured in several storeys. Normally, the movements in two directions (horizontal) are measured at a measuring station so that a spatial bending line e.g. in tower constructions can be determined in case of several measuring points.

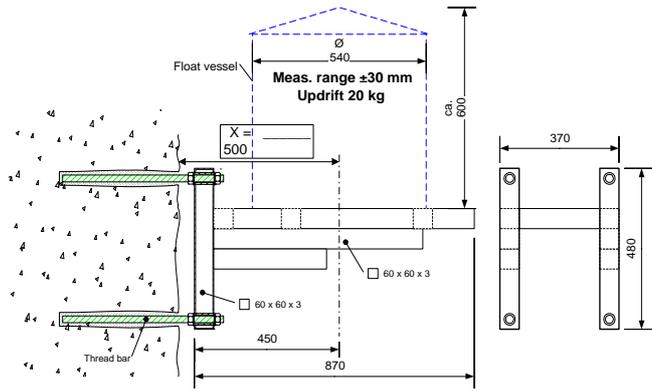
Scheme of a floating plumb device

- 1 Float vessel
- 2 Float
- 3 Console for float vessel
- 4 Tension lock with hook and eye
- 5 Plumb wire clamp/ screw-type sleeve
- 6 Plumb wire meas. device el./opt.

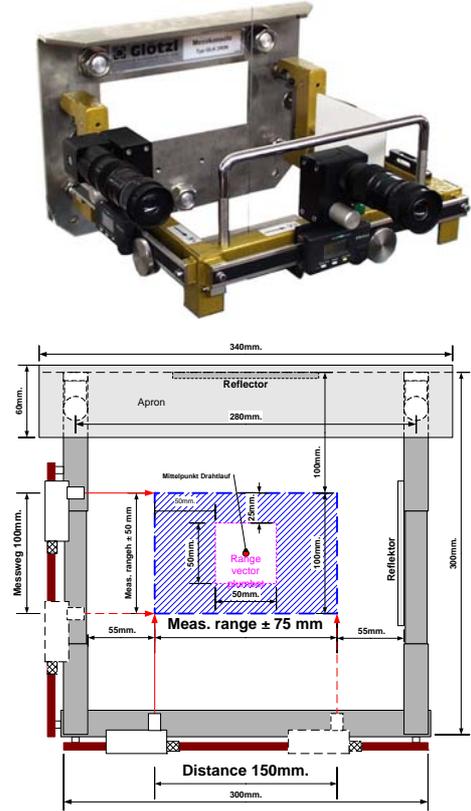


- 7 Console for pl. wire meas. system
- 8 Plumb wire
- 9 Drop screen
- 10 Plumb wire anchor
- 11 Tight closure of piping
- 12 Plumb wire deviation probe
- 13 Reel for tape measure

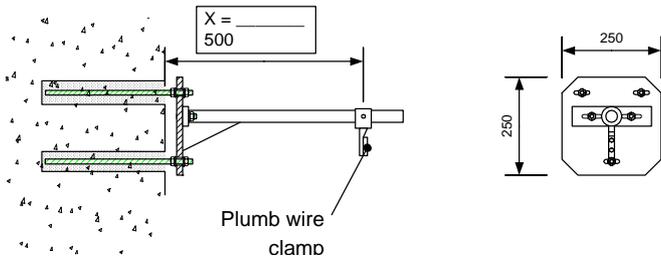
Console for float vessel



Console for plumb wire meas. system



Anchoring console pendulum plumb



Dampening vessel GPDB

