UPLIFT MEASUREMENT / CASAGRANDE

Application

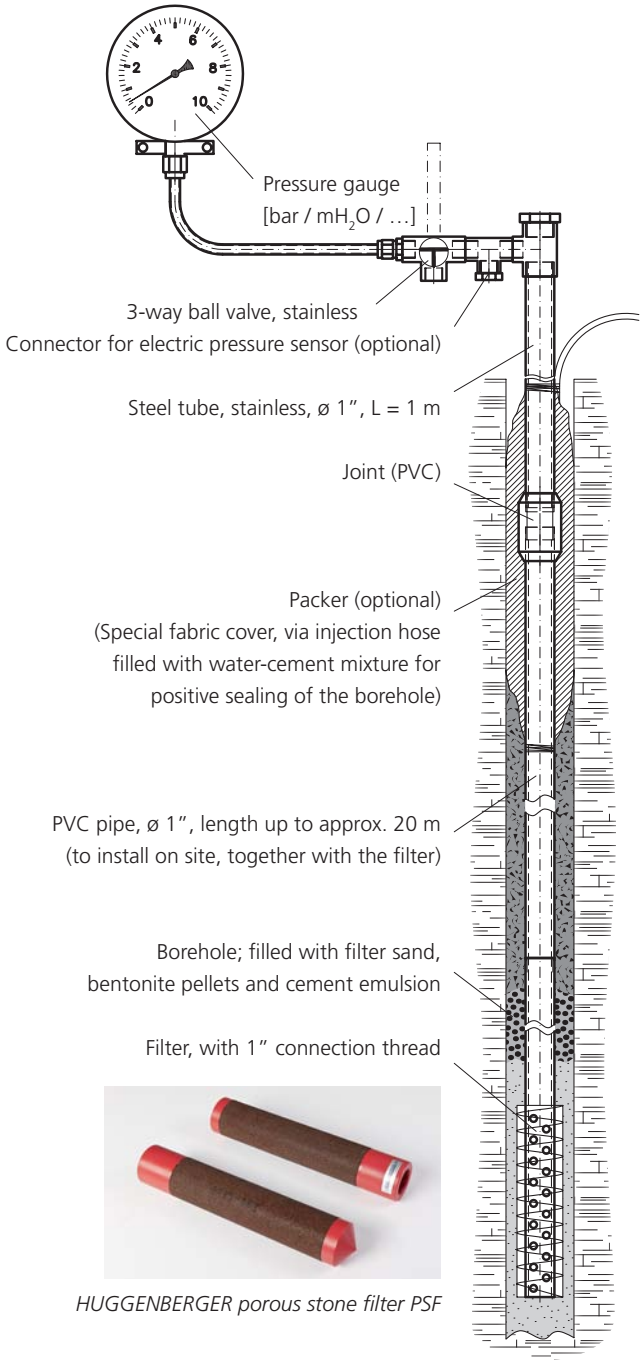
Device for measuring the relative uplift pressure of sole water at hydraulic structures such as dams; used to assess the uplift pressure and stability.

Description

In a borehole that extends to the sole water of the construction, an up to 20 m long PVC pipe with a filter at the bottom is installed on site. At the upper end the PVC pipe is jointed with a stable stainless steel tube on which a ball valve and a pressure gauge are connected. Subsequently, the borehole is filled with filter sand, bentonite pellets and cement emulsion. Depending on location, amount of water and water pressure it may be necessary to close the borehole by a packer, otherwise the filler can be scoured.
By opening the ball valve the relative uplift pressure [bar / mH_2O / ...] of the sole water is displayed on the pressure gauge.

Optionally, a connector for an electric pressure sensor can be installed. This allows the connection of a HUGGENBERGER Telepressmeter PWPRD for a permanent pressure monitoring via a HUGGENBERGER Tensologger.

By default, the system is designed with 1" pipes; If required, a version with 2" pipes is possible.



HUGGENBERGER porous stone filter PSF

Technical Data

Porous stone filter, type	PSF
Connection thread	1"
Total length	280 mm
Filter length	200 mm (other lengths on request)
Filter diameter	50 mm
Pores	~70 µm
Pressure gauge, ø 160 mm *	**—**
Scale as desired	bar / mH_2O / …

* in case of extremely high humidity optional with glycerin filling to prevent condensation and ensure faultless function