

CaviMini measuring system

Product specifications

Area of Use

The measuring system is intended to be used to ensure the quality of finished rock reinforcements pertaining to grouted rock and wire bolts.

Gas cylinder

1.0 liter single-use gas cylinder. The gas cylinder contains nitrogen gas (N₂) with an initial pressure of 110 bar. A pressure regulator reduces the pressure to a working pressure of about 8 bar.

The gas cylinder is normally sufficient for > 1000 measurements.

Measuring pressure

The measuring pressure is adjustable from 0 to about 8 bar. Normally, a measuring pressure of 3 bar is used for hardened cement.

System voltage

CaviMeter is powered by a lithium-ion battery: 12 V, x Ah.

Operating voltage

12 V

Weight

About 9 kg

Dimensions

430x320x160 mm

Measuring principle

Before the rock bolt is inserted into the bore hole through the cement slurry, a perforated measuring tube (4.0 mm diameter) is fitted alongside the bolt. Measuring begins by pressurizing a 1.0 dl gas tube with a set measuring pressure (usually 3 bar). The plastic gas tube from CaviMini's pistol handle is connected to the measuring tube on the rock bolt and a valve is opened by pressing the trigger on the pistol handle so that the gas from the gas cylinder can fill any cavities in the bore hole via the perforated measuring tube while the pressure can be read on the monometer on the pistol handle. Based on noted pressure changes, the size of the cavity can be read in a diagram.

Presentation of measurement results

Presentation of pressure data is done by reading the monometer.

Accuracy

Depends on the monometer used.