



S3

Borehole measures

Geophones

accessories

3D Borehole sensor

3 dimensional sensor for borehole seismic can be used for down-hole and cross-hole surveys. S3 sensor for borehole seismic surveys is composed by three geophones in correspondence of the 3 Cartesian axes x, y, z and placed inside a stainless steel cylindrical case to which connecting cable to seismograph is connected. Special type of cable used, graduated in meters, conveys internally multipolar cable for the electrical connection of the sensor to the seismograph, steel cable that ensures solid suspension of the sensor in the hole and the air hose for management of pneumatic system for anchoring sensor to bore-hole wall. Sensor use is simple and immediate, it is sufficient to connect supplied pump supplied and adjust pressure on 2 bar using pressure indicator on frontal panel of the sensor, once performed acquisition is sufficient to release air through appropriate command on sensor panel, place sensor at next depth and perform acquisition. Tire anchoring system makes sensor light and easy to carry, grants an optimal coupling of sensor to borehole wall. Due to particular clamping methodology with pneumatic system brings advantage of not having to carry heavy and bulky batteries on field and also in the event of failures or malfunctions is always possible to recover sensor from borehole, permanently eliminating the risk of losing sensor. Also S6 model is available. It consists of two S3 bore-hole sensors placed usually at 1 mt distance between one another and installed on the same cable.

Methodologies

Seismic Down-Hole/Cross-Hole

General

Geophones frequency	4.5 Hz
Horizontal component	2
Vertical component	1
Phase shift horizontal component	90°
Clamping mechanism	compressed air
Clamping pressure	1.5 bar

General

Manometer	yes
Pressurization pump	included

Geophones

Frequency	4.5 Hz
Moving mass	25.2 g
Sensitivity	100.4 V/(m/s) 2.4 V/(in/s)
Coil resistance	2450 Ohm

Physical specifications

Cable lenght	50 mt
Sensor lenght	280 mm
Sensor diameter	63 mm
Cable reel	610 x 475 x 385 mm
Weight	15 Kg

