

BIS-SV S-Wave Source Data Sheet

A new borehole S-wave source which enables the operator to generate vertically polarised shear waves (SV) whilst used with the IPG800 or 5000 impulse generators. The source can be used in dry or water filled boreholes, the source bladder can be inflated using a standard air pump and packing slip if needed to ensure coupling to the borehole wall. To improve feasibility, this source includes a switch box to allow the operator to choose the shot direction either "UP" or "DOWN" the borehole with no specific source alignment required. A further comprehensive study of the soil mechanical properties can be achieved when this source is used in conjunction with the P-Wave SBS42 and SH (BIS-SH) sources. In particular the SV and SH velocities can be used to evaluate soil stress and P-wave analysis can be used to understand the soil anisotropic properties.

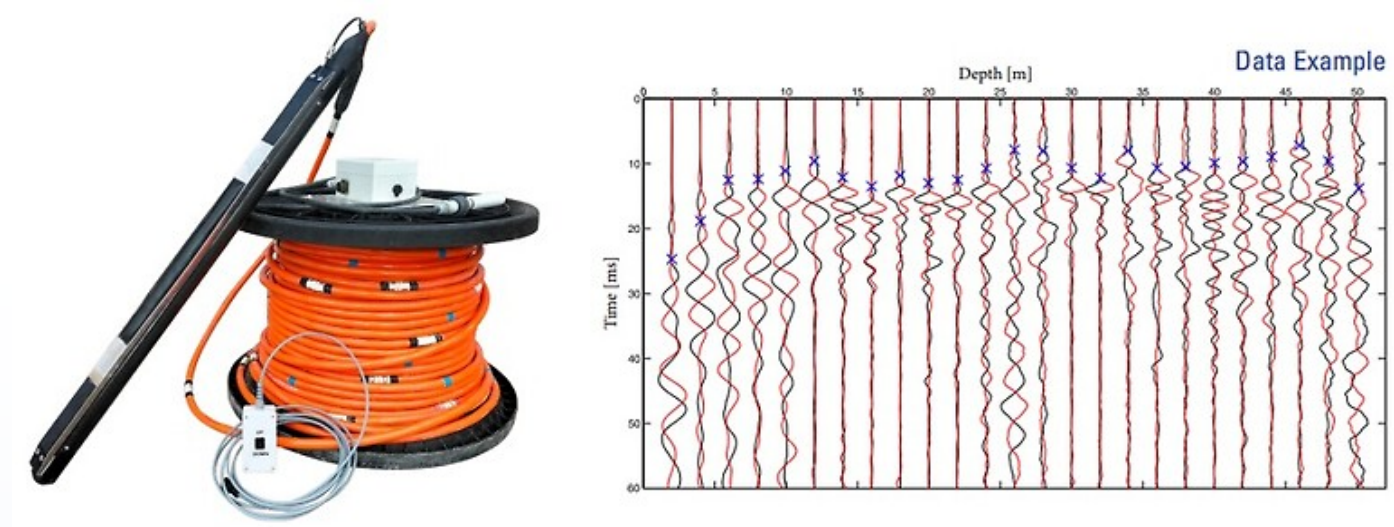


Fig. 1 Image of the BIS-SV S-wave source with the switch box and remote control and an example dataset, data acquired over unconsolidated sediments at a 6m borehole interval (Image courteously provided by Geotomographie)

Key Features

- Used in Crosshole Seismics
- More feasible Sv data acquisition - choose shot directions
- Can combine with Sh and P-Wave to determine soil parameters including stress

Applications

- Civil & Geotechnical Engineering
- Geological
- Hydrogeology

Technical Specifications

Generated Wave Types:	SV
Signal Frequencies:	up to 500Hz

Operational Depth:	up to 100m
Source Length:	1015 mm
Source Weight:	6 kg
Cable Weight per meter:	377 g
Borehole Diameter:	75-100 mm (or larger if spacers are used)
Clamping System:	Pneumatic Clamping System (Inflatable Bladder)
Depth Indicator:	Cable marking every 2m
Connector:	To IPG800 or IPG5000 impulse generators
Storage:	On Cable Drum
Switch Box:	Switch between two vertical shot directions