

**geotomographie**

manufacturer of seismic borehole equipment



## IPG800/IPG5000 | Impulse Generator

### IPG5000

The impulse generator IPG5000 is the high voltage supply to the seismic S-wave source BIS-SH and P-wave source SBS42.



Impulse generator IPG5000 and remote control unit RCU.

#### Technical Details

**Impulse voltage:** 5000 V  
**Impulse energy:** 1000 J  
**Power supply:** 230 V/110 V  
**Shot release:** Single or continuous  
**Repetition rate:** 8 s  
 (or freely selectable between 3 and 8 s)  
**Dimensions:** 52 x 32 x 53 cm  
**Weight:** 60 kg  
**Special features:** Impulse counter, test trigger, emergency OFF button, intern/extern operation  
**RCU:** Single or continuous shot release, impulse counter, test trigger, trigger output, emergency OFF button

### IPG800

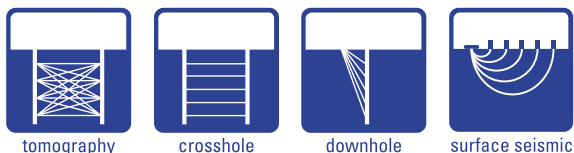
The impulse generator IPG800 is the high voltage supply to the seismic S-wave source BIS-SH-DS and BIS-SV.



Impulse generator IPG800 and remote control unit RCU.

#### Technical Details

**Impulse voltage:** 800 V  
**Impulse energy:** 1000 J  
**Power supply:** 2 x 12 V (car batteries)  
**Shot release:** Single or continuous (5/10 shots)  
**Repetition rate:** 10 s  
**Dimensions:** 53 x 43 x 23 cm  
**Weight:** 15 kg  
**Special features:** Impulse counter, test trigger, emergency OFF button  
**RCU:** Start/stop operation, trigger output, emergency OFF button



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## BIS-SH | S-Wave Source

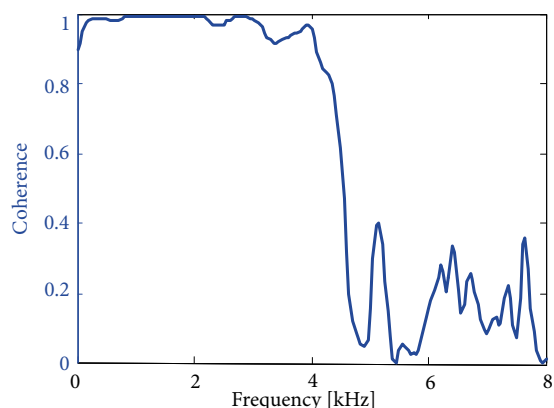
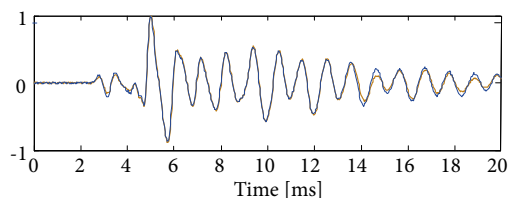
The borehole source BIS-SH generates horizontally polarized shear waves (SH) and compressional waves (P) in dry or water filled boreholes. The BIS-SH is used for crosshole testing and S-wave tomography.

### Trigger Accuracy

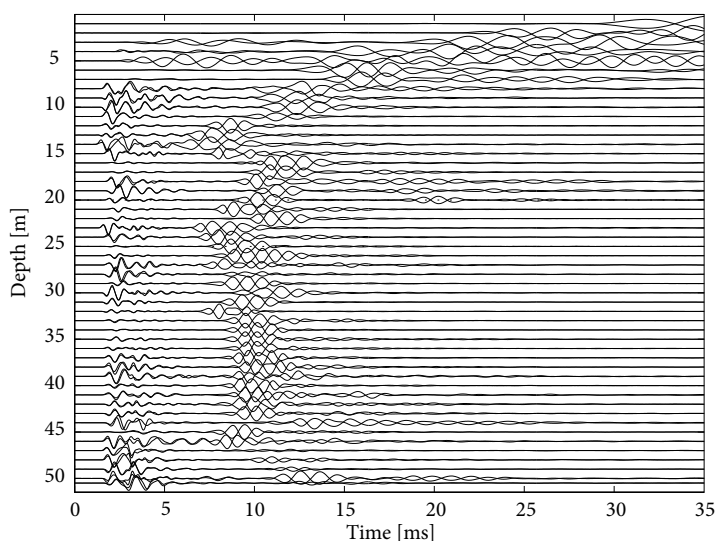
Mechanical impulses are released through manual or automatic triggering of the impulse generator (IPG5000) controlled by the remote control unit (RCU). The RCU converts the reference signal of the impulse generator to an accurate time break with an accuracy of a few microseconds.

### Signal Repeatability and Frequency Response

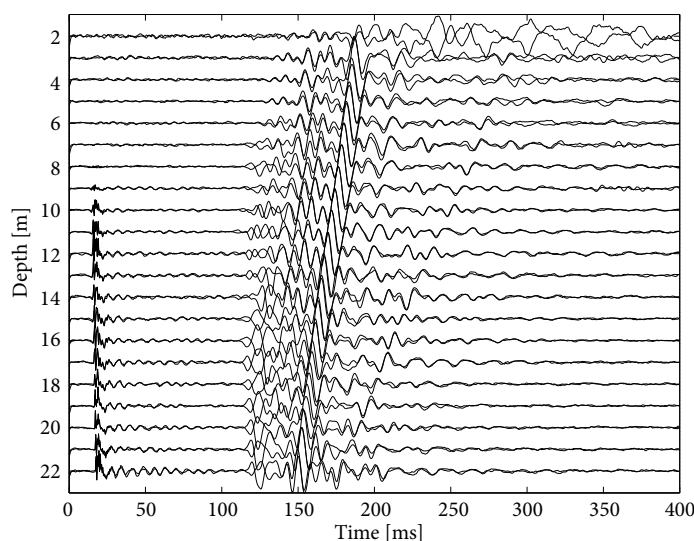
To estimate the source repeatability the calculation of the coherency spectra is used. Coherency values of „1“ indicate perfect repeatability whereas a coherency of „0“ expresses no repeatability. The test shows that the S-wave source BIS-SH is highly repeatable up to frequencies of 4-5 kHz.



### Data Examples



Unconsolidated sediments  
Borehole distance: 4 m



Unconsolidated sediments  
Borehole distance: 25 m