

Profound Vibration Monitoring

VIBRA geophone cone



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The Profound geophone cone for the VIBRA range has been designed for high-performance ground vibration monitoring, measuring dynamic soil parameters. Installation of the geophone cone with standard cone penetration rods can be done by pushing it to the desired depth. When the desired depth has been reached, the rod is slightly retracted to minimise the vibration influence of the penetration rods.

Digital ID

The geophone cone has an electronic datasheet including the serial number. Therefore, the source of measurement data can always be traced.

High-performance

Besides continuously monitoring the x-, y- and z-direction, the VIBRA also automatically corrects the measurement data for the individual sensitivity of each geophone channel. This guarantees high-quality measurements and performance.

VIBRA+

The VIBRA geophone cone in combination with the VIBRA+ offers the following extras:

- Detection of the geophone's inclination, assuring that measurements are carried out with a correctly positioned geophone.
- Based on data from the electronic datasheet, the VIBRA+ not only corrects the sensitivity, but also the resonance frequency and the quality factor with the help of digital correction filters.

VIB.00350 VIBRA geophone cone

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|-----------------------------------|---|
| Channels | 3 (X-, Y-, Z-direction) |
| Sensitivity (typical) | 23.3 Vs/m |
| Resonance frequency (f_{res}) | 8 Hz \pm 0.5 Hz |
| Output Resistance (R_{out}) | 330 Ohm |
| Quality factor (Q) | 0.75 |
| Distortion at 18 mm/s and 12 Hz | < 0.2 % |
| f_{res} within tolerance | < 15° |
| Max. inclination | \leq 5° |
| Electronic datasheet (ID) | Serial number; calibration date; sensitivity; f_{res} ; R_{out} ; Q |
| Protection rating | IP66 according to DIN 40 050/IEC 529 |
| Material | 42CrMo4V |
| Density | 4500 kg/m ³ |
| Cone diameter | \varnothing 49.5 mm |
| Cone length | 190 mm |
| Mass | 1.280 kg |
| Moving mass | 11 \pm 0.5 g (each channel) |
| Screw thread | GeoMil standard for CPT tubes |
| VIBRA connector | LEMO K Series |
| Cable length | 10 m cable |
| Accessory | VIB.00320 cable reel 50 m |



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