

SS08BH is a triaxial broad-band seismometer designed installation in boreholes. This solution offers automatic levelling and motorised hole-lock system, wide temperature operations and safe transport. The sensor uses the symmetric architecture recovering Z,Y,X velocity signal from U,V,W homogeneous transducers; this methodology allows higher precision in reconstruction of real ground motion.

### Applications

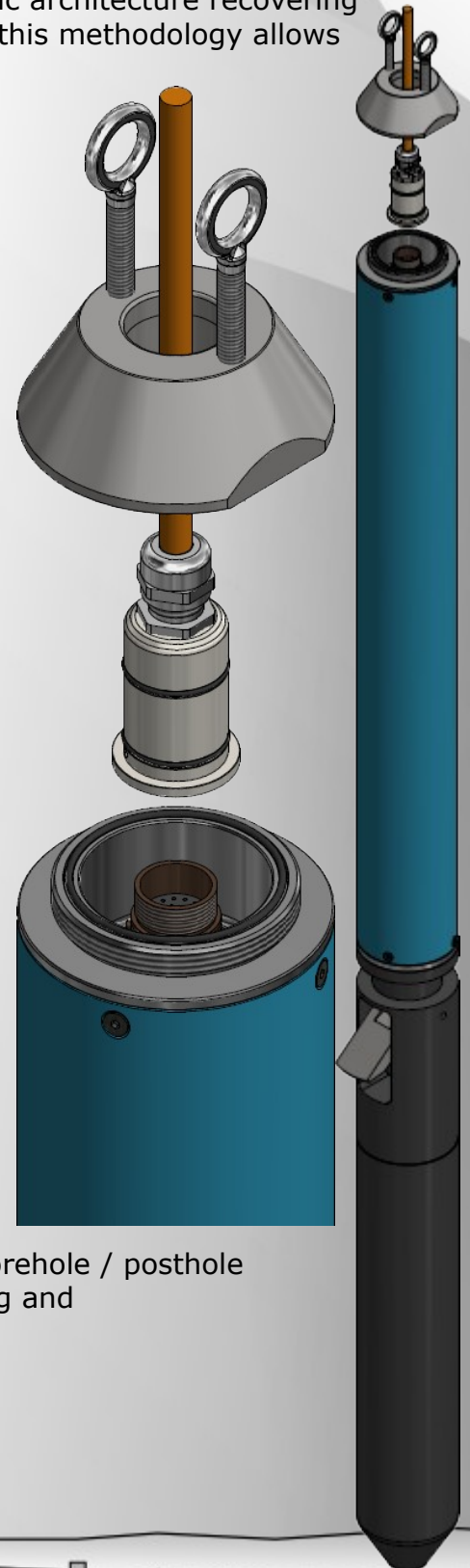
- \* Reservoir microseismic monitoring
- \* Observatory grade Earthquake seismology
- \* Global Scale Seismicity monitor
- \* Earthquake Early Warning Systems
- \* *Seabed installation compatible*

### Main features

- \* Small diameter to fit 100mm boreholes (4 inches)
- \* Hole lock mechanism to use the sensor at any hole deep
- \* Auto levelling mechanism to compensate up to  $\pm 5^\circ$
- \* Ultra low noise design
- \* Fast setup, data are useable few minutes after deployment
- \* Intrinsic robustness
- \* Low power consumption allows unit to be used in remote installation with limited energy source
- \* Possibility to have embedded digitizer with accurate sync
- \* Detachable cable for easier transportation
- \* Made in EU (Italy)

### Housings

Different housing are available upon request, for example borehole / posthole deployment using stainless steel AISI316 or titanium housing and motorized automatic levelling for high tilt compensation.





## Technologies for seismology, engineering and geophysics

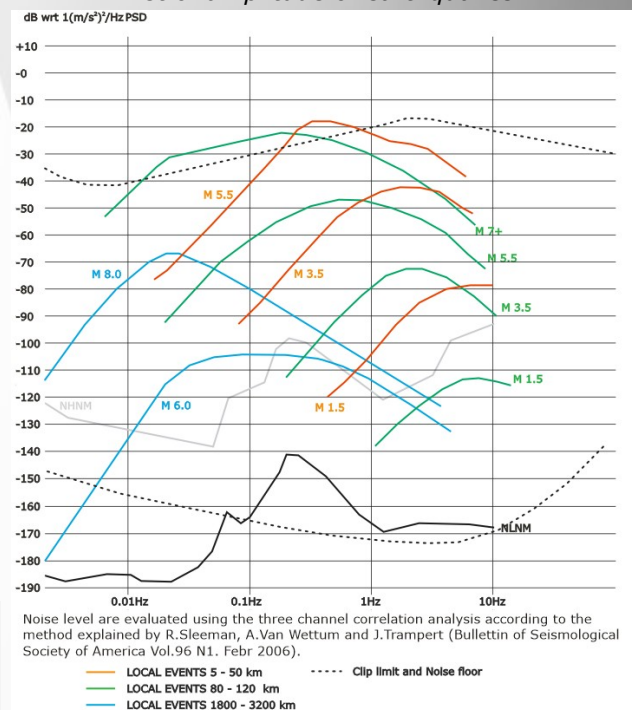
### Specifications

|                         |   |
|-------------------------|---|
| Configuration:          | U,V,W (output to physical motion Z, Y, X)   |
| Principle of operation: | Force Feedback with capacitive transducer   |
| Nominal sensitivity:    | 1500V/m/s* (customizable at order)  |
| Velocity output:        | Selectable Z, Y, X or U, V, W mode  |
| Pass-band:              | 120-20s to 100Hz (customizable at order)  |
| Number of channels:     | 3 + 3 (Z, Y, X and virtual mass UVW status)   |
| Peak output:            | +/- 20V (differential output, 40V p-p)  |
| Clip level:             | 13 mm/sec (nominal @ 1500 V/m/s, see chart)   |
| Output impedance:       | 2 x 100 Ohm   |
| Mass position output:   | +/- 10V from U,V,W signals  |
| Dynamic range:          | > 135dB in range 0.1 – 10Hz (see chart)   |
| Calibration input:      | 1 with transducer selection (U,V,W, all)  |
| Power supply input:     | 9-36Vdc isolated  |
| Power consumption:      | < 500mW* @ 12Vdc (1W maximum depending on conditions)   |
| Protections:            | Surge and reverse-voltage, with self-resetting fuses  |
| Calibration coil:       | 16 ohm  |
| Self noise:             | <USGS NLNM between 0.03 to 10Hz*  |
| Levelling:              | Manual with lockable paddles, integrated level  |
| Max. tilt olrance:      | +/- 5° automatic/remote levelling function  |
| Operating temperat.:    | -20/+50°C   |
| Storage temperature:    | -40/+80°C   |
| Humidity:               | 0-100% even condensing (with plugged-in connectors)   |
| Protection grade:       | IP68K   |
| Mass lock:              | Not necessary   |
| Max. shock allowed:     | 5g half sine  |
| Digital interface:      | RS485 for diagnostics and test  |
| Weight:                 | approximately 10kg, depends on configuration  |
| Dimension:              | diameter 88.9 mm, 1472mm with coupling extension<br>diameter with retracted shaft: 95mm<br>diameter with extended shaft: 132 mm<br>ideal mount pipe diameter: 127mm |
| Max depth:              | 500 meters (50 bars pressure)   |
| Enclosure:              | AISI316   |
| Norm conformity:        | CE  |



\* specification may vary depending on customization

Clip and noise level compared to NLNM and a list of amplitude of earthquakes



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