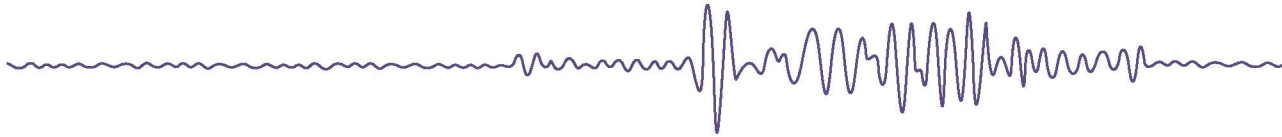


# CMG-5TB



## Borehole accelerometer

The Guralp Systems CMG-5TB accelerometer is a low-noise triaxial force-feedback instrument, equivalent to the CMG-5T vault accelerometer, designed for strong-motion borehole studies..

### Key Features:

Flat acceleration output from DC top 100Hz (200Hz optional)

76mm outer diameter

Optional single-jaw lock for boreholes of 82-178mm diameter

Waterproof and durable with 'O' ring seals fitted.

Suitable for installation with sand backfill to minimise convection

Dual output (high and low gain) and optional high/low pass filters

Optional electronic compass module to determine downhole attitude

Remote DC offset zeroing

Guralp analogue borehole instruments can be combined with CMG-DM24 borehole digitizers and DCM/AM borehole data modules. Using these you can build a fully networked, authenticating digital instrument inside a single borehole.

If a downhole digitizer is not present the instrument is supplied with a strain relief mechanism to isolate the sensors from motions in the load bearing cable.

Guralp Systems can provide tripods winches and other equipment designed specifically for borehole installations. We also offer civil works, installation and seismic station operation services.



# Specifications

GURALP

SYSTEMS

Acceleration output bandwidth	<i>DC - 100 Hz</i>
Dynamic range	<i>156 Db</i>
Dynamic range 20 - 200 s	<i>140 Db</i>
Dynamic range 3 - 30 Hz	<i>127 Db</i>
Output sensitivity	<i>0.1 - 4g</i>
Peak output	<i>±10 V differential</i>
Output options	<i>2 g + 0.2 g, 1 g + 0.1 g, 0.5 g + 0.05 g, 0.1 g + 0.01 g 50 Hz, 100 Hz or 200 Hz</i>
Lowest spurious resonance	<i>&gt; 400 Hz</i>
Linearity, vertical (USGS)	<i>&gt; 77 dB</i>
Linearity, horizontal (USGS)	<i>&gt; 66 dB</i>
Cross-axis rejection	<i>0.001 g / g</i>
Remote control	<i>DC offset zero</i>
Operating temperature	<i>-20 to +65 °C (-55 °C optional )</i>
Temperature sensitivity	<i>&lt; 0.6 V per 10 °C</i>
Materials	<i>Hard anodised aluminium case Gold plated contacts O-ring seals throughout</i>
Borehole diameter	<i>82 - 120 mm</i>
Install depth	<i>to 250 m (other options available)</i>
Case height (with lifting loop)	<i>431 mm</i>
Power supply	<i>11 - 30 V DC</i>
Current at 12 V DC	<i>24 mA</i>
Calibration controls	<i>Common signal &amp; enable lines exposed on sensor connector</i>
Hole-lock mechanism	<i>Spring-loaded jaw with passive skids or studs (&gt;60 kg force)</i>
Optional low pass corner	<i>50 Hz, 100 Hz or 200 Hz</i>