

# Güralp 40T



BROADBAND SEISMOMETER



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## A rugged and robust three-component broadband seismometer.

The Güralp 40T is ideally suited for installation in vaults with moderate noise. It's high-gain feedback loop eliminates mechanical non-linearity (the overall measured linearity exceeds 90 dB) and minimizes resonances in the spring system.

The 40T's design has carefully avoided low-frequency vibration modes. The lowest spurious vibration mode of the 40T is a barely measureable resonance at 440 Hz.

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## Applications

- > Surface and subsurface vault
- > Posthole
- > Networked Arrays
- > Earthquake Early Warning systems

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## Key features

True broadband force-feedback instrument

Direct velocity outputs

Self-contained in a waterproof steel case

Fully adjustable levelling feet

No mass clamping required - plug in and go

High sensitivity and dynamic range

The 40T has a standard response of 30 seconds to 50 Hz. Optional responses of 1, 10, 30 or 60 seconds for the long period corner and 50 or 100 Hz for the high frequency corner

Lowest spurious vibration is a barely measureable resonance at 440 Hz

The 40T can be supplied as the 40TD which incorporates an integrated digitiser

## SPECIFICATIONS

SYSTEM	
Configuration / Topology	Triaxial orthogonal (ZNE)
PERFORMANCE	
Velocity output band	30 s to 50 Hz Options of 1 s, 2 s, 10s or 60 s long period. 100 Hz high frequency option.
Output sensitivity	800 V/ms <sup>-1</sup> (2*400 V/ms <sup>-1</sup> ) differential output. Optional sensitivities from 2000 to 3200 V/ms <sup>-1</sup>
Peak / Full scale output	±10 V differential
Sensor Dynamic Range	> 145 dB
Self noise below NLNM	60 s to 4 Hz
Electronics noise level	-172 dB (rel. to 1 m <sup>2</sup> s <sup>-4</sup> Hz <sup>-1</sup> )
Cross axis rejection	> 65 dB
Linearity	> 90 dB
Lowest spurious resonance	> 450 Hz
High gain outputs	Optional high gain output (x 10)
Optional high gain sensitivity	2 x 10 000 V/ms <sup>1</sup> (adjustable)
Offset zeroing	Adjustable through case Optional remote control for offset zeroing with DC motors
Transfer function	User manual is available to download from the website. Each sensor is provided with full calibration details including measured sensitivity, measured frequency response and instrument poles and zeros
Calibration controls	Independent signal & enable lines exposed on sensor connector
MASS / MONITORING CONTROL	
Sensor Mass positions	Three independent sensor mass position outputs (single ended)
POWER	
Power consumption (at 12 V DC)	0.46 W
Power voltage range	10– 36 V DC Optional low power 5 V DC supply
ENVIRONMENTAL	
Operating temperature	-20 to +75 °C

PHYSICAL	
Diameter	154 mm
Height with handle	207 mm
Enclosure/Materials	Stainless steel case O-ring seals throughout
Weight	2.49 kg
Communication / Connectors	Mil-spec connector