

OBS-System LOBSTER

The titanium frame **LOBSTER** (Longterm **OBS** for **Tsunami** and **Earthquake Research**) is a Broadband-OBS-System.

It is the instrument carrier for broadband seismometer, recorder, releaser and batteries each in a titanium pressure tube as well as for float units made of syntactic foam, hydrophone, flasher, radio beacon and signal flag.

Due to the utmost simple design of the OBS-System it is easy to handle and offers multiple modification potentialities. The single components are quickly mounted / demounted; this also save space during transport and storing.

LOBSTER is available in two versions: for operation in up to 6000m depth (LOBSTER-6000, orange) and for up to 7300m depth (LOBSTER-ultra-deep, yellow).

Anchor and float are asymmetrically designed: the OBS ascends to the water surface in upright position whereas it descends to the seafloor and stays there for data recording in horizontal position.



Lobster-6000 Longterm (side view) with two titanium pressure tubes (electronics tube, battery tube) + shock protection



Lobster-ultra-deep, short term, (front view) with releaser, broadband seismometer, hydrophone, flasher, radio beacon

LOBSTER-6000 can be deployed for a long or short period. In the latter case both battery tube and the 4 smallest external float disks are taken away. You only have to install shorter titanium bars for the float units – this is quickly done!

Features:

- * modular system: easy and quick mounting, demounting, adjustment + float units can be added or removed acc. to requirements
- * stability and shock resistance ensured through syntactic foam and shock protection
- * pressure tubes and frame are made from high quality titanium (less weight + corrosion resistance)
- * due to the flat design important noise reduction at the seafloor even if the current is strong
- * simplified handling on deck and deployment with the crane due to the titanium hook
- * system modifications at will



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Technical Data

Size / longterm / 6000m:	length: 1650mm (2800mm with flag) width: 1300mm height: 720mm
Size / short term / 6000m & 7300m:	length: 1650mm (2800mm mit Fahne) width: 1070mm height: 720mm
Weight / longterm:	LOBSTER-frame equipped for 14 months with 1 pressure tube (without anchor) weight / air: ~300kg; weight / water: ~-30kg LOBSTER-frame equipped for 36 months with 2 pressure tubes (without anchor) weight / air: ~335kg; weight / water: ~-30kg
Frame:	titanium, flexible
Operation depth:	6000m / 7300m
Power supply:	Alkaline- or Lithium- battery packs ex. 260 days operation with 228 Alkaline-cells 36 months operation with 228 Lithium-cells
Recorder:	Seismic Datalogger „6D6“
Releaser:	K/MT 562 KUMQuat, titanium
Hydrophone:	HTI-04-PCA/ULF
Seismometer:	Broadband Seismometer Nanometrics „Trillium Compact“ in titanium pressure tube
Positioning:	radio beacon, flasher, signal flag
Anchor:	steel anchor
Float / Longterm / 6000m:	8 disks syntactic foam
Float / Short term / 6000m:	4 disks syntactic foam
Float / Short term / 7300m:	4 disks syntactic foam

**In the course of permanent further development of the OBS-System LOBSTER
modifications are subject to change without prior notice.**