

## OBS-System LOBSTER

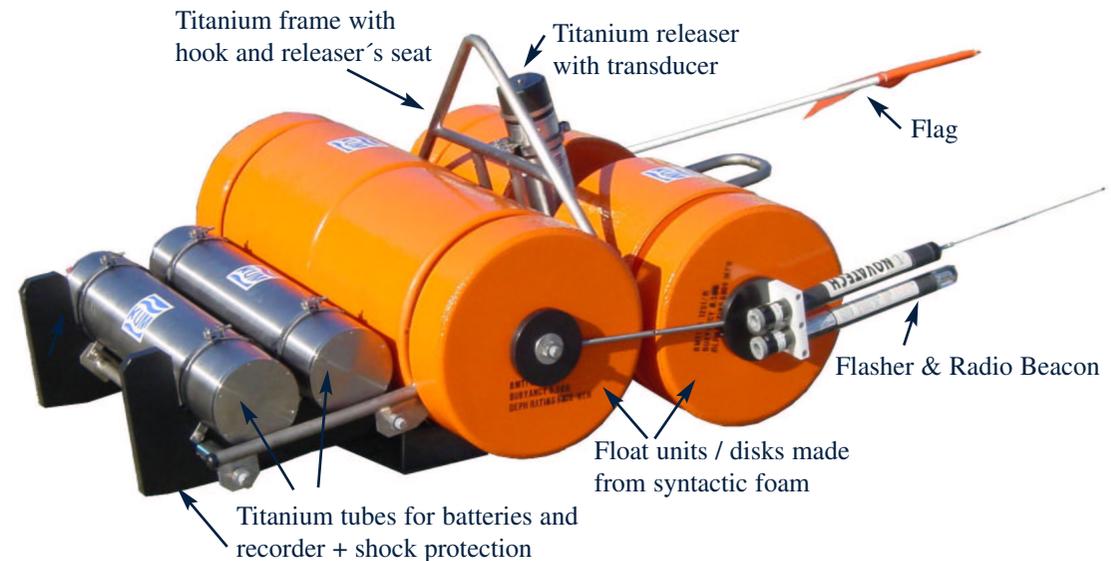
Longterm OBS for Tsunami and Earthquake Research

The titanium frame LOBSTER is a Broadband-OBS-System, designed and manufactured for the Alfred-Wegener-Institute for Polar and Marine Research in Bremerhaven / Germany.

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 OBS-System's utmost simple design it is easy to handle and offers multiple modification potentialities. The single components are quickly mounted respectively demounted, that also leads to space saving transport and storage.

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

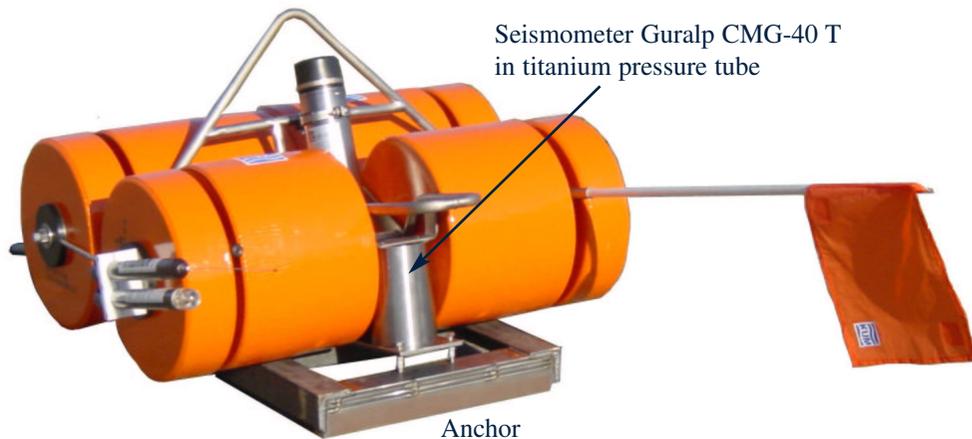


OBS-System LOBSTER / Longterm / 6000m: side view



LOBSTER-6000 can be deployed for a long or a short period.

In the latter case both battery tube and the 4 external float disks are taken away. You only have to install shorter titanium bars for the float units - this is quickly done.



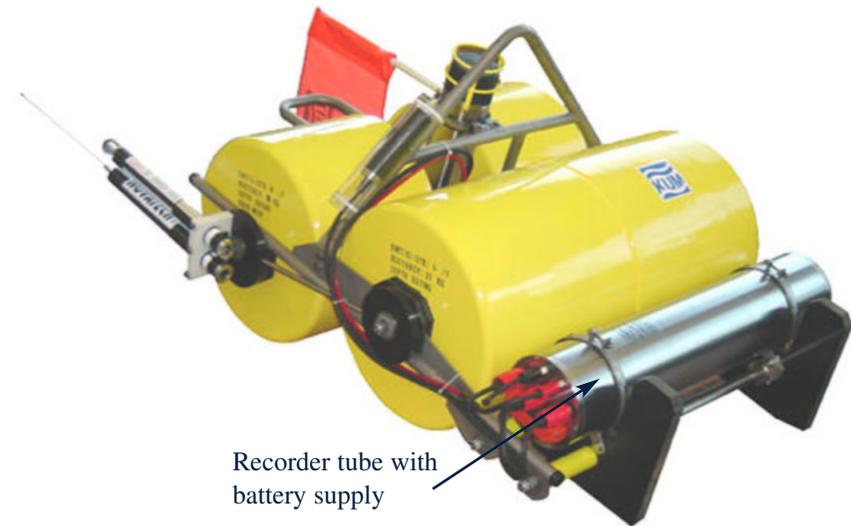
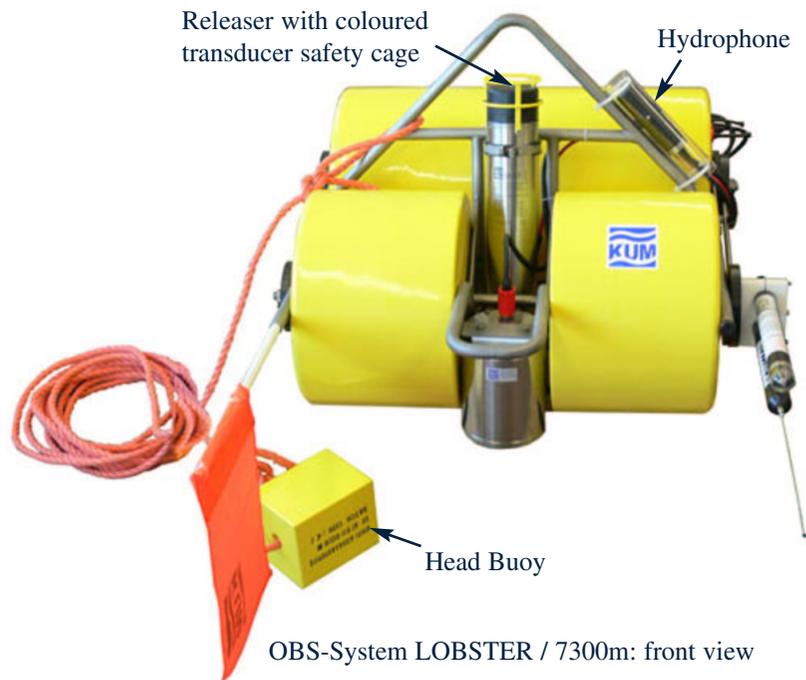
OBS-System LOBSTER / Longterm / 6000m: front view

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.

#### Features

- \* modular system: easy and quick mounting, demounting and alterations + float can be added or removed according to requirement
- \* stability and shock resistance ensured through syntactic foam and shock protection
- \* pressure tubes and frame are made from titanium of high quality: hence less weight and corrosion resistance
- \* due to the flat design important noise reduction at the seafloor even when the current is strong
- \* easy handling on deck and comfortable deployment with the crane
- \* system modifications at will and variable use

The 7300m-LOBSTER-version differs from the 6000m-version through its colour. The single components are the same except for two things: first the titanium pressure tubes` walls are thicker and second the yellow float units have other densities.



OBS-System LOBSTER / 7300m: side view

Power supply for the recorder in the pressure tube with  
 1x 48 Alkali-battery pack (operation: 28 days) or  
 2x 48 Alkali-battery pack (operation: 55 days) or  
 2x 48 Lithium-battery pack (operation: 8 months).

## Technical data

Size / Longterm / 6000m      length: 1650mm (2800mm with flag)  
   width: 1300mm  
   height: 720mm

Size / Shortterm / 6000m      length: 1650mm (2800mm with flag)  
   width: 1070mm  
   height: 720mm

Weight / Longterm:      equipped for 1-year-operation (144 Li-cells)  
   with two pressure tubes  
   weight / air: ~335kg (without anchor)  
   weight / water: ~30kg

Frame:                              titanium, flexible

Operation depth:      6000m / 7300m

6000m operation depth:  
Buoyancy/ Longterm: 8 cylinders syntactic foam  
Buoyancy/ Shortterm: 4 cylinders syntactic foam

7300 operation depth:  
Buoyancy:                      4 cylinders syntactic foam

Power supply:              Alkali- or Lithium- battery packs  
   (acc. to operation length)

Recorder:                      GEOLON-MCS Recorder in titanium  
   pressure tube

Releaser:                      K/MT 562 KUMQUAT, titanium

Hydrophone:                HTI-04-PCA/ULF

Seismometer:                Broadband Ocean Bottom Sensor  
   Guralp CMG-40T in titanium pressure  
   tube

Anchor:                        steel

Positioning:                 Radio Beacon Novatech RF700-A1, 7300m;  
   Flasher Novatech ST400-A, 7300m,  
   Signal Flag

*Product number:*        *K/MT 510 (6000m)*  
   *K/MT 517 (7300m)*

*Article number:*         *2030 (6000m)*  
   *2030-7 (7300m)*