

## Epibenthic Sledge "EMMA"

### Scientific and Industrial Applications

- ➔ EMMA-EBS according to the design of Brenke, 2005 and improvements (Brenke, 2012 to 2014)
- ➔ Full ocean depth monitoring
- ➔ Proven design for biological monitoring and deep sea exploration
- ➔ Operational on soft sediments as well as on hard rock
- ➔ Modular, adaptive and upgradeable system
- ➔ Electro-mechanical interfaces for existing vessels and winches
- ➔ Education, training and support

## PROVEN DESIGN EBS SYSTEM

The Epibenthic Sledge „EMMA“ is the latest generation of EBS based upon the design of Brenke (2005) and various improvements of this design (Brenke, 2012 to 2014).

The construction of the EBS is the latest improvement and an ideal tool for studies of sediment surface, deep sea habitats and patterns of benthic diversity.

The Sledge is constructed of high grade steel and divided in three to five sections. Offering various sections allows different configurations of equipment set-up and in case of damages the sections can be easily replaced.

The two equal cone nets, (mesh size 0.5 mm, Polyamide, PA), the two net buckets and all additional equipment is well protected by the ruggedly designed frame.

To accommodate video cameras and lights two side sections (electronic carrier) can be attached and equipped with electro-optical devices and different sensor systems.

Standard dimensions (L x W x H): 3600 mm x 1300 mm x 1162 mm  
 Weight: 360 kg  
 Opening: 100 x 33 cm  
 Net: length 1200 mm, mesh size 500 µm, net bucket: 300 µm

### Possible Upgrades

#### Positioning Package

- USBL
- LBL

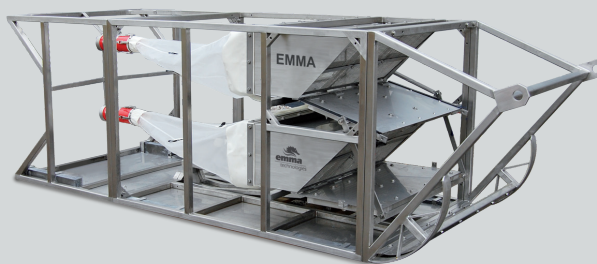
#### Modular Sensor Package

- C, T, D
- Turbidity
- Current
- Altimeter
- Dissolved Oxygen
- more sensors upon request

#### Warmwater Sampling

- Cooling System
- C-Bucket Package

#### Basic Configuration EBS "EMMA"



#### Education and Services

- on site / on board
- Gear operation
  - Sample handling
  - Biology
  - Taxonomy
  - Genetic

#### Electro-Optical Package

- Full HD Video Camera
- Full HD Still Camera
- LED Light
- Flash Light
- Laser Scale
- Telemetry System

#### Containerised Solution

- for transport and operation
- Standard 10 ft / 20 ft