



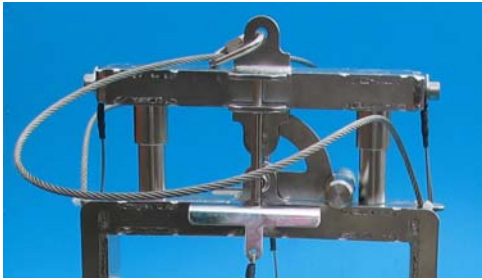
Ekman Grab – 400 cm²
Model 12.002

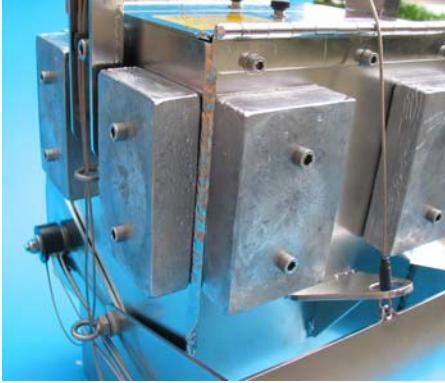


Manual


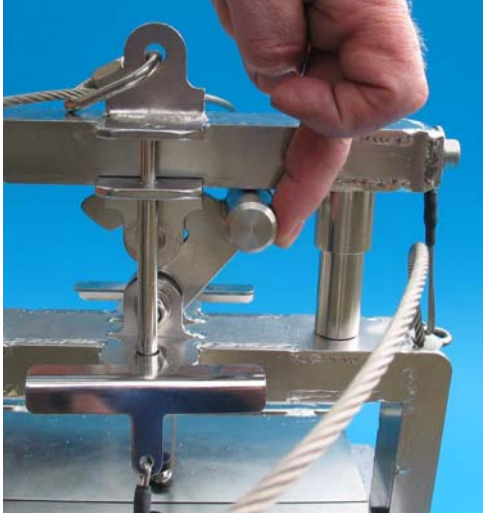
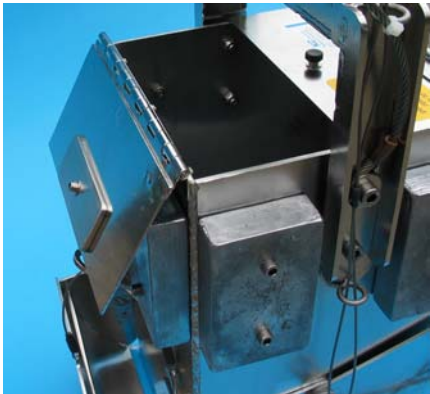
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Research Equipment

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	<p align="center">Manual for Ekman Grab</p>	<p align="center">Model no. 12.002</p>
	<p align="center">  Caution </p> <p>KC-Denmark is not, and cannot be held, responsible for any damage(s) made to equipment or to operators who ignore safety precautions or because of misuse or wrong operation.</p> <p>Never walk under the Ekman Grab, when lifted up by the winch.</p>	
	<p>Preparation:</p>	
<p align="center">1</p>	<p align="center">  Caution </p> <p>The security line must always be attached when using the grab. If the grab gets stuck; i.e. by a stone on the seabed the thin wires located at each side of the top part may break, and you will loose the bottom part of the sampler.</p>	

2	<p>Mount the lead weights and remember to fasten the bolts. Depending on the hardness of the sea bed you can mount a various number of weights. Maximum: 16 Pcs = 32 kg.</p> <p>By exceeding 8 Pcs of weights you must use longer bolts and mount the weights two by two.</p>	
3	<p>The locking mechanism is shown in the open position.</p>	
4	<p>The shovels are forced to the upper position as shown.</p>	

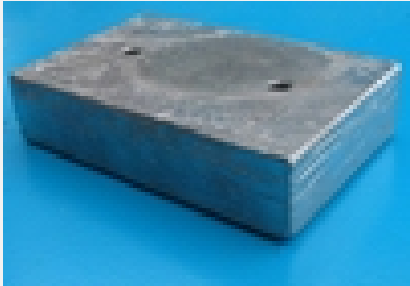
5	<p>While holding the shovels, insert the small locking brackets for the shovels.</p>	
6	<p>The wire of the winch must be attached to the top of the Ekman Grab.</p>	
7	<p>Push the locking mechanism into the lock position and the sampler is ready. Keep a tight wire to avoid release of the grab.</p>	
8	<p>When the sample has been taken and the grab has been retrieved from the seabed you can take out a small portion of sediment by opening the lids at the top of the grab.</p>	

9	To empty the grab completely, you must force the shovels into open position as shown in fig. 3.	
	Brief characteristic of the function:	
13	As soon as the grab hits the seabed, it will penetrate the seabed. When the wire gets loose, the locking mechanism will fall back; releasing the 2 locking brackets for the shovels. Upon retrieving the shovels will be forced together and the sample will be taken.	

	Maintenance
	<p>All parts of the Ekman Grab can be rinsed using salt water or fresh water. Regular cleaning with fresh water is recommended and all moveable parts must be moved individually to ensure all dirt has been removed.</p> <p>For a smoother operation we recommend regularly use of silicone grease on the vertical bars, where the parts move up and down.</p>

	Technical information	
	Materials:	
	All metal parts:	AISI 316 stainless steel. Finish: Electro polish.
	Measurements of sample:	
	A square sample of 20 x 20 cm	
	Penetration:	
	Up to a depth of 15 cm, depending of the hardness of the seabed and the lead weights attached to the sampler.	
	Operational depth:	
	Full oceanographic depth.	>6000 m (No limits).

Spare parts

12.005	Lead weights, 2 kg each - for model 12.002 only. Maximum mounting of 16 pcs.	2 kg each	
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