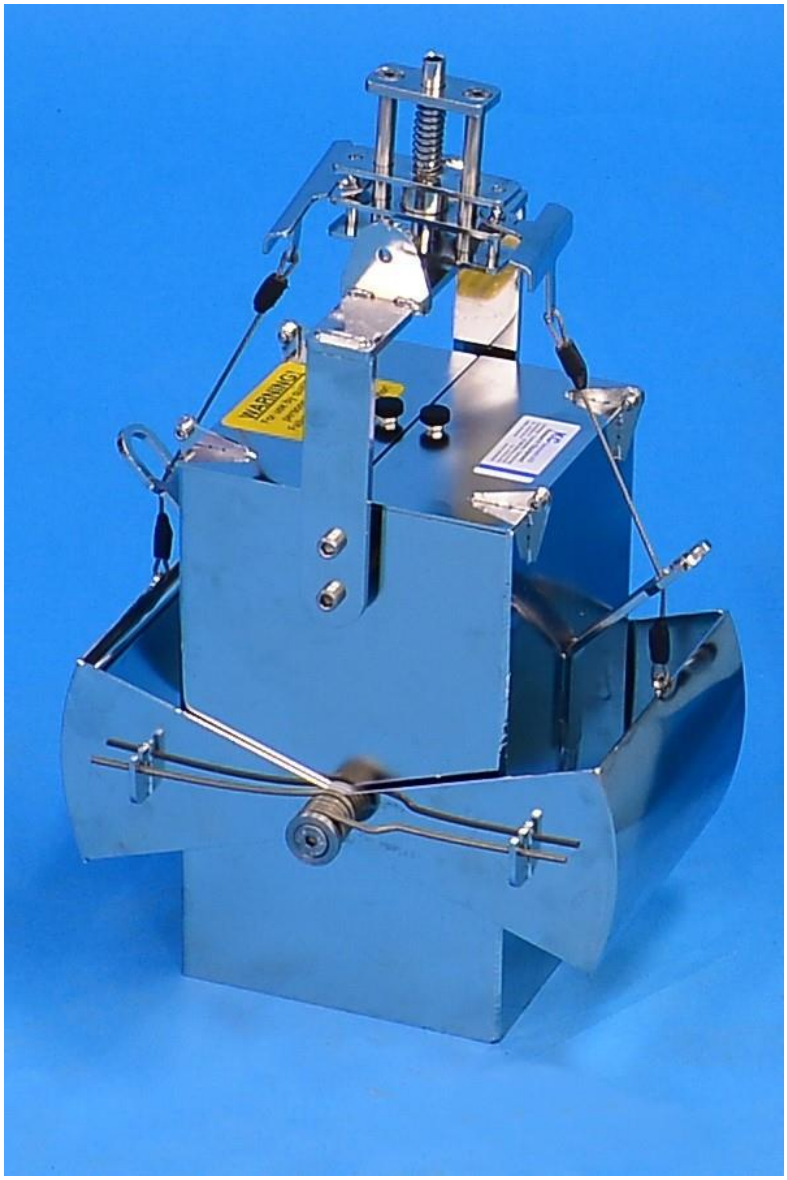


Ekman Grab – 225 cm^2
Model 12.000

Manual

KC Denmark A/S

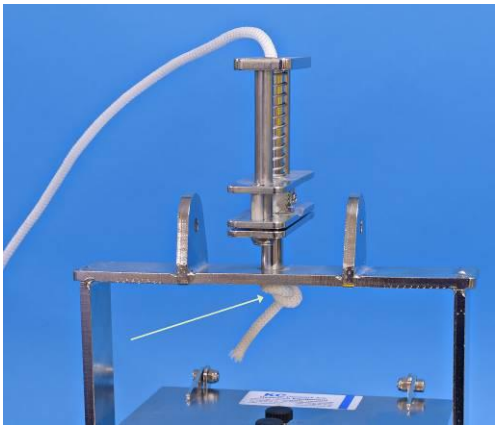
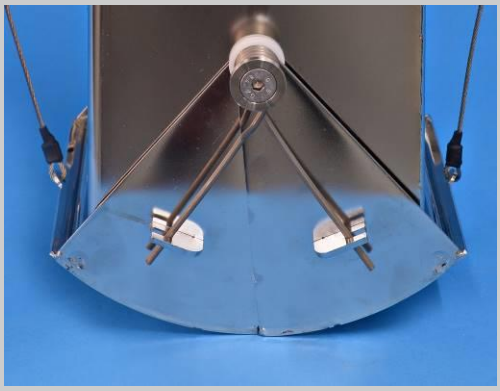
Research Equipment
Limnology • Oceanography • Hydrobiology

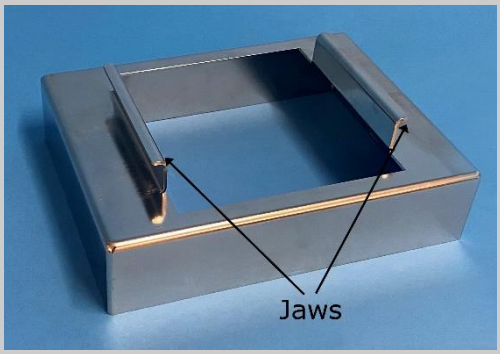
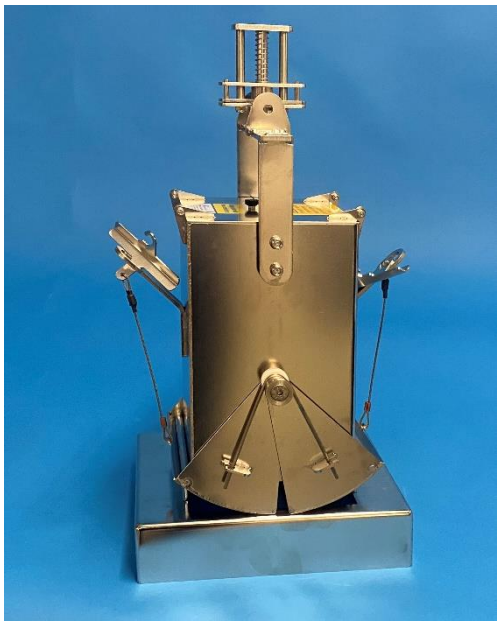
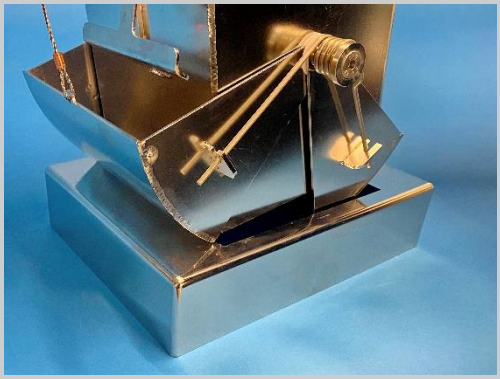
Ekman Grab – 225 cm²

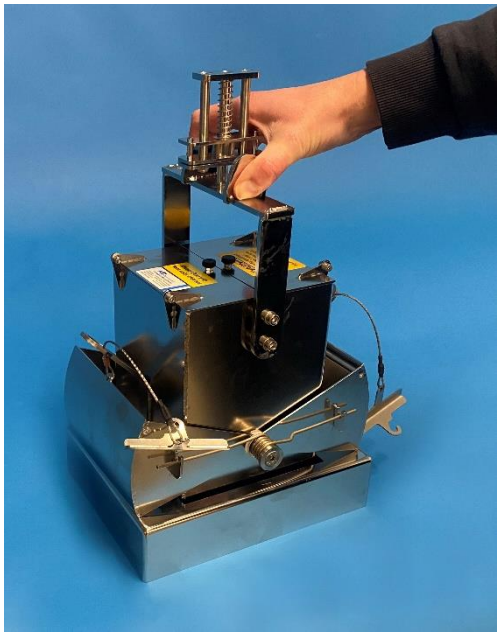
Caution

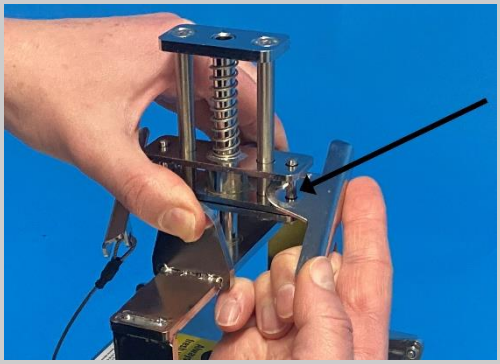
KC Denmark A/S is not, and cannot be held, responsible for any damage(s) made to equipment or to operators who ignore safety precautions or because of misuse or wrong operation.

In shallow water, you can operate the Ekman grab by means of a 4 m pole (13.006).

Item	Description	
1	Attach the line through the tube at the middle of the release mechanism. Secure with knots at the bottom. We recommend a 5 mm line. Caution **Secure the knots properly; otherwise, you may lose the grab at the sea floor.**	
2	Mount the springs as shown on the photo. When storing for a long time and to keeping the strength of the springs, please remove them from the brackets.	

3	To load the grab, you will need the enclosed loading tool. It has two jaws for securing the grab while loading. A short video is available **here**.	
4	Place the grab on the loading tool.	
5	Pull one of the wires upwards, thus lifting the shovel. Align the shovel over the jaw and release the wire, so the shovel grips onto the jaw. Repeat the operation on the other side of the grab.	

6	Both shovels are now engaged with the jaws.	
7	Push the Ekman sampler downwards and the shovels will move upwards.	

8	Secure both brackets to the release mechanism.	
9	The sampler is now correct loaded, ready for deployment.	
10	Lower the grab to the sea floor and when the sampler hits the sea floor, release the drop messenger along the line. The release mechanism is activated, as soon as the drop messenger hits the upper plate and once you hoist the grab, it will take the sample. To empty the grab completely, you must force the shovels into open position.	

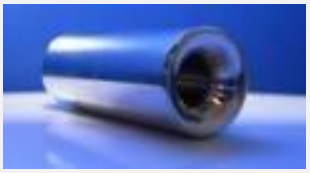
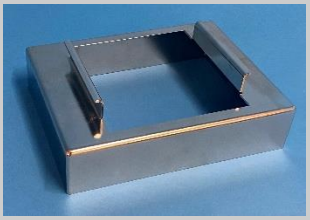
Mounting the pole		
12	In shallow water, you can use the pole 13.006 for manual insertion into the sediment. If a line is present, see item 1, please remove it. Mount the pole on the Ekman and fasten with two bolts, A and B. Ensure that pawl C is located on top of the spring-loaded release mechanism.	
13	Correct mounting of the pole.	
14	Assembly of the shaft: Push the shafts together and align the holes. Insert the wingnut and fasten it.	 
15	Load the grab as described in items 5-10. Insert the grab into the sediment and pull the line to release the grab.	

Maintenance		
16	Before storing the grab, it is important to rinse all parts with fresh water to ensure a smooth operation. Operate all parts individually and wash out dirt and sediment from the moveable parts. When storing for a long time and to keeping the strength of the springs, please remove them from their positions, see photo.	

Other Parts Recommended

12.006	**Shaft** • The 12.000 Ekman can be operated by shaft • The grab is released by pulling the cord • AISI 316 stainless steel • Length: 2 + 2 m • Weight: 3,2 kg		

Spare Parts

10.001	**Drop messenger** • For model 12.000 • Brass (standard delivery) • Weight 500 g		
10.002	**Drop messenger** • For model 12.000 • AISI 316 stainless steel • Weight 500 g		
60.001	**Drop messenger, 400 gr.** • Construction: Open/close • Stainless steel • Max. Ø6 mm wire • To be attached to the line at any point of the wire. Turn one part of the messenger, insert the line and close the messenger		
12.003	**Spring** • For model 12.000 only • Requirement: 2 pcs • Weight: 0,2 kg		
12.004-1	**Loading tool** • Tool for loading the 12.000 Ekman grab • AISI 316 stainless steel		

Tran-01	**Transport box** • Support for 12.000 Ekman grab • Room for deployment line • IPPC certified • Inner dimensions: L x W x H: 670 x 250 x 250 mm • Outer dimensions: L x W x H: 690 x 280 x 300 mm • Weight: 4,5 kg		

Safety Regulations

This grab is very dangerous in unskilled hands and you must take serious precautions to avoid accidents.

KC Denmark A/S 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.

When working on the unit in areas, which are difficult to access or hazardous, ensure to take adequate safety precautions for the operator and others in compliance with the provisions of law on health and safety at work.

Replace worn component with original spare parts.

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KC Denmark A/S

Research Equipment
Limnology • Oceanography • Hydrobiology

E-mail: sales@kc-denmark.dk website: http://www.kc-denmark.dk/
Holmbladsvej 17-19, DK 8600 Silkeborg, Denmark. Tel. +45 86 82 83 47
Bank: Sydbank. SWIFT: SYBKDK22 - IBAN DK5070460000104832
VAT no. DK 29 61 96 62