

Multi Corer, 4 x Ø80 mm  
Model 71.080  
Manual

**KC** Denmark A/S

Research Equipment  
Limnology • Oceanography • Hydrobiology

## Multi Corer – 4 x Ø80 mm




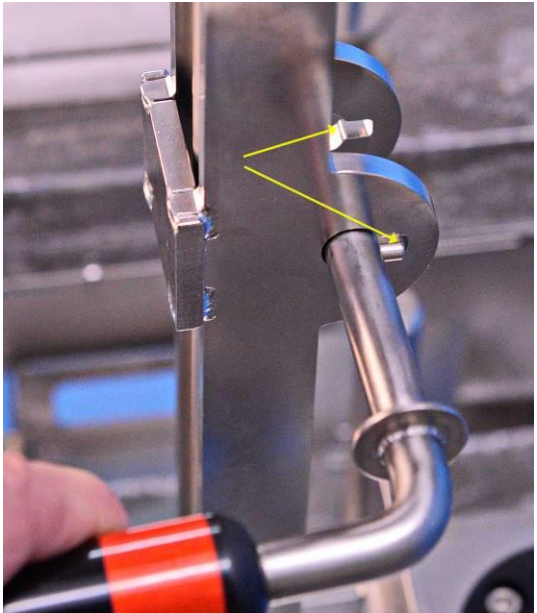

Caution

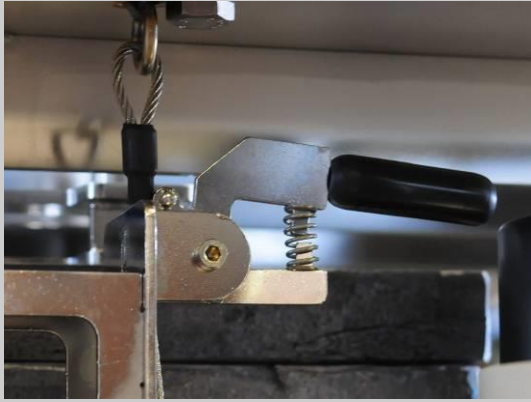

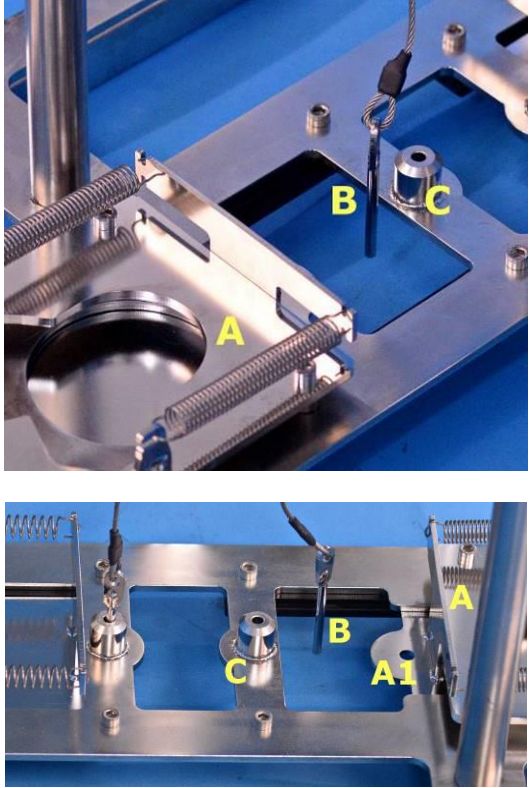
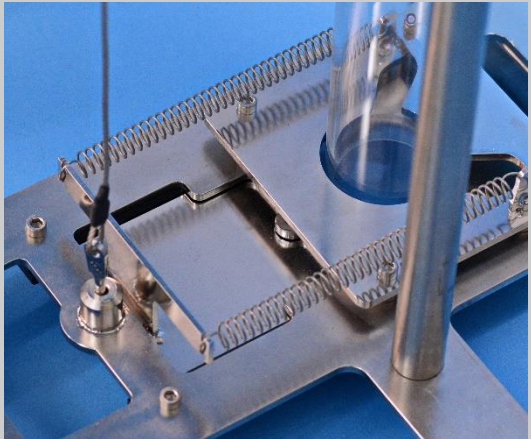
**This multi corer is very dangerous in unskilled hands and serious precautions must be taken to avoid accidents.**

**The safety clamp must always be in the secured position and must be released only, when the multi corer is outside the rail of the boat.**

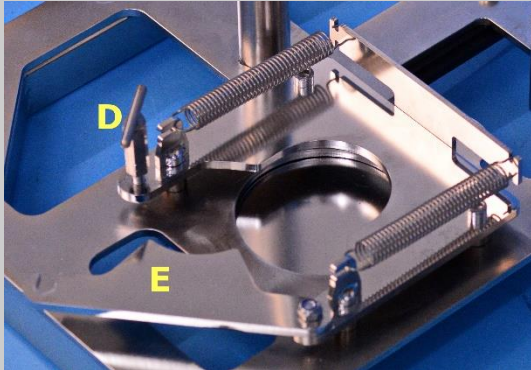

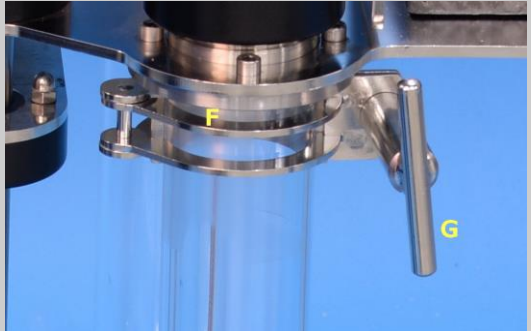
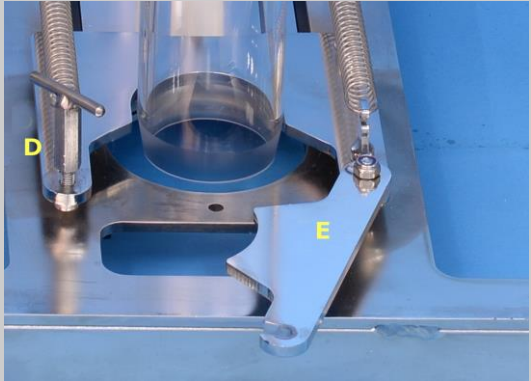
**KC Denmark A/S is not, and cannot be held, responsible for any damage(s) made to equipment or to operators who ignore safety precautions or because of misuse or wrong operation.**



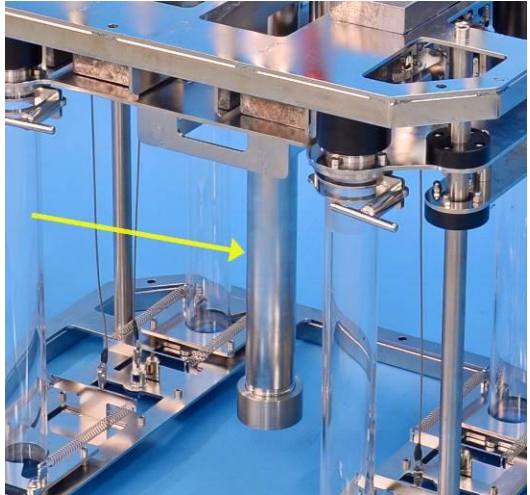


**Never walk under the multi corer, when lifted by the winch.**

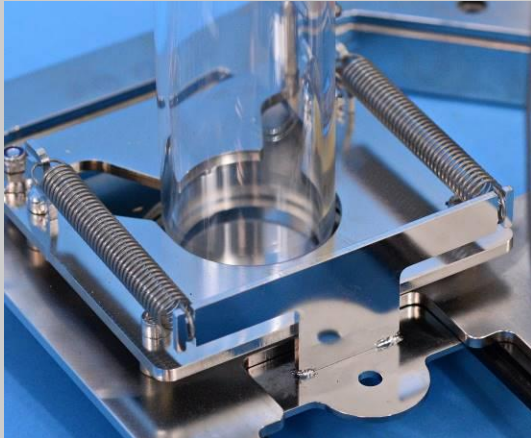
Item	Preparation	
1	<p>Attach the winch to the lifting eye of the multi corer. Lift up the corer, so you can insert the safety clamp.</p>  <p>Caution</p> <p>Push in the safety clamp with the handle in horizontal position. Make sure the locking pin goes through both holes as shown. Once in position turn the handle to vertical position.</p>	 


2	<p>Beneath the top plate, you will find 4 small handles, push the handles, one by one, and pull down the steel wire until it is taut, then release the handle.</p>	
3	<p>Force the spring-loaded bottom lid "A" toward the centre of the sampler; the back side of "A" has an eye "A1" to be aligned beneath "C"</p> <p>While holding "A" in position, insert security pin "B" at the end of the steel wire into "C" and "A1", so the bottom lid remains locked in open position.</p> <div data-bbox="248 1024 363 1157">  <p><b>Caution</b></p> </div> <p>Once loaded you must avoid an unattended release as the mechanism may cause injury to body parts.</p>	
4	<p>The lid is loaded and secured in correct position.</p>	



5	Loosen the handle "D" and open "E".	
6	Open the handle for the sample tube.	
7	<p>Slide in the sample tube, and while pressing the tube against the upper part of the multi corer "F", tighten the handle "G". Do not overtighten as you may damage the tube.</p> <p>Close the lower bracket "E" and tighten "D".</p>	 

8	<p>Mount the required numbers of lead weight and tighten all locks on the brackets. Standard delivery comes with 4 lead weight and the multi corer supports a maximum of 12 weights.</p>	
9	<p>For use in muddy sediment and for better stability, the multi corer comes with 2 footplates. Mount the plates on the lower frame by means of 3 bolts/nuts for each plate.</p>	
	<b>Deployment</b>	
10	<p>The multi corer has an automatic, hydraulic damper located at the centre.</p> <p>Upon lowering to the sea, the damper is filled up with water through the inlet.</p> <p>When the multi corer hits the seabed, the water is forced through the outlet, causing a delay before the tubes penetrate the sediment.</p> <p>After landing on the seabed, please allow 1-2 minutes before you raise the multi corer.</p>	
11	<p> <b>Caution</b></p> <p>The multi corer is now ready for deployment. When the rack is outside the bulwarks, you can remove the safety clamp.</p> <p>If you must remove the security clamps while the sampler is on deck, you must avoid an unattended release to protect against injury.</p>	

12	<p>When hoisting the sampler, the sediment tubes are withdrawn from the sediment, and the lids will close to protect the samples from exit.</p> <p>The photo shows a closed lid, i.e. the sample has been taken.</p>	
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<b>Back on deck</b>		
13	<p>When the multi corer is back on deck, secure it with the safety clamp before doing any job on the multi corer.</p>	
14	<p>Remove the sample tubes one by one. Unscrew the upper handle for the sample tube; while holding the sample tube, open the lower bracket. During removal of the tube, you may hold a thin plate in position under the tube to avoid loss of sediment.</p>	

<b>Storing the multi sampler</b>		
15	<p>Before storing the sampler:</p> <ol style="list-style-type: none"> <li>1. Remove all sample tubes</li> <li>2. All closing lids must be released to keep the strength of the springs</li> <li>3. Rinse all parts of the sampler carefully with fresh water to avoid rust and corrosion.</li> </ol> <p>You can store the sampler in two ways:</p> <ol style="list-style-type: none"> <li>1. In loaded position, having the safety clamp attached.</li> <li>2. You may remove the safety clamp and the sample tubes. By use of the winch, lower the multi corer slowly, so it will empty the hydraulic damper.</li> </ol>	

## Troubleshooting and maintenance

When using the corer, you might encounter problems with the sampling.

If the sediment is too soft, it will not be possible to take a correct sample, as you will need a "bung" of hard(er) sediment to hold the sample inside the core tube. Otherwise, the soft sample will seep away because of the small space of app. 1 - 2 mm between the sample tube and the moveable closing mechanism. (Will depend on the change of temperature from sea deck to bottom of the sea).

If the depth of penetration is too low, it will be necessary adding more weights to the weight platform at the top of the rack.

When you raise the sampler, it is important to have a reasonable weight on the rack to ensure the closing mechanism will work correctly. If the weight of the rack is too small and you raise the sampler, the rack will begin to rise before the closing mechanism has locked and secured the sample. Please add more weights to the rack.

For a smoother operation we recommend regularly use of silicone grease on the vertical bars, where the parts move up and down.

## Safety Regulations

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.

An expert maintenance technician fully familiar with the attendant hazards must only do all maintenance, inspection and repairs.

Persons charged with working on the multi corer and the accessories must be trained specially for the purpose with special abilities and experience in this area as well as being equipped with the appropriate tools and individual safety equipment. Failure to meet these requirements constitutes a risk to personal health and safety and economic damages.

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. Use the lubricants (oil and grease) recommended by the manufacturer.

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