



Kajak Sediment Sampler

Model 13.030

Manual

KC Denmark A/S

Research Equipment
Limnology • Oceanography • Hydrobiology

Kajak Sediment Sampler

Brief description:

The KC Kajak Sediment Core sampler is based on the Kajak design and can be used as a line operated unit, as well as a hand operated sampler with poles (to be ordered separately). For a depth of 4 m, you will require 13.302; for 6 m, you must add an extension pole 13.303.

This model is a quick-change model and speeds up the changing of corer tubes; very useful if you need many samples. The sampler can also be equipped with AISI 316 stainless steel corer tubes.

The upper part of the sampler can be exchanged with a shaft to sample by manual insertion of the tube. The shafts are made of AISI 316 stainless steel tubes, each 2,0 m. They can be assembled to a maximum length of 6,0 m.

The system supports use of inner liners, carvers and orange peel for higher performance.

An adapter (optional) can be added for supporting 80 mm sample tubes.

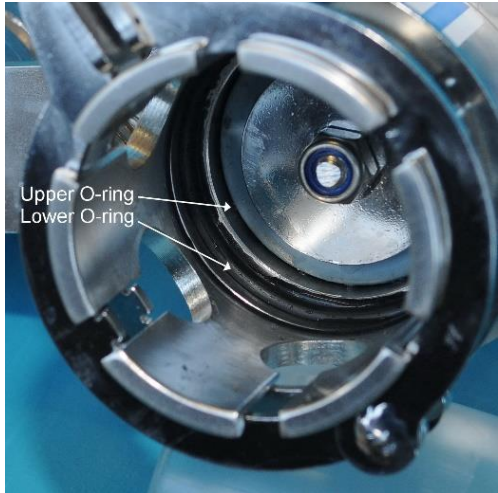




Caution

Do not use alcohol for cleaning acrylic parts

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.





Item	Preparation	
1	<p>Rinse the interior of the Kajak with fresh water. It is important, that both O-rings are clean, as they help securing the vacuum during the sampling. The rinsing will also reduce wear and tear of the O-rings.</p> <p>We recommend smearing the rubber bung and the O-rings with silicone grease (or spray) to ease the insertion of the sample tube.</p> <p>If the O-rings are cracked, worn or damaged, you can replace them using these dimensions:</p> <p>Upper O-ring: Ø55 x Ø5 mm Lower O-ring: Ø59,5 x Ø3 mm</p>	
2	<p>Place the upper part of the corer horizontally and insert the sample tube in the upper part. Press the corer tube firmly into the core head, so the end of the tube hits the upper O-ring. A rough guideline says that you must insert the upper 55 mm of the tube into the core head to secure the vacuum.</p> <p>Turn the quick lock in clockwise position. Be sure to fasten the handle to avoid losing the sample tube into the sea. Stainless steel tubes have an eye for attaching a safety line to the Kajak.</p> <p> Caution</p> <p>IMPORTANT Smear the rubber bung with a thin layer of silicone grease before use.</p>	 <p>Quick lock</p>

<p>3</p>	<p>Mount the necessary number of weights and secure the bolts. Max. mounting of 12 weights = 12 kg. Standard delivery includes 6 pcs of weights and threaded bars accordingly.</p> <p>A larger qty. of weights requires 2 threaded bars, ordering no. 13.007.</p> <p>To ensure a permanent vertical position, you must mount an equal number of weights to both sides of the weight station.</p>	
<p>4</p>	<p>Before you ease the Kajak corer over the rail, press the movable part (in which the blue rubber bung is mounted) upwards, until the 2 lock-arms slide into the notch of the bar.</p> <p>The Kajak Corer is now ready for lowering into the sea.</p>	
<p>5</p>	<p>The correct penetration of the seabed is achieved during some tests, as it depends on several conditions:</p> <p>Type of seabed, the lowering speed and the number of weights on the Kajak Corer.</p>	
<p>6</p>	<p>Hard seabed: Taking samples in a hard seabed demands a carver to protect the sample tube. Mount the carver by turning clockwise and secure. You will need tubes with threaded end to mount the carver.</p>	



7	<p>Soft seabed: For soft bottom samples, you might need the orange peel system to prevent the sample from exiting the tube. Can only be used with model 13.030 (Quick change) as it will only fit into stainless steel tube, model 13.533.</p>	
8	<p>Assembly of orange peel system and carver for the stainless steel tube. Insert the PP (Polypropylene) liner to hold and store the sample for later analysis.</p>	 <p>PP liner Carver Orange peel</p>
9	<p>When the sampling has been finished, you can seal it for later research by inserting rubber bungs at each end of the tube.</p> <p> Caution</p> <p>IMPORTANT Smear the rubber bung with a thin layer of silicone grease before use.</p>	

Ejecting the sample

10	<p>After raising the corer, dismount the carver and the orange peel system. Take out the internal acrylic or PP tube.</p> <p>For later analysis, you can secure the samples with rubber bungs or caps at the tube's end(s).</p> <p>For ejecting the sample into smaller parts, adjust the small crossbar accordingly.</p> <p>Due to small variations in the inside diameter of the pipe, it may be necessary to adjust the nut at the end of the piston. Check regularly that the nut does not come loose, so the steel bar may fall off.</p>	
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11	<p>Attach the fraction tray to the end of the sample tube and secure it by turning the wing nut. Insert the piston into the tube and push out the sample. The small plate can be used for cutting a small, thin sample of a few mm.</p>	
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Mounting the adapter for 80 mm sample tubes

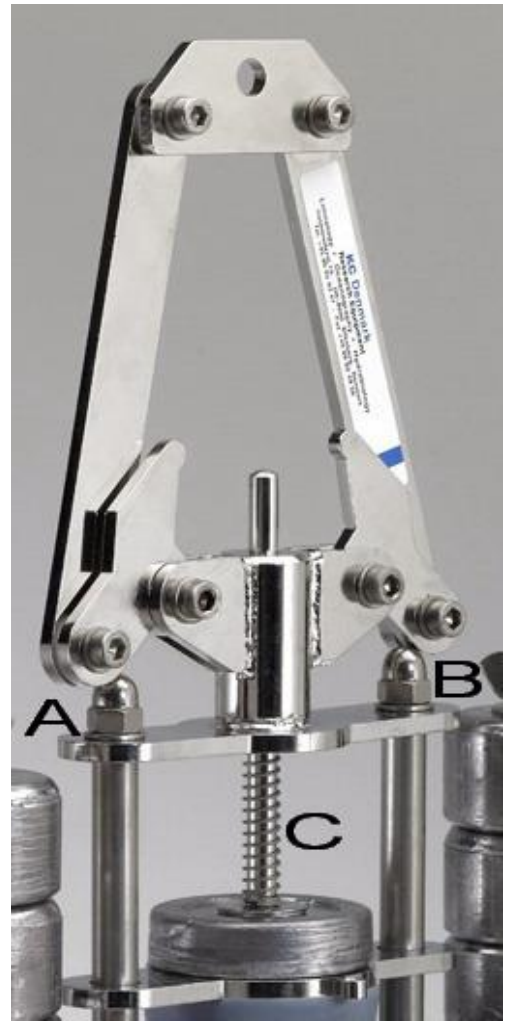
12	<p>Adapter (13.050, optional) for 80 mm tubes</p> <p>The adaptor for 80 mm tubes is mounted in the Kajak like the tubes, see item 13.</p>	
13	<p>Insert the adapter into the Kajak body as per item 1.</p> <p>Turn the handle clockwise to secure the adapter in the Kajak.</p> <p>Insert the 80 mm tube into the adapter and secure it by turning the handle in clockwise position.</p>	

Mounting the extensions poles

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When operating the Kajak in shallow lakes, the upper part of the sampler is exchangeable with a shaft (optional) to sample by manual insertion of the tube into the sediment.

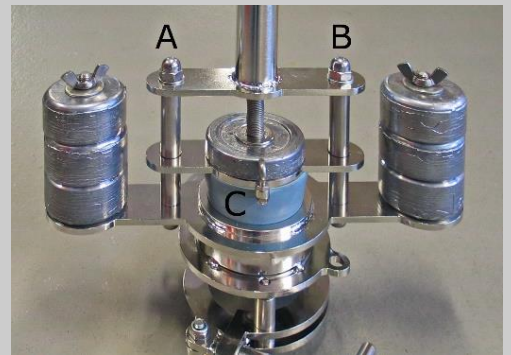
Remove the lock mechanism by unscrewing 2 nuts, A + B and removing 2 washers. The spring, C, has been loaded and you must secure it by fingers to avoid losing it.



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Push down the spring, mount the shaft and secure the nuts, A + B. Attach a polyester line, or similar, to the hook (C).

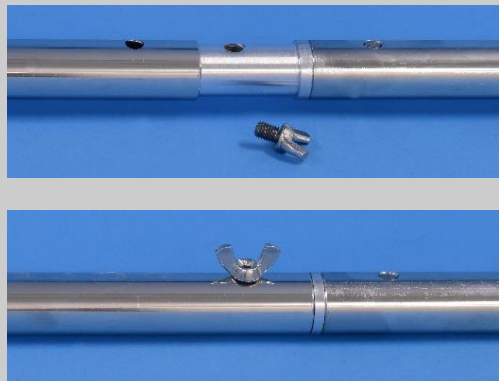
Before lowering the sampler in the sea, pull the line to allow a free flow through the sample tube. Once, you have taken the sample, release the line and the bung will close, ensuring a vacuum in the sample tube.






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The poles are made of AISI 316 stainless steel tubes, each 2,0 m. They can be assembled to a maximum length of 6,0 m.



17	<p>Assembling the shaft: Push the shafts together and align the holes. Insert the wingnut and fasten it.</p>	
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Storing and Maintenance

18	<p> Caution</p> <p>Remove the sample tube or 80 mm adapter from the core head.</p> <p>Wash all parts with fresh water.</p> <p>For storing the Kajak, please tie up the part as shown to prevent the bung from being jammed in the stainless steel top. Otherwise, it is very difficult to separate the parts as the bung might expand a little.</p> <p>All parts of the item can be rinsed using salt water or fresh water. Before storing, we recommend a thoroughly cleaning with fresh water.</p> <p> Caution</p> <p>Do not use alcohol for cleaning acrylic parts.</p> <p>Items, like PP/PVC/acrylic tubes, rubber seals, motor houses with or without Fluorinert, etc., and a long exposure to direct sunlight or lack of clean up for salt water might affect the durability and stability of the products and will remain uncovered by the warranty.</p>	
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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.

When working with 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.

Rev.: May 24, 2022 - lkj

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