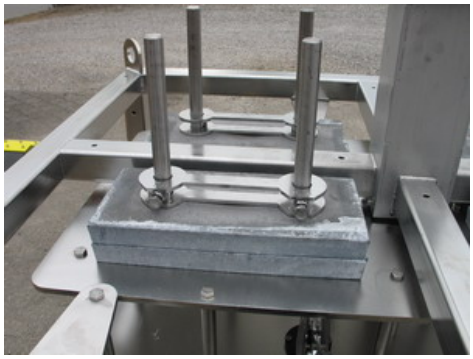
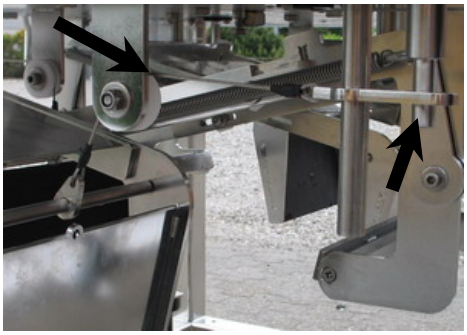
KC Multi-corer, 4/6 x ø110 mm
Model 72.000 – 73.000

Manual

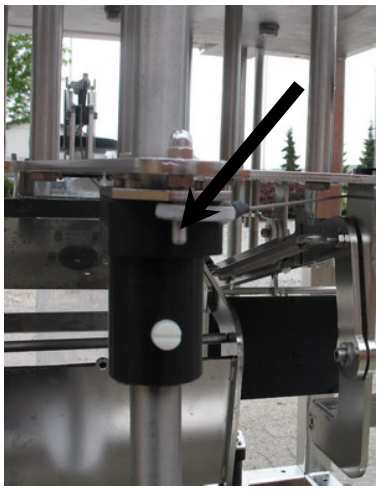
KC Denmark

Research Equipment
Limnology • Oceanography • Hydrobiology

	Manual for multi corer, 4/6 x ø110 mm	Model no. 72.000 – 73.000
	Caution **This multi corer is very dangerous in unskilled hands and serious precautions must be taken to avoid accidents.** **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.** **Never walk under the multi corer, when lifted up by the winch.**	
	Preparation:	
1	The upper part of the multi corer now has to be hitched on the lifting hook from the crane. Lift the multi corer out from the transport pallet.	
2	Caution Check up that the safety clamp is placed correctly at the top of the rack. Always mount the clamp when possible to avoid any accident.	

3	Mount the necessary amount of lead weights on the platform and do not forget to secure the position by fastening the 2 bolts on each bracket. The amount of weights must be equal to all weight stations to ensure a properly lowering and penetration of the seabed. Maximum mounting: 640 kg. (32 weights, each 20 kg).	
4	Before inserting the tubes, all shovels must be forced backwards.	
5	The wire on the bottom of the shovel has to run on the small wheel (upper arrow) and the end is secured to the small pin, (lower arrow).	
6	Open the lid and push the sample tube into the bracket. The sleeve of the tube must fit into the gap between the plates.	

7	While turning the handle to the right, push it into the fork of the bracket. Turn the handle clockwise until the tube is secured.	
8	The lid is open and the photo shows the correct mounting of the tube. All lids must remain open.	
9	The black plastic holder on each vertical bar is lifted to the upper position. A small wire is mounted at the lid of each tube and the end of this wire must be attached to the small pin.	

10	Caution It is very important the wire is attached **under** the plate as shown on the photo. Incorrect mounting between the plates will hinder the closing of the lid.	
11	Now the multi-corer is ready for operation. **When the multi corer is outside the rail, remove the safety clamp.** Lower the rack to the seabed.	
	Brief characteristic of the function:	
12	While the multi corer is lowered into the water, there is a full flow through the sample tubes in order to obtain an undisturbed sample. The top of each sample tube has a spring-loaded lid, which is in open position during the sampling. When the sample has been taken the lid will close and the vacuum will hold the sample. Upon raising the multi corer and as soon as the tubes are leaving the sediment, a spring-loaded shovel is pressed in position under the sample tubes. It turns down, having a space of approx. 1 cm to the end of the sample tube. Finally the shovel is lifted to avoid exit of the sample.	 The lid has been closed  Closing at the end of the tube

13	Caution **When the sample has been taken and you raise the multi-corer, it is very important to mount the safety clamp as soon as possible and <u>before re-moving the sample tubes.</u>**	
14	The position of the shovel when the sample has been taken. Open the lids and secure with the wires. Loosen the handle and take out the sample tube.	

15	Caution Always remember to mount the safety clamp during transport or working with the multi-corer.	

Samples

Photographer: Stig Monsen, Researcher, Havforskningsinstituttet, Bergen, Norway.

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

	Troubleshooting
14	When using the corer, you might encounter problems with the sampling. If the sediment is too soft, it will not be able 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 bottom of 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 to add more weights to the weight station. 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.

	Technical information	
	Materials:	
	All metal parts:	AISI 304 stainless steel. Finish: Electro polish.
	Dimensions, model 72.000	
	Length x width x height: Loaded, ready for use:	132 x 106 x 188 cm
	Weight, standard delivery: (Inclusive 8 lead weights, each 20 kg).	470 kg
	Weight, maximum, inclusive 32 pcs of lead weights, each 20 kg:	950 kg
	Dimensions, model 73.000	
	Length x width x height: Loaded, ready for use:	178 x 126 x 210 cm
	Weight, standard delivery: (Inclusive 8 lead weights, each 20 kg).	510 kg
	Weight, maximum, inclusive 32 pcs of lead weights, each 20 kg:	990 kg
	Tubes:	
	Corer tubes:	Diameter: 110/105 mm. Shock-proof polycarbonate. A small adapter (optional) allows use of tubes with smaller diameter.
	Length of tube: Model 72.000:	500 mm, ± 2 mm
	Length of tube: Model 73.000:	800 mm, ± 2 mm
	Sleeve of the tube:	Max. 122 mm
	Penetration: Model 72.000	Max. 35 cm
	Penetration: Model 73.000	Max. 50 cm
	Operational depth:	
	Full oceanographic depth,	>6000 m (No limits).

Other parts recommended for model 72.000					
Order no.	Pcs.	Product	Net. weight		
72.001	1	Lead weight, 20 kg each, maximum mounting 32 pcs. (Standard delivery includes 8 weights).	20 kg		
72.002	1	Core tube, shockproof polycarbonate, O.D. ø110 mm, I.D. 105 mm. Length 500 mm			
72.020	1	Adapter for smaller tubes. Upon order please specify diameter of tube. Exclusive sample tube.			
72.030	1	Spare parts kit, contents the following parts: 1 pc top lid (POM), 1 pc silicone seal, 2 pcs springs, release wire,			
72.040	1	Security lock			
Other parts recommended for model 73.000					
72.001	1	Lead weight, 20 kg, each, maximum mounting, 32 pcs. (Standard delivery includes 8 pcs).	20 kg		
73.002	1	Core tube, shockproof polycarbonate, ø110 mm/ø105mm, length 800 mm			
72.020	1	Adapter for smaller core tubes. By ordering please specify diameter of tube. Exclusive sample tube.			
73.030	1	Spare parts kit, contents the following parts: 1 pc top lid (POM), 1 pc silicone seal, 2 pcs springs, release wire,			
73.040	1	Security lock			

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E-mail: kc@kc-denmark.dk website: http://www.kc-denmark.dk/
Holmbladsvej 19 – DK-8600 Silkeborg – Denmark - Tel. +45 86 82 83 47 – Fax +45 86 82 49 50
Bank: Sydbank – S.W.I.F.T. SYBKDK22 IBAN DK5070460000104832 or
Bank: Danske Bank – S.W.I.F.T. DABADKKK IBAN6730003462779860
VAT no. DK 29 61 96 62