

Rosette with 12 Glass Bottles

Model 100.270

Manual

KC Denmark A/S

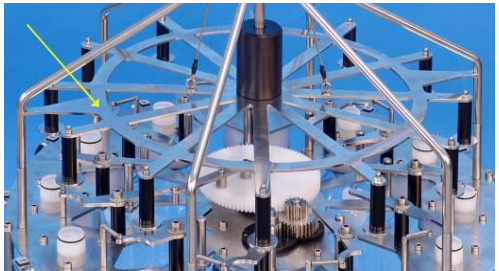


Research Equipment
Limnology • Oceanography • Hydrobiology



Rosette with 12 Glass Bottles

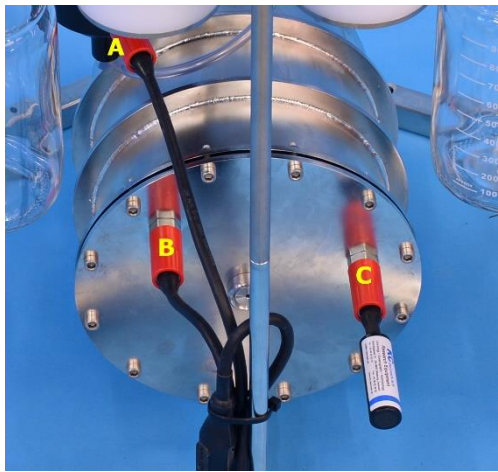





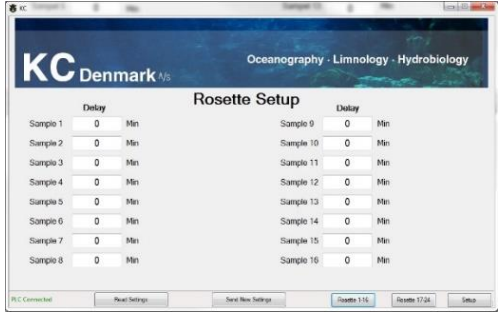
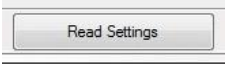
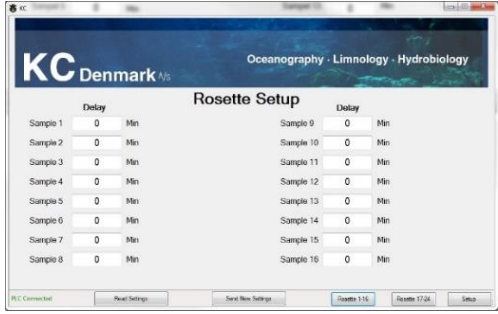
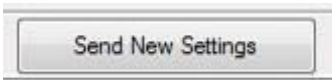
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The rosette includes 12 glass bottles and, when deployed all bottles are closed. A programmable time-lapse trigger opens the bottles one by one, using a pre-defined delay. Once all bottles are open, a drop messenger performs a manual closing of the bottles to avoid any contamination when raising the sampler through the water column.

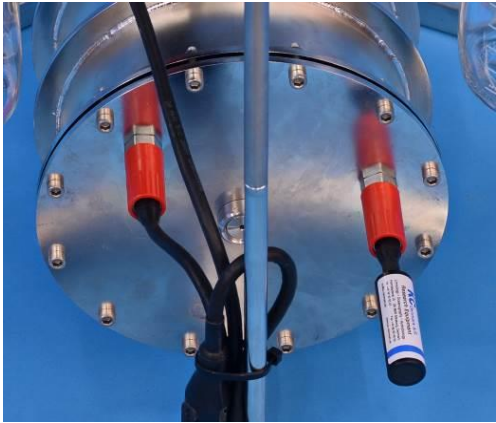
Item	Loading the sampler	
1	Lift the circular closing mechanism.	
2	While holding the closing mechanism, press down the black item "A" and insert "B" and "C" onto the two locking pins; once inserted, release "A".	
3	If the white studs are open, please attach the white stoppers as per next item.	



4	Attach the white stoppers.	
5	Use 12 standard glass bottles and screw them into position, one by one.	

Programming the delay		
6	<p>Connect the 5-conductor cable from the motor "A" to the battery cylinder "B".</p> <p>Charge the battery by inserting the 8-conductor cable to the Battery Charger connector "C". A fully discharged battery requires charging for 8-10 hours, approx. The charger contains advanced electronics preventing overcharging even if connected for a long time.</p> <p>The SubConn connectors requires regular greasing with Molykote, see recommendations on page 7-10.</p> <p>"C" shows the programming plug (attach it, once you are ready to deploy the sampler).</p>	
7	The tablet comes with pre-installed software for the programming. Once charged replace the charger cable with the USB cable and connect to USB on the tablet.	

8	Run the KC program on the tablet's desktop.	
9	<p>The software detects the hardware and the label "PLC Connected" (located at the screens lower, left corner) turns green.</p> 	
10	<p>If "PLC Connected" turns red, there is no connection. Follow these instructions:</p> <ol style="list-style-type: none"> 1. Disconnect USB cable and battery supply if connected. 2. Close Program on tablet. 3. Connect USB cable to tablet and KC timer. 4. Click the KC icon on tablet. 	
11	<p>Assuming the connection is correct you are now ready to program the individual delays.</p> <p>Click on the icon "Read Settings"</p> 	
12	<p>The sampler has a short delay of 1 min. for the first sample. If delay for sample 1 is set to "0", the sampler starts immediately after the delay.</p> <p>If you estimates that, the deployment to the desired depth takes 5 minutes you may enter the value "5".</p> <p>All remaining samples may have various delays between every sample. You can enter an individually delay in the range of 1 min. to 600 hours for every sample but keep in mind, that the battery capacity may be insufficient for very huge delays.</p>	
13	When programming is finished, press button "Send New Settings"	

Loading the mechanical release		
14	Insert the deployment line at top of the sampler.	
15	Pull the line through the stainless steel tube and insert the tube on top of the locking mechanism.	

Deploying the sampler		
16	<p>Max. deployment depth is 200 m.</p> <p>Once you are ready to deploy the sampler, start the time-lapse trigger by inserting the programming plug (shown to the right).</p>	

17	After the sampling has finished, slide down the drop messenger along the line to activate the mechanical closing of the bottles.	
18	All samples are now closed. Raise the sampler and unscrew the bottles for further examination.	

Maintenance		
19	<p>After use or before storing:</p> <ol style="list-style-type: none"> 1. Wash all parts thoroughly with fresh water. 2. For maintenance of the SubConn connectors, see pg. 7-10. 3. The motor and battery cylinder: Do not expose to direct sunlight for a long time. 4. An expert maintenance technician fully familiar with the attendant hazards must only do all maintenance, inspection and repairs. 5. 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. 6. Replace worn component with original spare parts. 	

Rev.: November 21, 2022 - lkj



SubConn® Handling instructions

Follow these instructions carefully to ensure correct use of your SubConn® connectors.

Handling

- Connectors must be greased with Molykote 44 Medium before every mating
- Always grease O-rings on BH, BCR and FCR connectors with Molykote 111
- Disconnect by pulling straight out, not at an angle
- Do not pull on the cable and avoid sharp bends at cable entry
- When using a bulkhead connector, ensure that there are no angular loads
- Make sure to apply the recommended torque when tightening bulkhead nuts
- SubConn® connectors should not be exposed to extended periods of heat or direct sunlight. If a connector becomes very dry, it should be soaked in fresh water before use

Scan to access
SubConn® greasing
and cleaning
instruction videos



Greasing products



Molykote 44 Medium

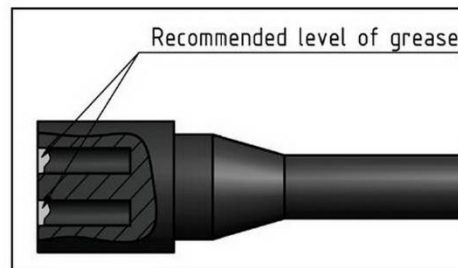


WD-40
or similar products



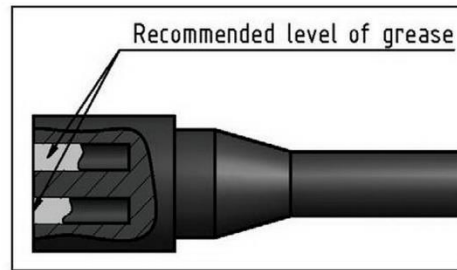
Compound
or similar greasing
products

Greasing and mating above water (dry mate)



- Connectors must be greased with Molykote 44 Medium before every mating
- A layer of grease corresponding to a minimum of 1/10 of the socket depth should be applied to the female connector
- The inner edge of all sockets should be completely covered, and a thin transparent layer of grease left visible on the face of the connector
- After greasing, fully mate the male and female connector in order to secure optimal distribution of grease on all pins and in the sockets
- To confirm that grease has been sufficiently applied, de-mate and check for grease on every male pin. Then re-mate the connector

Greasing and mating under water (wet mate)



- Connectors must be greased with Molykote 44 Medium before every mating
- A layer of grease corresponding to approximately 1/3 of a socket depth should be applied to the female connector
- All sockets should be completely sealed, and a transparent layer of grease left visible on the face of the connector
- After greasing, fully mate the male and female connector and remove any excess grease from the connector joint

Cleaning products



- * General cleaning and removal of any accumulated sand or mud on a connector should be performed using spray based contact cleaner (isopropyl alcohol)
- New grease must be applied again prior to mating

Use of Loctite

- Always use Loctite 5910 to lock non-metallic (PEEK) connectors
- For locking metallic connectors, the use of Loctite 243 is recommended



COAX connector

- Only grease the rubber parts - do not grease coax pin and socket
- Do not mate under water. To be used with locking sleeves only

Bulkhead Connectors - Tightening force

Type	Material	Rec. Torque - Nm
3/8" - 24 UNF	Brass, aluminium	4.0
	Stainless steel, titanium	6.0
	PEEK	2.0
7/16" - 20 UNF	Brass, aluminium	10.0
	Stainless steel, titanium	14.0
	PEEK	4.2
1/2" - 20 UNF	Brass, aluminium	15.0
	Stainless steel, titanium	21.0
	PEEK	5.2
5/8" - 18 UNF	Brass, aluminium	29.0
	Stainless steel, titanium	41.0
	PEEK	10.0
3/4" - 16 UNF	Brass, aluminium	44.0
	Stainless steel, titanium	63.0
	PEEK	15.0
7/8" - 14 UNF	Brass, aluminium	60.0
	Stainless steel, titanium	80.0
	PEEK	20.0
1" - 14 UNF	Brass, aluminium	75.0
	Stainless steel, titanium	100.0
	PEEK	25.0

Recommended oil for pressure balanced systems

- MacArtney recommend DC-200/350 or PMX-200/350 in oil compensated systems

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KC Denmark A/S

Research Equipment
Limnology • Oceanography • Hydrobiology

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