





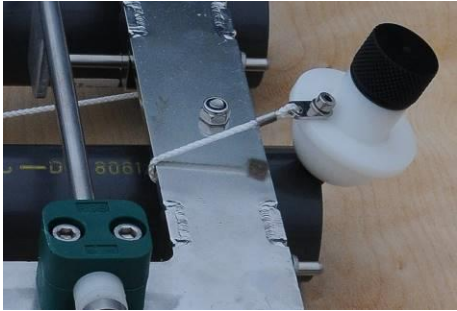
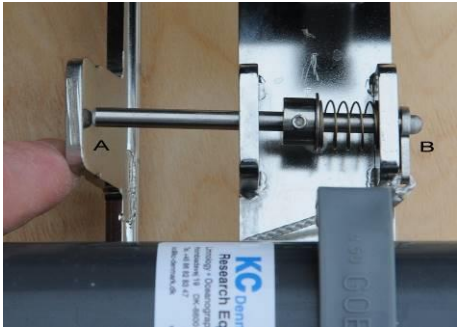
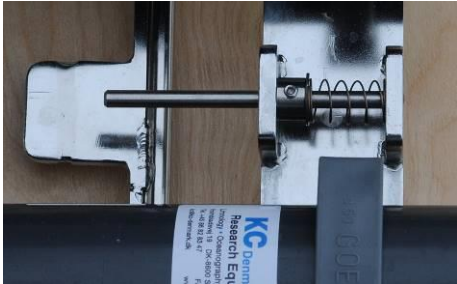
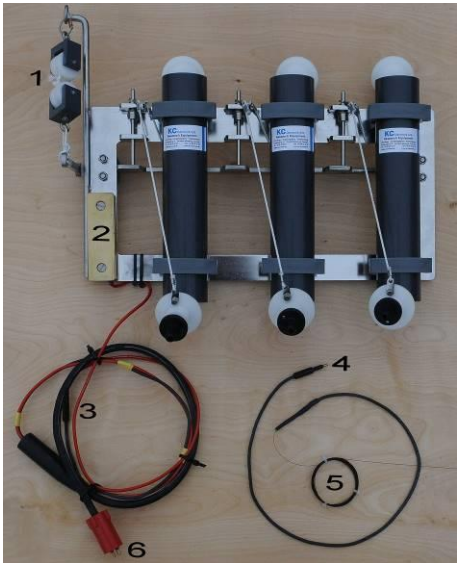
Niskin water sampler 3 x 250 ml
Model 100.148

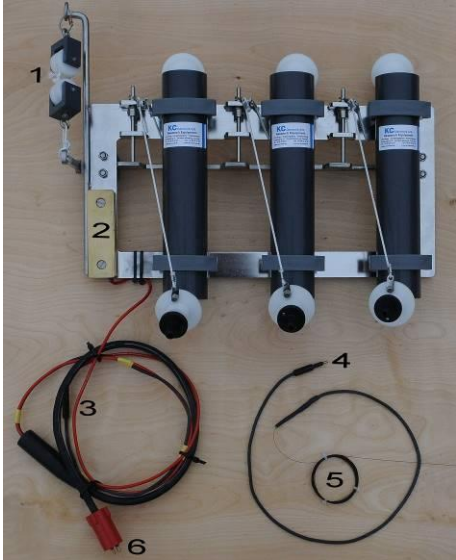

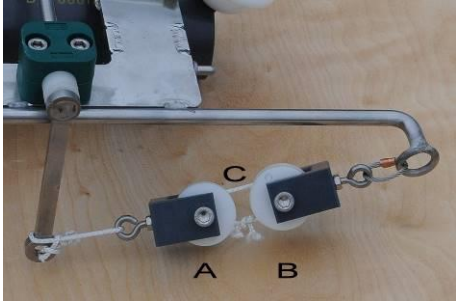
Manual

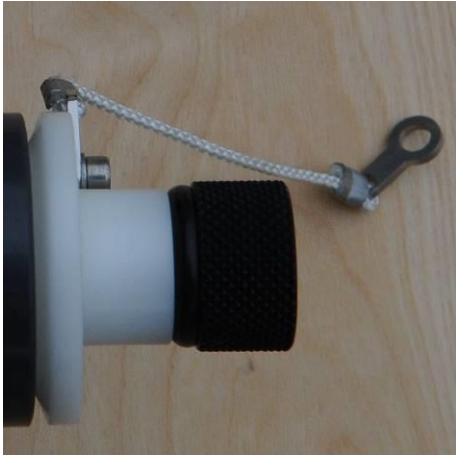

KC Denmark A/S

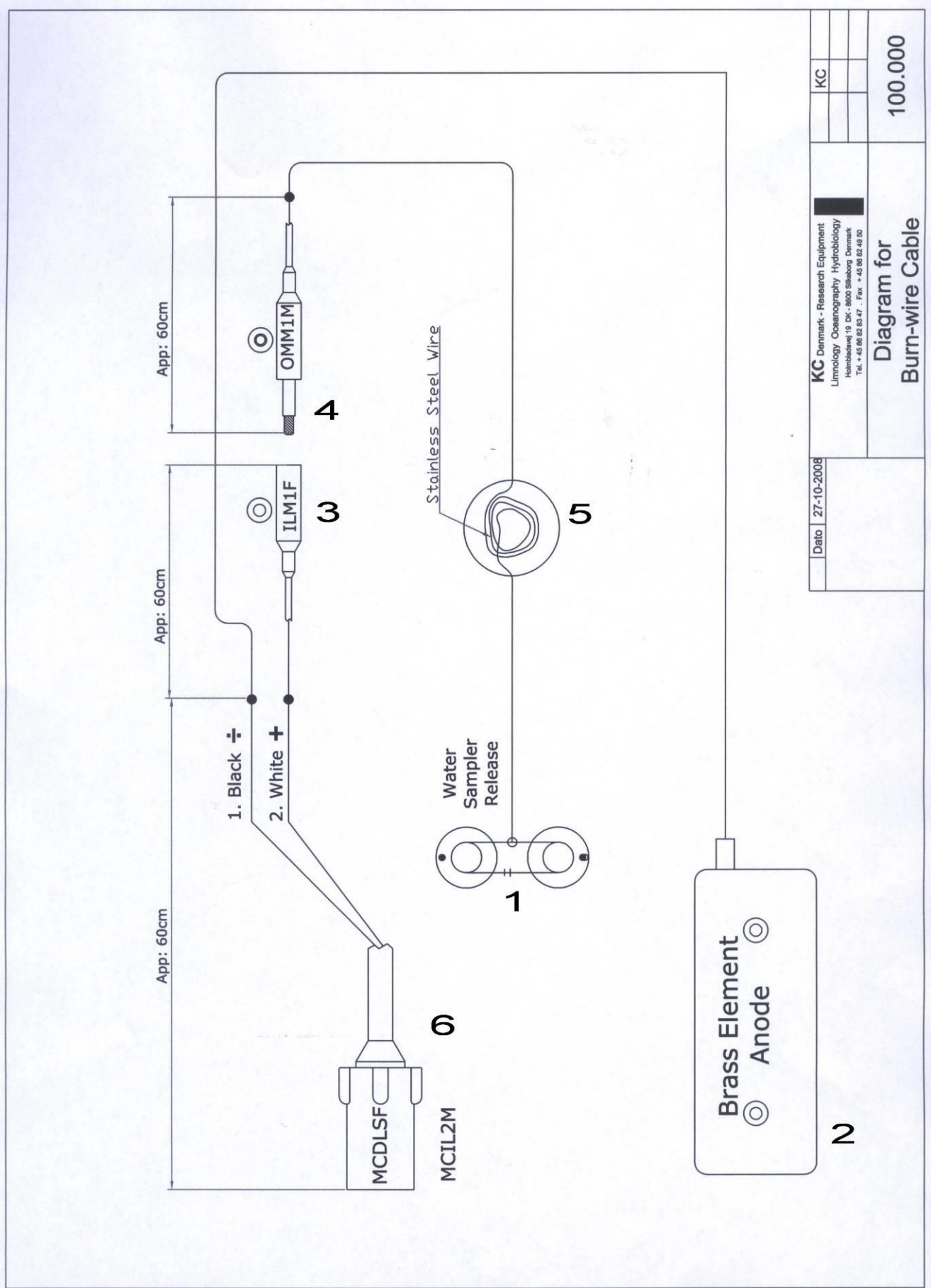
Research Equipment
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	<p align="center">Manual for Niskin water sampler, 3 x 250 ml</p>	<p align="center">Model no. 100.148</p>
	<p>Preparation:</p>	
<p>1</p>	<p>Each sampler must be loaded correctly. See item 3/4.</p>	
<p>2</p>	<p>The line for the bottom lid will pass at the top of the main rack and the line for the top lid must pass at the reverse side.</p>	

3	A close up showing the mounting of the line for the top lid (at the reverse side of the rack).	
4	While pressing the release arm (A) secure both lines from the Niskin bottle to the pawl (B)	
5	When the releaser is activated, the pawl falls back and releases the lines.	
<h2>The Burn Wire System</h2>		
6	<p>Brief characteristic for the burn wire system:</p> <p>The burn wire link (5) is a small loop of stainless steel wire encapsulated in a holder with 2 wheels (1). The burn wire (erosion link) will release the water sampler by a fast electrolytic erosion of the exposed stainless steel part of the loop (C – see item 7) and the anode (2), thereby freeing the release bracket. This occurs when a positive voltage is connected to it by an internal electronic timer (computer or similar, none of these are part of standard delivery).</p> <p>The burn wire itself is partially coated with an epoxy coating to restrict the intended erosion to two points at the base of the loop to speed the release and save on battery drain.</p> <p>The burn wire must be replaced after every release.</p>	

<p>7</p>	<p>The burn wire system includes: (The corresponding numbers can also be found on the schematics, pg. 6).</p> <ol style="list-style-type: none"> 1. The release mechanism 2. The brass anode 3. Female connector for the burn wire 4. Male plug for the burn wire 5. The burn wire 6. Subconn connector 	
<p>8</p>	<p>The polyester line secures the release system during shipping. Cut the line, mount the free end of the burn wire (5) in the same way, and secure with a knot. Do not cut the line.</p> <p> Caution</p> <p>You must remove the encapsulation for a length of approx. 5 mm. (C) A small knife will do the job.</p>	
<p>9</p>	<p>Connect the plugs 3 and 4. The SubConn connector (6) goes to the computer or the electronic timer. Now the unit is ready.</p>	

Emptying the sampler		
10	Keep the sampler in upright position. Loosen the air valve at the top of the sampler.	 A close-up photograph of the top of a Niskin water sampler. The device is white and black. A black, textured cylindrical cap is being pulled away from the top of the white plastic housing. A white braided rope is attached to the top of the housing, and a metal ring is visible on the right side.
11	The bottle can now be emptied by pulling the valve backwards (5-6 mm).	 A close-up photograph of the Niskin water sampler with the black cap removed. The black valve handle is being pulled back, away from the white plastic housing. The white braided rope is visible at the bottom of the frame.



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Diagram for Burn-wire Cable			100.000



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

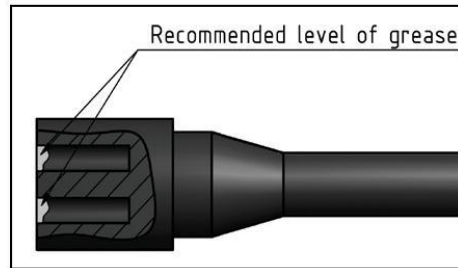


WD-40
or similar products



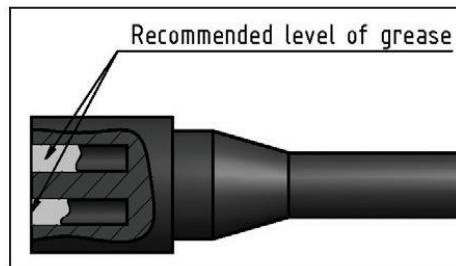
Compound
or similar greasing
products

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

11-2018

Maintenance	
	<p>For certain items, (PVC tubes, rubber bands and rubber seals), 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> <p>All parts of the Niskin water sampler 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.</p>

Technical information	
	<p>Materials, main rack: AISI 316 stainless steel. Finish: Electro polish. Anode for burn wire: Brass</p>
	<p>Tubes:</p> <ul style="list-style-type: none"> • Contents: 3 x 250 ml • The water sampler tube is made of PVC. • The top and bottom lids are made of POM, • O.D /I.D Ø50 mm/Ø38 mm • Length: 250 mm • The top and bottom lids are held together with a rubber tube (Para/Latex).
	<p>Release system: To be released by a burn-wire system (optional).</p>
	<p>Operational depth: >6000 m (No limits).</p>

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