

Epibenthic Sledge – 80 x 30 cm

Model 19.750

Manual

**KC** Denmark A/S

Research Equipment

Limnology • Oceanography • Hydrobiology

## Epibenthic Sledge – 80 x 30 cm

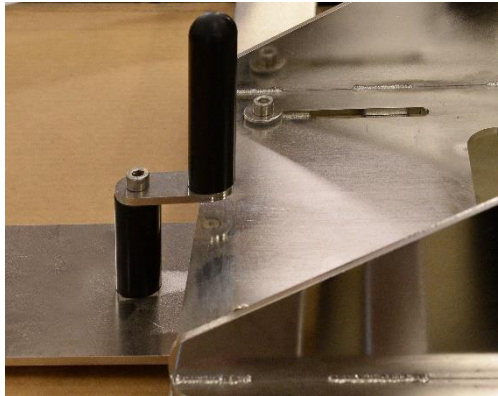





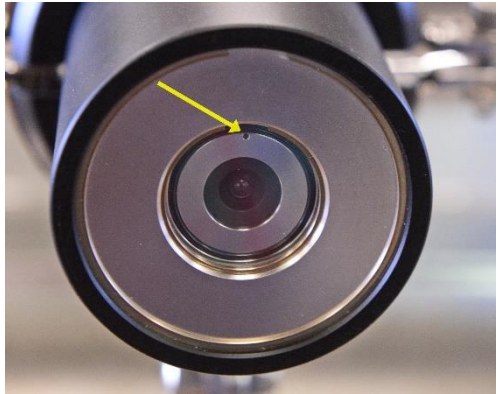

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### General:

A mechanically operated flap closes the net during deployment and opens when the sledge touches the bottom. The net will also collect the organisms in the water column just above the benthos (25 cm above the seabed).

Optional: A video camera with battery cylinder and light can be attached to the frame.

Item	Preparation	
1	<p>Turn the handle to release the mechanical closing mechanism.</p> <p>The steel door at front is closed during the deployment.</p>	
2	<p>The front has more drag anchors so you can configure the height of your drag.</p>	
3	<p>Deploy the sledge using the standard methods for similar deployments.</p>	

<b>Camera Option</b>		
4	The camera option includes all necessary parts and it can be used for a maximum depth of 500 m.	
5	<p>The battery cylinder has 3 holes for the mounting. Align the holes on top of the sledge and attach the cylinder using the threaded bars on the lamps and the camera.</p> <p>Before you tighten the nuts firmly, you may run a quick test to find out, if the positions are correct.</p>	
6	Adjust the camera so the red dot is located in upper position. The adjustment ensures a correct, horizontal recording angle for the camera.	
6	Grease the Subconn connectors with Molycote 44 before connecting; see the guide on page 5-8.	
7	<p>As standard, the battery isn't fully charged on delivery; but it may have sufficient capacity for testing the lamps.</p> <p>Otherwise, connect the charger and allow 10 hours for the first charging. The charger has a built-in protection, so the battery cannot be overcharged.</p> <p>The camera has a built-in battery and you can charge it using the small, black charger. As a guideline, one hour of charging allows 6 hours of recording. A fully charged battery (3 hours) provides 10 hours of recording. Once the charging is finished, the charger's green LED lights constantly.</p>	

8	Connect the split cable from the battery to the lamps and the light is on.	
9	Insert the plug in the camera and the recording starts within 2-3 secs. The red LED on top of the camera blinks during the recording.	
10	<p>Record for a few seconds, pull out the plug and connect the USB cable to a PC. Using Windows pathfinder you will see a drive called "LH-Camera". Direct access with other pathfinders may show a folder called "DCIM", in which you will find the movie.</p> <p>Play the movie and check if the recoding angle seems to be correct; it may be necessary doing some attempts and adjustments. Testing in a darkened room gives a better idea for the light's maximum useable range.</p> <p>The camera does not allow live view via the PC, so you must repeat the steps doing a new recording.</p> <p>Once finished, fasten the camera and light.</p>	

<b>Maintenance</b>	
11	<p><b>IMPORTANT</b>  <b>After use or before storing: Always wash the sledge using fresh water.</b></p> <p><b>Give the plankton net proper care and maintenance. Do not let particulate matter dry on the net because it can significantly reduce size of mesh apertures and increase frequency of clogging.</b></p> <p><b>Wash net and collecting bottle thoroughly with water after each use. Periodically clean with a warm soap solution. It is also advisable letting the net bag to air-dry after washing.</b></p> <p><b>Regularly check if the Subconn connectors needs re-greasing with Molycote.</b></p>

Rev.: October 24, 2018 - lkj



## SubConn® handling instructions

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

### Handling

- Always apply grease before mating (see next page)
- Disconnect by pulling straight, 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
- Do not over-tighten the 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

### Untagged cable and pigtail colour coding

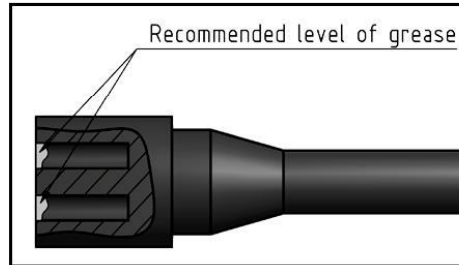
#### 2 - 25 pin connectors (excluding 3 pin connectors):

1 Black	7 White / Black	13 Red / White
2 White	8 Red / Black	14 Green / White
3 Red	9 Green / Black	15 Blue / White
4 Green	10 Orange / Black	16 Black / Red
5 Orange	11 Blue / Black	17-25 Tagged numbering
6 Blue	12 Black / White	

#### 3 pin connectors:

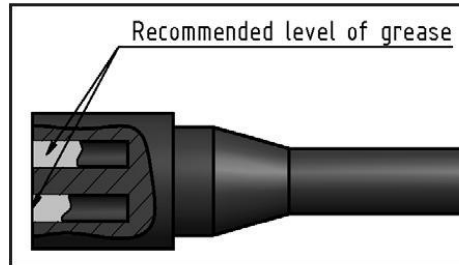
1 Black	2 White	3 Green
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## Greasing and mating above water (dry mate)



- Connectors must be greased with Molykote 44 Medium before every mating
- A layer of grease corresponding to minimum 1/10 of 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 pins and in 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 socket depth should be applied to the female connector
- All sockets should be completely sealed, and 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

- 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

Scan to access  
SubConn® greasing  
and cleaning  
instruction videos



## Bulkhead Connectors

### Tightening force

Type	Material	Rec. Torque - Nm
3/8" - 24 UNF	Brass, Aluminium	4,0
	Stainless Steel, Titanium	6,0
	Non-metallic (Peek)	2
7/16" - 20 UNF	Brass, Aluminium	10,0
	Stainless Steel, Titanium	14,0
	Non-metallic (Peek)	4,2
1/2" - 20 UNF	Brass, Aluminium	15,0
	Stainless Steel, Titanium	21,0
	Non-metallic (Peek)	5,2
5/8" - 18 UNF	Brass, Aluminium	29,0
	Stainless Steel, Titanium	41,0
	Non-metallic (Peek)	10,0
3/4" - 16 UNF	Brass, Aluminium	44,0
	Stainless Steel, Titanium	63,0
	Non-metallic (Peek)	15
7/8" -14 UNF	Brass, Aluminium	60
	Stainless Steel, Titanium	80
	Non-metallic (Peek)	20

### Use of Loctite

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

For further support and advice, please contact your local SubConn® distributor or MacArtney ([www.macartney.com](http://www.macartney.com))

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