

KC Winch
Model 40.230 – 18,5 kW

Manual

KC Denmark A/S

Research Equipment
Limnology • Oceanography • Hydrobiology

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**Manual for
Winch, 18,5 kW**

**Model no.
40.230**



EVERY CORNER OF THE WINCH HAS AN EYE - DO NOT USE THESE 4 EYES FOR LIFTING THE WINCH, AS IT WILL VOID THE WARRANTY.

This winch is very dangerous in unskilled hands, and you must take serious precautions to avoid accidents.

The safety cover must always be in the secured position to avoid any contact with the drum and the wire during operation.

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.

Before operating the winch for the first time, always check the lubricant level for the gearbox, see item #15.





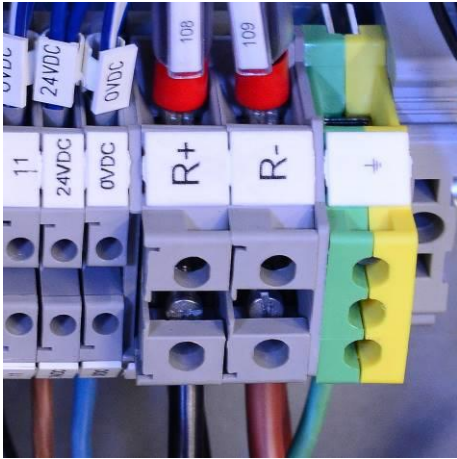
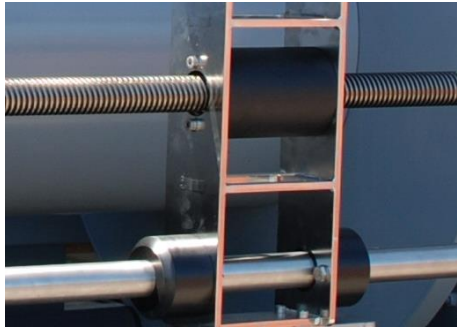
Preparation:




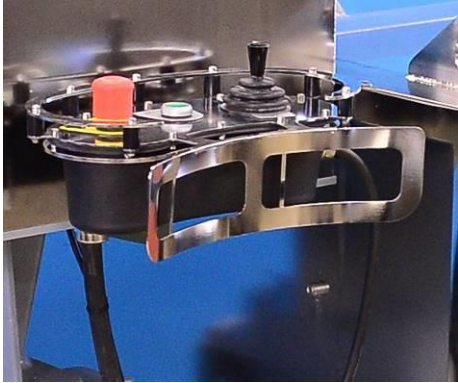

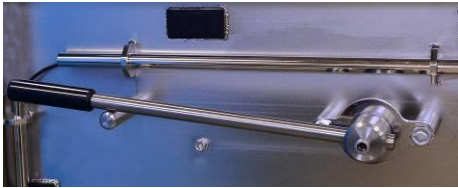
The winch has 5 additional stands; remove these before installing on the deck. Secure the winch on a plain and stable surface before use.

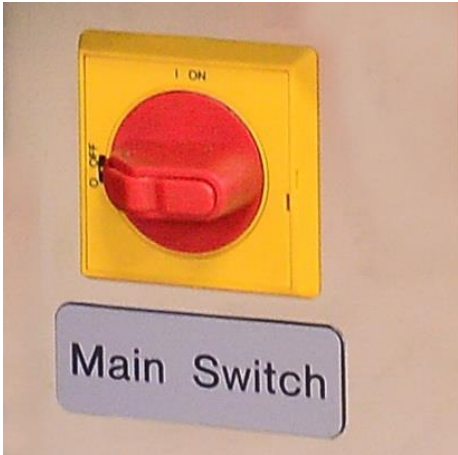

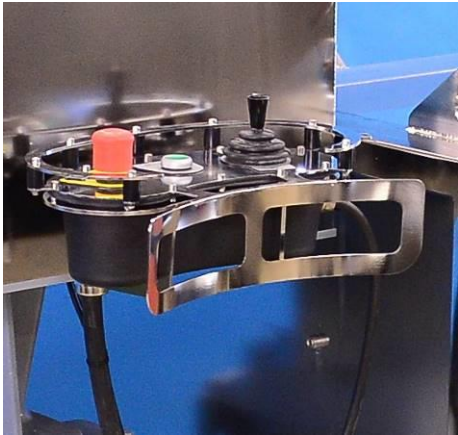

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Fasten with 5 bolts. To avoid any damage or injury, you must ensure free space for the wire in all positions.



<p>2</p>	<p>Install one set of brake resistors inside the ship in a well-ventilated place and protect it from rain and humidity.</p> <p>The resistors may become very hot, so you must consider for the local environment and protect it from contact, as it may cause injury to people.</p> <p>Connect the resistors properly; otherwise, the winch is not operational.</p>	
<p>3</p>	<p>Remove the cover at end of the resistor and connect a 3-conductor cable to RB1, RB2 and ground. Use a cable with a minimum size of 6 sq. mm.</p> <p>If the length of cable exceeds 20 m, increase the cable to 3 x 10 sq. mm.</p> <p>Secure the cable properly with the strain relief. Attach the cover to the junction box.</p>	
<p>4</p>	<p>Connect the 3 wires from the brake resistor to the screw terminal board, marked R+ and R- and ground.</p> <p>The resistor has no demands for the polarity, so you can just connect the 2 wires.</p> <p>It is very important, that you also connect the ground.</p> <p>The photo shows a thinner cable and is only for illustration purpose.</p>	
<p>5</p>	<p>Grease the spindle and the guiding system with consistent grease.</p>	

<p>6</p>	<p>Power supply for the winch</p> <p>Ensure the proper power supply is available.</p> <p>Standard delivery demands: 3 x 400 V AC/50 Hz + ground. Recommended fuse for the ship's control panel: 50 Amps.</p> <p>Faulty connection or voltage may damage the winch and void the warranty.</p> <p>Connect the power supply to the EEC plug and turning the switch clockwise will turn on the power.</p>	
<p>7</p>	<p> Caution</p> <p>The winch has 3 emergency stops, 2 of them located at each end of the winch and the last one on the handheld manoeuvre box. Pushing one of the stops will activate the winch's brake system immediately.</p> <p>The remote control has an adjustable belt, so you can wear it around your neck.</p> <p>Once the emergency stop is activated, pull the button backwards to continue use of the winch.</p>	 
<p>8</p>	<p> Caution</p> <p>Loosen the mechanical emergency break before use by turning anti clockwise until it stops. Otherwise, you might cause serious damage to the winch.</p>	

<p>9</p>	<ol style="list-style-type: none"> 1. Turn the main switch clockwise to position 1. See item 6 for location of the switch. 2. On the remote control, press the green "Activate" button. 3. The joystick controls the wire direction and the speed of the winch. The more you press the higher speed. 	
<p>10</p>	<p> Caution</p> <p>When changing direction of the wire, return the joystick to neutral position. It is very important the drum has stopped before you activate the joystick in the opposite direction.</p> <p>By emergency or in need of a fast stop press the emergency switch and the winch will stop immediately. Two emergency switches are located on the winch, one switch at each end.</p> <p>Once activated, pull the button backwards to continue use of the winch.</p>	
<p>11</p>	<p>The warning light flashes as soon as you activate the joystick.</p>	

Meter and speed counter

Standard delivery of the winch does not include a counter. Adding a counter demands a meter wheel, too. A standard counter will count the meter length with a resolution of 10 cm. Optionally it can be replaced by a 2-display counter measuring the length as well as the speed of the wire.

Power supply:

The counter needs an external power supply of 10 – 24 V AC or DC. Power consumption: Max. 200 mA. Upon request it can be delivered with built-in batteries, power supply or charger.

Connection for power supply:

Brown and blue wire: 10 – 24 V AC or DC.
No need for polarity. Yellow/green wire: Earth.
No needs for connecting to ground.

Before inserting the cable on the meter wheel check out the counting direction of the wheel by manually turning of wheel.

Connection for meter wheel:

Attach the Subconn connector to the meter wheel.

Operation:

Push the green button to start the counter and the night visibility.

When you lower the equipment and it hits the sea level, you can reset the counter to zero by pushing the red button.

The display:

The display will show the cable length with a resolution of 10 cm. Built-in light for night visibility and for easy read-out even in strong sun light.

The digits:

The very first digit will show a maximum of 3 bars. The upper and lower bar indicates the counting impulses and at the middle the bar will show the power supply has been connected.

Heating element:

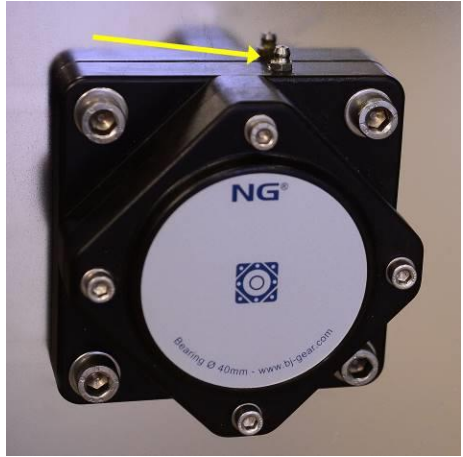
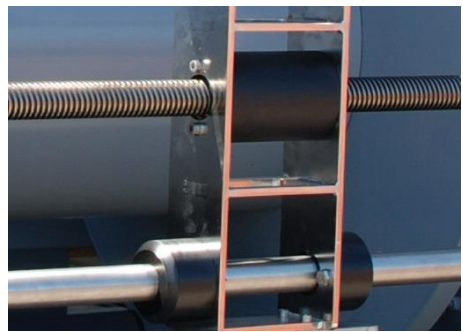

The counter has an internal heating element to prevent condensate water. (Always connected, regardless of the position of the green button).

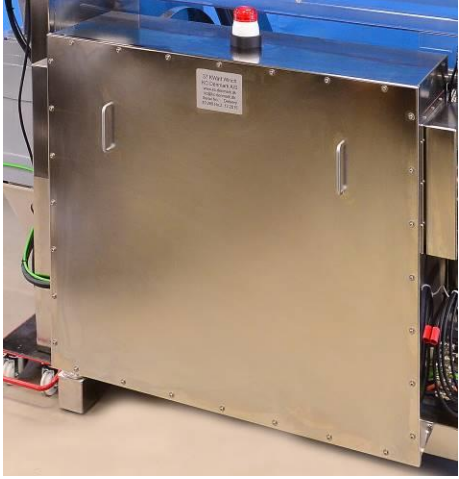
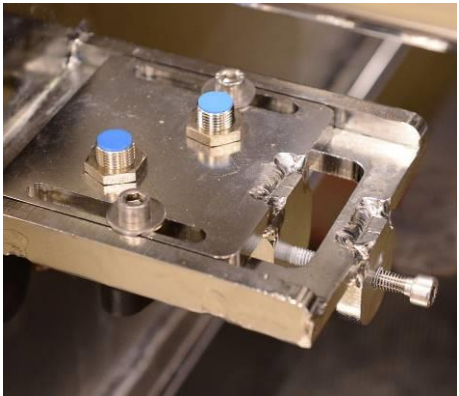


Interface:

The counter can be equipped with various interfaces for RS-232, RS-485 or for USB. On request, special software can be offered.



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Maintenance		
13	Every 6 months, grease the ball bearing located on left side of the motor.	
14	Grease the spindle and the guiding system when needed.	
15	<p>For the gearbox, check the status of lubricant oil periodically. Check that the correct level has been reached via the sight glass. Max. 50 % visible through the glass. Top up as necessary. Do not overfill; it will cause excessive heat and potential damage to the gear.</p> <p>Recommended lubricants or equivalent types:</p> <p>BP Energol GR-XP 220 Shell Omala 220</p>	

<p>16</p>	<p>All schematics, manuals and software for programming is located at the inner of the electronics box.</p>	
<p>17</p>	<p>There are 2 adjustable sensors at each end of the wire guiding system. The sensors close to the centre of the winch determines the shift of the direction. Consider the outer sensors as an additional safety.</p>	
<p>18</p>	<p> Caution DO NOT ACTIVATE THE SWITCH AND THE PUSH BUTTON; THESE CONTROLS ARE ONLY FOR PROGRAMMING THE WIRE GUIDE FOR ANOTHER DIAMETER.</p>	

Safety information



Caution

Disconnect power supply to avoid any unattended operation causing accident to personnel and winch.

All maintenance, inspection and repairs must only be done by an expert maintenance technician fully familiar with the attendant hazards.

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Persons charged with working on the winch and the accessories must be trained specially for the purpose with special abilities and experience in this area as well as being equipped with the appropriate tools and individual safety equipment. Failure to meet these requirements constitutes a risk to personal health and safety and economic damages.

When working on the unit in areas which are difficult to access or hazardous, ensure that adequate safety precautions have been taken 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. Use the lubricants (oil and grease) recommended by the manufacturer.

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Research Equipment

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