

# Day Grab – 2000 cm<sup>2</sup> Model 12.301

Manual



Research Equipment
Limnology • Oceanography • Hydrobiology

## Manual - Day Grab - 2000 cm<sup>2</sup>



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.

The Day Grab is very dangerous in unskilled hands and you must take serious precautions to avoid accidents.

Testing the release on deck requires a safety distance of at least 1,5 m to avoid injury.

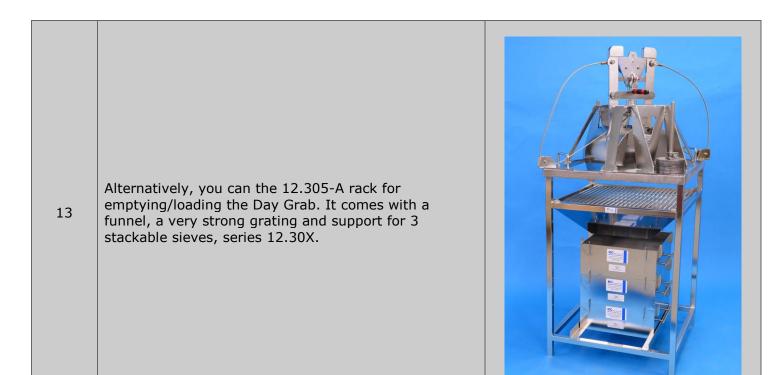
Never walk under the Day Grab, when lifted up by the winch.

Item	Preparation:	
1	<ul> <li>Recommended wire for deploying the grab: Min. 8 mm</li> <li>Necessary free height when the grab is released: 185 cm or more</li> </ul>	
2	Before lifting the Day Grab out of the transport cage, make sure the safety lock is properly inserted as per the photo.	

3	Place the grab in a stable position using 4 wooden blocks or similar. A pallet frame is a useful alternative; see item 12, pg. 5.  Caution The photo shows only two wooden blocks, which is not recommendable as it poses a potential risk for injury.	
4	Mount the necessary amount of lead weights on the platform and do not forget to secure the position by fastening the bolt on each bracket.  The amount of weights must be equal to both weight stations to ensure a properly lowering and penetration of the seabed.  Maximum mounting: 240 kg (48 weights, each 5 kg distributed on 6 weight stations capable of holding 6 x 8 pcs.  Standard delivery includes 4 pcs lead weights.	
5	Attach the winch's steel wire to the shackle. You are now ready to deploy the grab.	
6	Caution Before lowering the grab to the sea, you must keep the deployment wire taut while removing the safety clamp. For maximum safety remove the clamp when the grab is outside the railing.	

7	Lower the grab to the sea, as soon as the grab hits the sea floor, the deployment wire slackens and the triangular mechanism becomes free allowing the release of the shovels, see item 8.	
8	A video showing the release (182 Mb) is available here.  The photo shows the Day Grab in released position. Raising the grab towards the surface, the steel wires "A" are pulled upwards, at the same time forcing the arms "B" and "C" to be pulled apart so the shovel closes.	B
9	The grab is closed and back on deck. In order to empty the grab, you may place it on a pallet frame; see item 12, or the 13.305-A rack, item 13.  Both options are useful for emptying/loading the grab.	
10	If you don't want to empty the grab, you may open one or more lids to take out a small sample.	

11	When the sampling is finished, and you raise the Day Grab, the arms remain wide open.  You can empty the grab by pressing the arms towards the middle.  For safety reasons we recommend at least 2 people to empty and secure the Day Grab.  Lower the triangular unit, force the arms towards the centre of the grab, and insert the triangular plate as shown. Insert the security clamp and once inserted, lower the winch's wire 1-2 cm so the horizontal bar resides on the two pins (shown with arrows).  A video showing the loading procedure (99 Mb) is available <a href="here">here</a> .	
12	A standard pallet frame is useful for emptying/loading the grab.	



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Always remember to mount the safety clamp during transport or working with the Day Grab.

#### Maintenance

Inspect all (4) talurit ferrules and thimbles very carefully and replace if any damage or corrosion is visible. Also inspect the shackle; we recommend replacing it at least once a year.

Any damage might cause injury to people and by losing 2 of the thimbles during operation; the grab will remain on the seabed!

All parts of the Day Grab can be rinsed using salt water or fresh water. We recommend regular cleaning with fresh water.

#### **Safety Regulations**

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

An expert maintenance technician fully familiar with the attendant hazards must only do all maintenance, inspection and repairs.

Persons charged with working with the Day Grab 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 to take adequate safety precautions for the operator and others in compliance with the provisions of law on health and safety at work.

Always replace worn component with original spare parts.



#### INSPECTION CERTIFICATE NO.

OBJECT: TESTET H-SJÆKEL MED ØJEBOLT SIZE: 3/8" STAMPING: WLL 1,00 T DATE OF TEST: QUANTITY WLL: INVOICE NO. 9,80 kN **CUSTOMER:** BL: Sanistål A/S 61 kN CUSTOMER ORDER NO.: MATERIAL REQUIREMENTS MATERIAL QUALITY HEAT TREATMENT C45 Bows 40 Cr Pins ELONGATION YIELD P N/MM2 TENSILE CONTRACTION STRENGTH % MIN % MIN C45 350 590 15 38 780 970 40 Cr 9,5 44 MATERIAL PROPERTIES **ITEM** ELONGATION CAST NO. YIELD P TENSILE N/MM2 STRENGTH N/MM2 BOWS 96-4-20 350 590 15 PINS 96-4-20 780 970 9,5 CHEMICAL COMPOSITION ITEM Mn P Cr NI S BOWS 0,43 0,18 0,35 0.50 0.35 0,3 PINS 0,38 0,18

0,53

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