





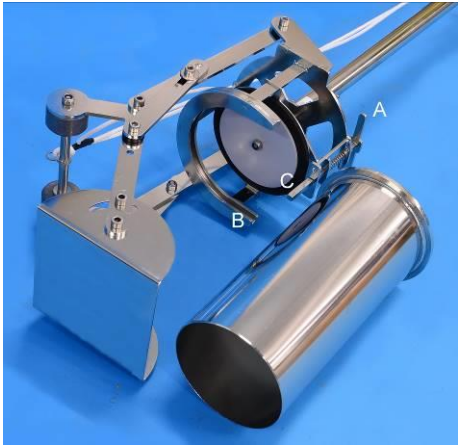


Hand operated Haps
Model 50.820




Manual


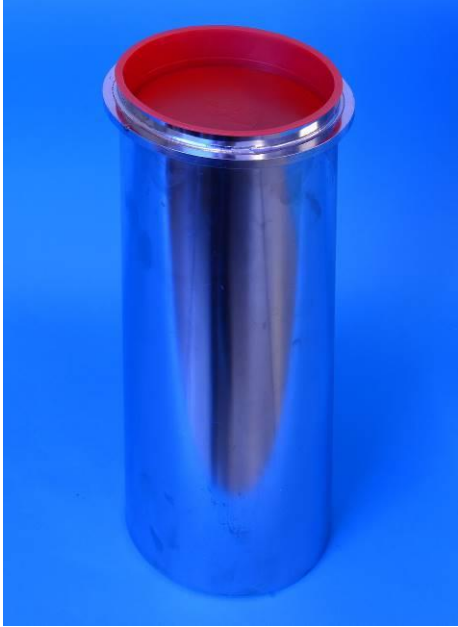


KC Denmark

Research Equipment

Limnology • Oceanography • Hydrobiology

	<p style="text-align: center;">Manual for Hand operated Haps</p>	<p style="text-align: center;">Model no. 50.820</p>
	 <p>Caution</p> <p>KC-Denmark 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.</p>	
<p>Preparing the Haps</p>		
<p>1</p>	<ul style="list-style-type: none"> • Place the Haps in horizontal position • Lift the handle "A" • Push the sample tube into the groove "B" • Release the handle "A", so "C" will secure the tube 	
<p>2</p>	<ul style="list-style-type: none"> • Assemble the shafts • Align the holes 	
<p>3</p>	<ul style="list-style-type: none"> • Screw in the American wing nut and tighten firmly 	

4	<ul style="list-style-type: none"> • Turn the shovel into open position 	
5	<ul style="list-style-type: none"> • Secure the steel ring to the hook at the upper end of the shaft 	
6	<ul style="list-style-type: none"> • Now the non-return flap, on top of the sample tube, remains open to allow a free flow during the deployment 	
7	<ul style="list-style-type: none"> • Lower the Haps to the water and force the sample tube into the sediment • During sample taking you must avoid huge sideways movement of the sampler 	
8	<ul style="list-style-type: none"> • Lift off the ring from the hook and loosen the line • The non-return flap will close top of the sample tube • Upon raising the sampler, the shovel will close at bottom of the sample tube 	

<p>9</p>	<ul style="list-style-type: none"> • Release the handle "A" (item 1) to remove the sample tube • If you hold the Haps in vertical position during the removal of the tube, it is recommended, that another person hold the Haps  <p>Caution</p> <ul style="list-style-type: none"> • When you remove the sample tube, the lower part of the Haps will "collapse", that's the reason, that 2 persons are recommended for the operation • You may use a red cap for the tube, if it is stored for later analysis 	
<p>Maintenance</p>		
<p>10</p>	<ul style="list-style-type: none"> • Before storing you may rinse all parts with fresh water • Leave the non-return flap in open position so the seal will dry  <p>Caution</p> <ul style="list-style-type: none"> • Do not use alcohol for cleaning acrylic tubes 	
<p>How to adjust the Haps</p>		
<p>11</p>	<ul style="list-style-type: none"> • Insert the sample tube • Loosen all bolts 1-4 at both sides • Insert a plate "5" with a thickness of 1,5 - 2 mm • Hold the sampler in vertical position • Ensure that the sample tube hits the vertical locking plate between the two bolts "3" • Now tighten all bolts 	

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E-mail: kc@kc-denmark.dk website: <http://www.kc-denmark.dk/>
Holmbladsvej 17-19, DK 8600 Silkeborg, Denmark. Tel. +45 86 82 83 47. Fax +45 86 82 49 50
Bank: Sydbank. SWIFT: SYBKDK22 IBAN DK5070460000104832
VAT no. DK 29 61 96 62