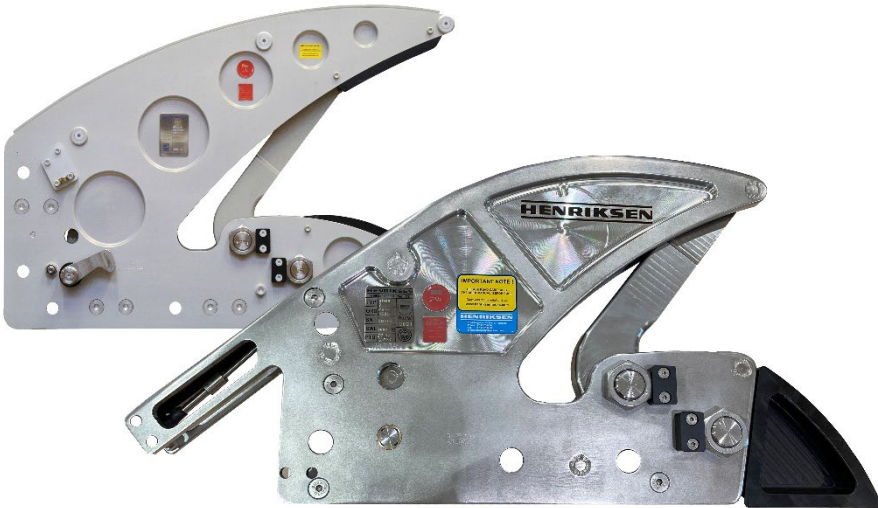


HENRIKSEN HOOKS

HOOKS
HENRIKSEN HOOKS

HPHA

CAPTURE CLAW



U
S
E
R

M
A
N
U
A
L

Rev.: -4

M000443

HENRIKSEN

REDUCING OPERATIONAL RISK

Phone: +47 33 37 84 00
hooks@hhenriksen.com
www.henriksenhooks.com

HPHA

GENERAL

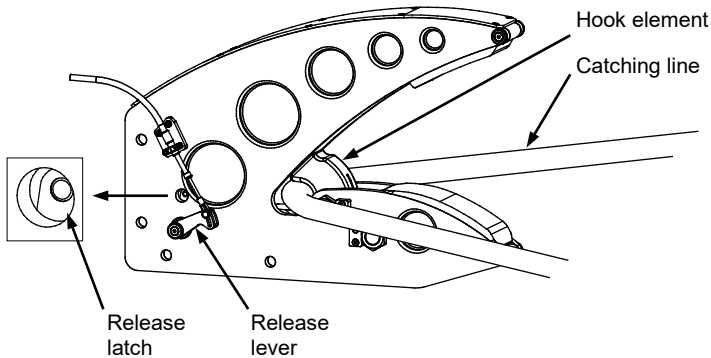
- Read this user manual carefully before you use the hook and save it for future reference.
- Operational scenarios with corresponding risk evaluations must be well known for the operators.
- It is important that the hook is inspected and maintained periodically to ensure a safe and well-functioning equipment.
- Monthly controls by the operators are limited to visual check and practical operations.
- All necessary service and maintenance shall be carried out by authorized service personal annually and by 5-years controls. On-line annual inspection course for Henriksen hooks is available on the internet, please check our website for more information.
- Contact the manufacturer in case of any visible damage and/or if malfunction occurs.
- Any unauthorized repair, service and/or parts used in the hook will violate the warranty.



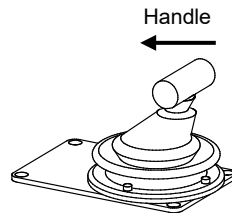
HPHA

LAUNCH – USED AS CAPTURE CLAW

- 1 Check the following before launch:
 - the boat is in the correct position
 - the hook element is in closed position
 - the release lever is in closed position
 - the release latch is in the correct position, refer to the illustration
 - the catching line is properly placed
 - the hook is free of any impurities or ice



- 2 Pull the remote release handle - refer to the illustration - to open the hook and release the catching line.

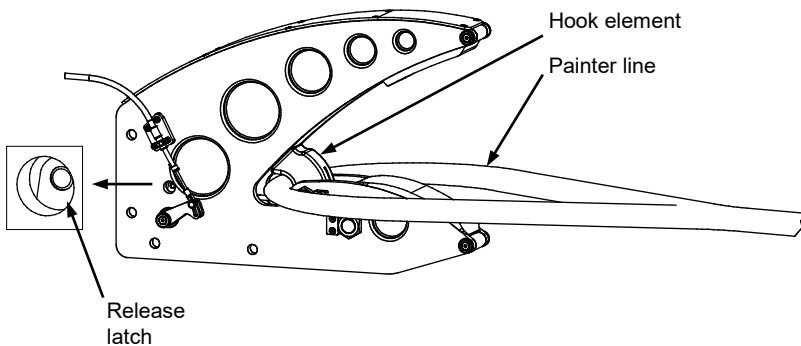


- 3 The hook element stays in open position after releasing the catching line.

HPHA

LAUNCH – USED AS PAINTER HOOK

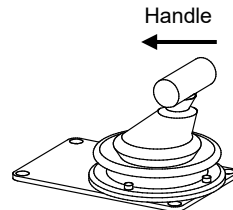
- 1** Check the following before launch:
- the hook element is in closed position
 - the release lever is in closed position
 - the release latch is in the correct position, refer to the illustration
 - the painter line (rope or steel link) is properly placed
 - the hook is free of any impurities or ice



2 Continue the launch process.

3 Release the painter line when the boat and the crew is ready.

Pull the painter remote release handle – refer to the illustration – to open the hook and release the painter line.



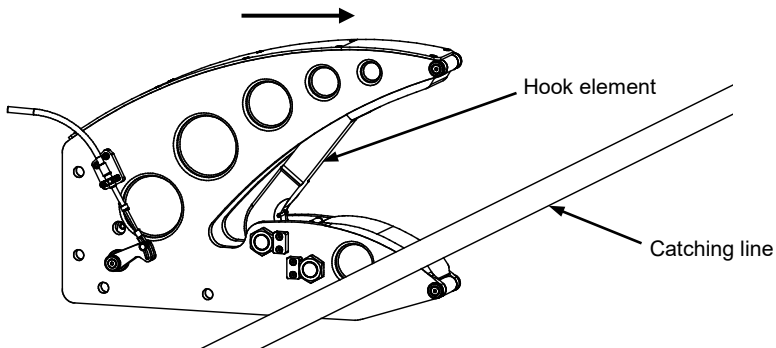
WARNING:

Do not open the painter hook before the lifting hook has released the lifting ring!

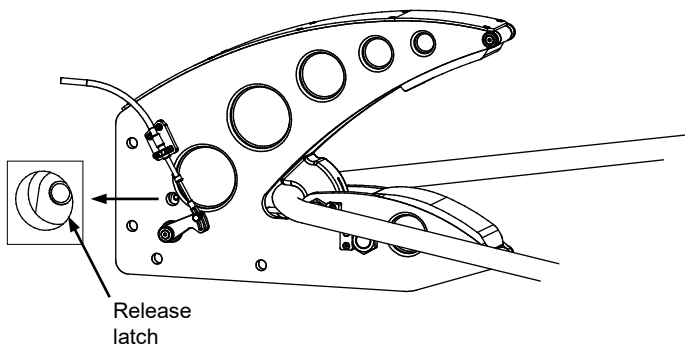
HPHA

RECOVERY – USED AS CAPTURE CLAW

- 1 Make sure that the hook element is in open position.
- 2 Navigate the boat with proper speed so close to the mother vessel that the hook connects to the catching line as the catching line presses the hook element to the closed position. It is important to have proper tension in the catching line.



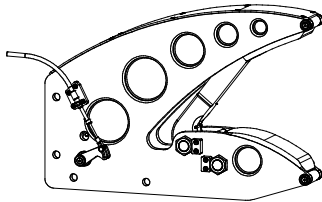
- 3 Check visually that the hook is properly closed and holding the catching line, and the release latch is in the correct position, refer to the illustration



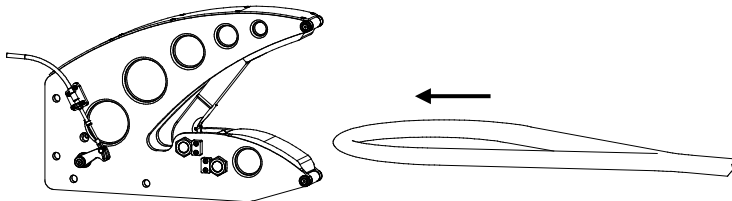
HPHA

RECOVERY – USED AS PAINTER HOOK

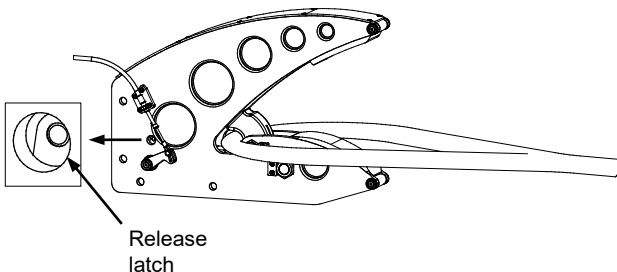
- 1 Make sure that the hook element is in open position, refer to the illustration.



- 2 Guide the painter line into the jaw of the hook, press it against the hook element to turn the hook element to the closed position.



- 3 Check visually that the hook is properly closed and holding the painter line, and the release latch is in the correct position, refer to the illustration.



HPHA

RECOVERY - HPHA7

The HH000332 hook is equipped with an integrated mechanical flag that indicates the operational status of the hook.

The picture below shows when the flag is visible, and the hook is not ready for capture.

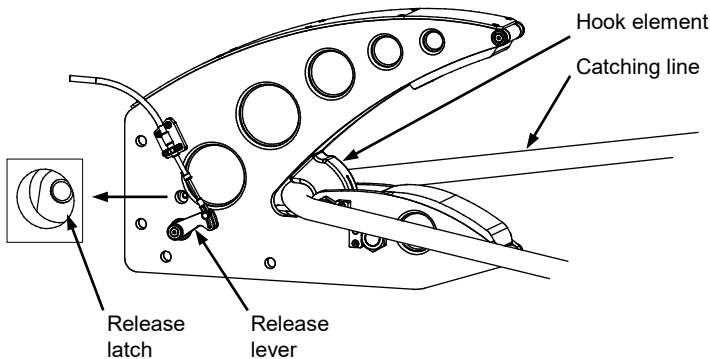
Mechanical flag



HPHA

LAUNCH – USED AS CAPTURE CLAW

- 1 Check the following before launch:
 - the boat is in the correct position
 - the hook element is in locked position
 - the release lever is in closed position
 - the release latch is in the correct position, refer to the illustration
 - the catching line is properly placed
 - the hook is free of any impurities or ice

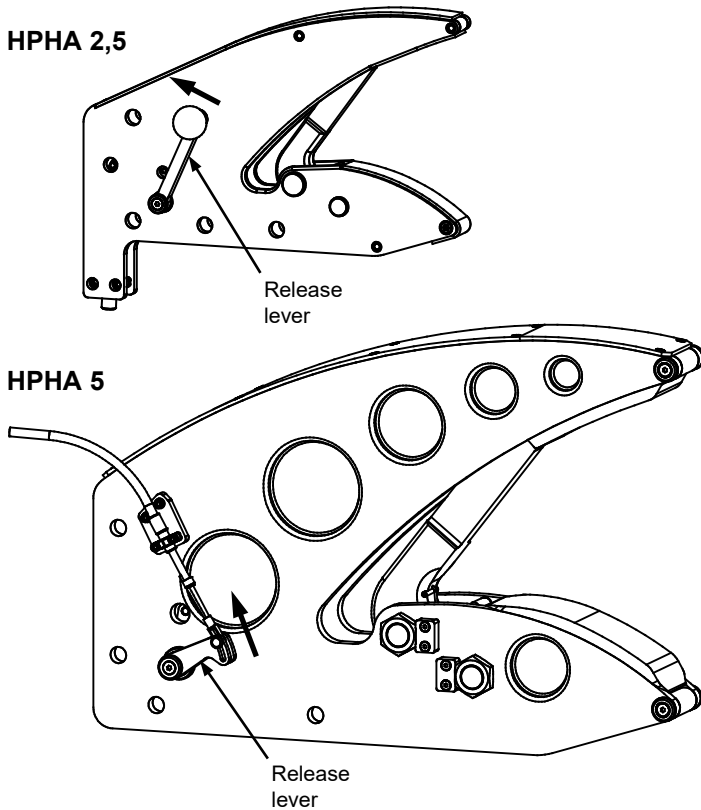


HPHA

LAUNCH – USED AS CAPTURE CLAW

- 2 Turn the release lever backwards – refer to the illustration – to open the hook and release the catching line.

WARNING: This operation will override the IHS control!



- 3 The hook element stays in the open position after releasing the catching line.

HPHA

GENERAL CONSIDERATIONS

- 1** Mount the hook on an area that is strong enough to withstand the forces the hook is exposed to.
- 2** We recommend to use two outside mounting plates and to apply shims to reduce the gap between the hook and the mounting plates.
- 3** Make sure that the mounting arrangement doesn't cause a blockage of the proper operation of the release mechanism.
- 4** We recommend to use proper sized catching line:
 - HPHA 2,5: $\varnothing 20 - \varnothing 25$
 - HPHA 5: $\varnothing 30 - \varnothing 55$
 - HPHA 7: $\varnothing 45 - \varnothing 55$We recommend doing a functional test of the catching line before use.
- 5** Consider the height of catching line when mounting the hook. The catching line should enter approximately at the middle of the jaw of the hook at recovery.

HPHA

GENERAL CONSIDERATIONS

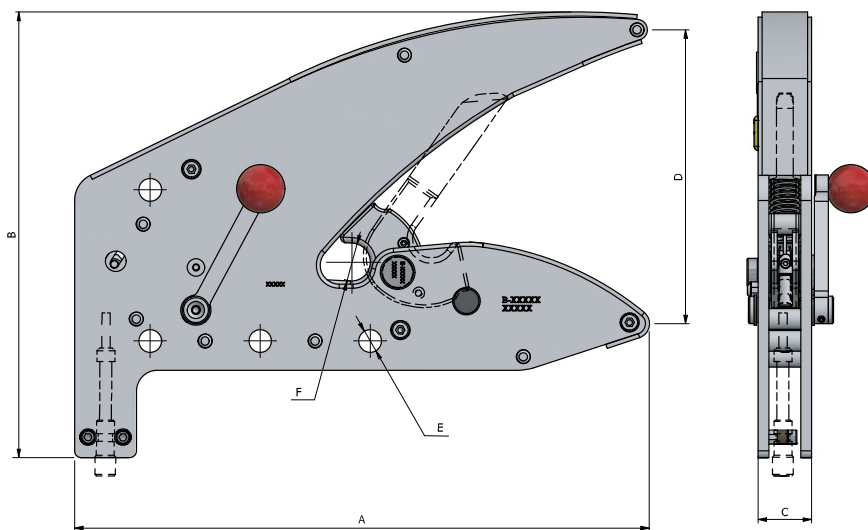
- 6** Consider the vertical angle of the hook used as capture claw and/or the operational angle of the painter line when the hook used as painter hook before mounting the hook on the boat.
- 7** Make sure that the painter hook operator can get access to the painter hook easily and can connect the painter line safely during recovery.
- 8** Consider the ergonomical details before mounting the remote unit with the push / pull cable. It shall be easy to install, remove, adjust and safe to operate the remote unit.
- 9** Make sure that the minimum bending radius of the remote cable will be more than 150 mm / 6 inch after the cable is installed.
- 10** Use an installation path for the remote cable that prevents tripping hazard.



HPHA

DIMENSIONS

HPHA 2,5 / HPHA 5



MOUNTING

PART NO.	HOOK	SWL	A	B	C	D	E	F	WEIGHT
HH000164	HPHA 2,5	2 500 kg	418	324	39	213	Ø16,5	Ø25	11,0 kg
HH003095	HPHA 5	5 000 kg	768	528	90	428	Ø20,5	Ø55	29,6 kg

NOTE: Detailed drawings and 3D models are available on request.

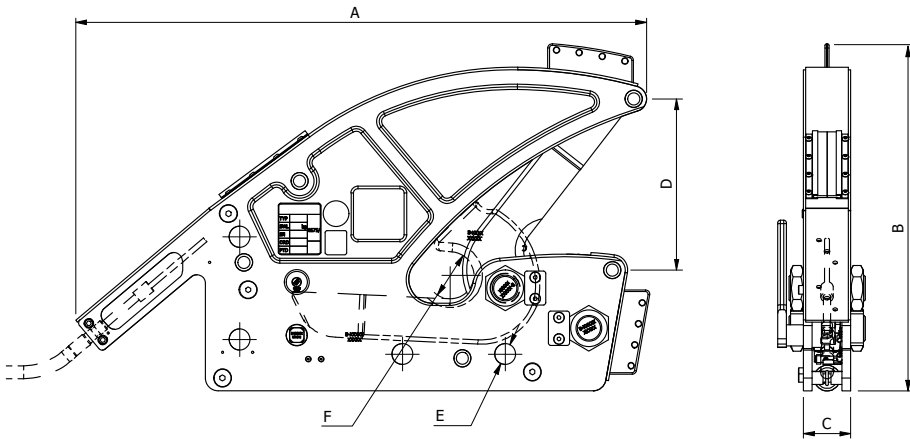


HPHA

DIMENSIONS

HPHA 7

MOUNTING



PART NO.	HOOK	SWL	A	B	C	D	E	F	WEIGHT
HH000332	HPHA 7	7 000 kg	666	378	55	200	Ø24,5	Ø55	25,5 kg
HH000305	HPHA 7	7 000 kg	666	378	55	200	Ø24,5	Ø55	25,5 kg

NOTE: Detailed drawings and 3D models are available on request.

HPHA

RECOMMENDED BOLTS

Hook type	Bolts	Locknuts	Max. torque (Nm)
HPHA 2,5	M16 A4-80	M16 A4	50
HPHA 5	M20 A4-80	M20 A4	50
HPHA 7	M24 A4-80	M24 A4	70 **

* The length is specified by the boat builder.
The bolt should be unthreaded in the loaded cross-section.

** Make sure that the bolt is inserted properly before tightening the locknuts.

WARNING:

Use only recommended bolts, locknuts and torques.

Always use new locknuts.

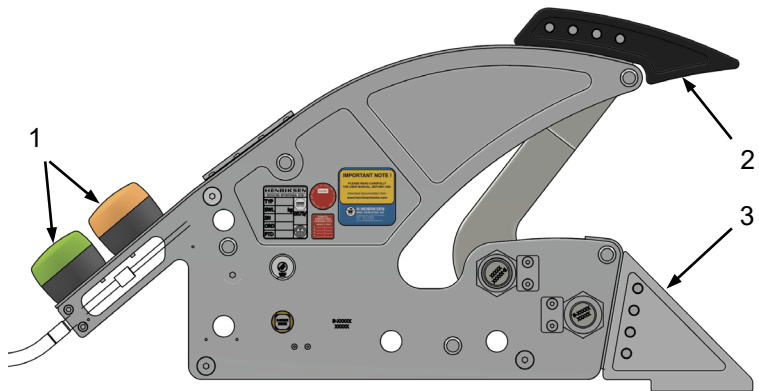
Use correct type of M6 / Ø6 countersunk screw (depending on the board material) to fasten the remote unit.



HPHA

HPHA 7 – OPTIONAL COMPONENTS

Pos	Part name	Part number
1	Status lights *	HH000398
2	Custom top guide	Contact H. Henriksen for more information. The guides must be custom designed to your boat. The guides can be delivered in various materials depending on weight and structural strength requirement.
3	Custom bottom guide	



* HH000332 is equipped with sensors that monitors the hook status. The status lights use signals from these sensors to give a clear visual indication of the hook status to the operator.

Amber light: Shows that the hook is ready for capture.

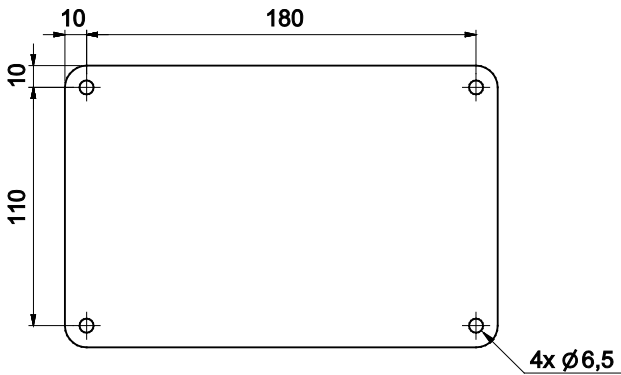
Green light: Shows that the hook is closed and locked.

The hook is equipped with holes for mounting.

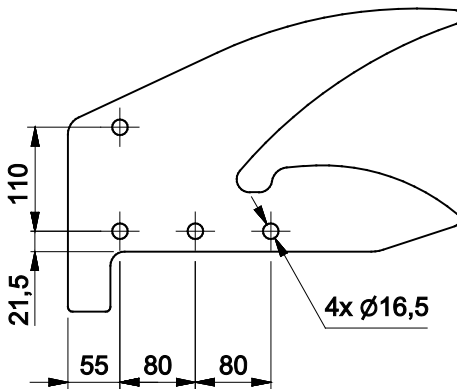
HPHA

MOUNTING HOLE DIMENSIONS

REMOTE HANDLE



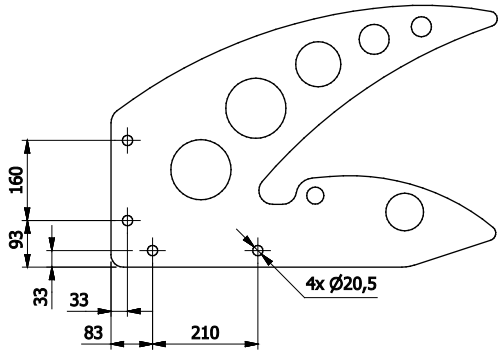
HPHA 2,5



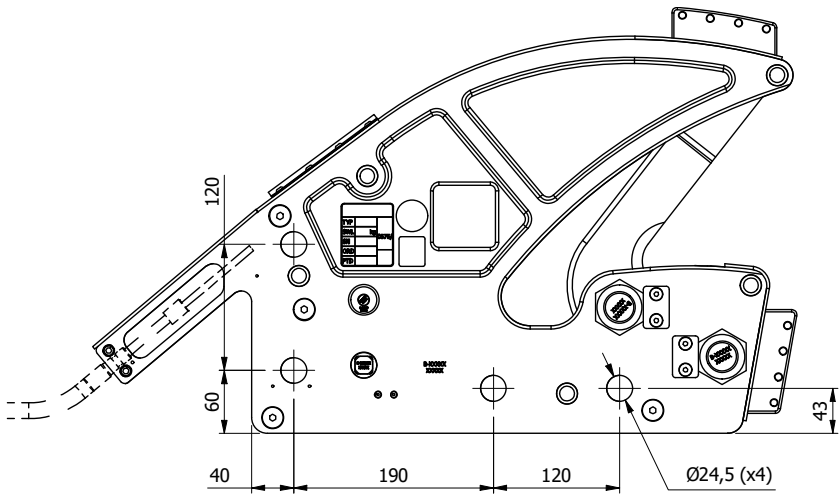
HPHA

MOUNTING HOLE DIMENSIONS

HPHA 5



HPHA 7



HPHA

REMOTE HANDLE WITH CABLE

- 1 Make sure that the nut is installed on this end of the cable.



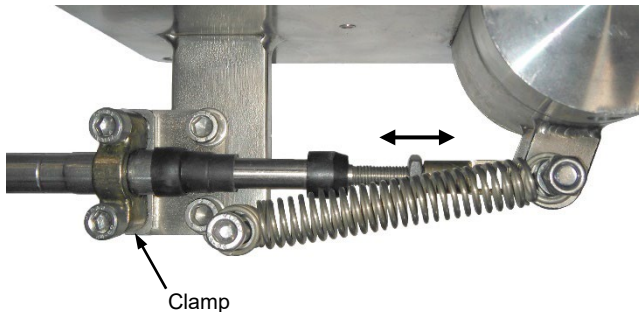
- 2 Attach the cable attachment to the cable, refer to the illustration.



- 3 Change the position of the cable attachment and the nut on the cable end to adjust the operational range of the remote handle.

Make sure that cable is minimum 5 mm deep inside the cable attachment.

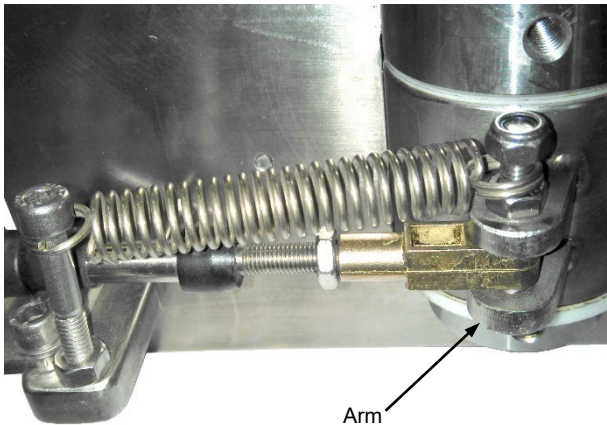
Lock the cable attachment with the nut after the adjustment is completed.



HPHA

REMOTE HANDLE WITH CABLE

- 4 Install the cable attachment with the cable on the arm of the remote unit, refer to the illustration.

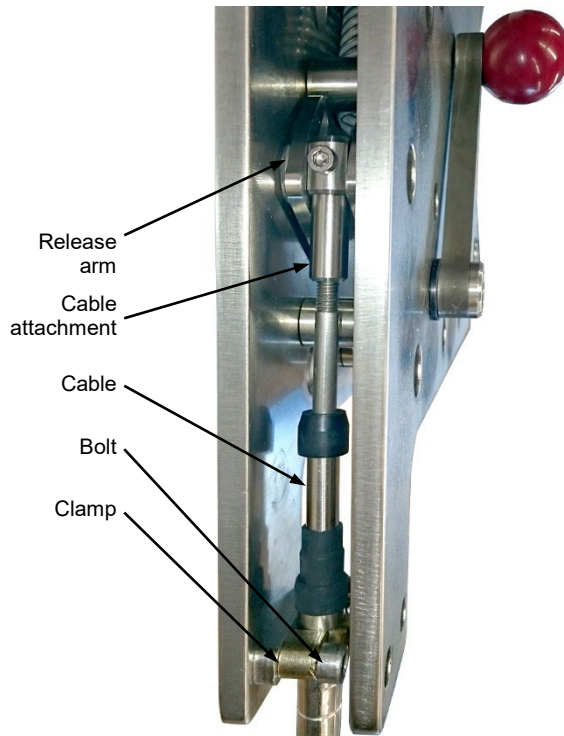


- 5 Pull the release handle into the open direction.
Make sure that the cable can move at least 5 mm more in this direction beyond the end position of the arm.
Release the remote handle and adjust the position of the cable attachment if necessary.

HPHA

HOOK WITH CABLE - HPHA 2,5

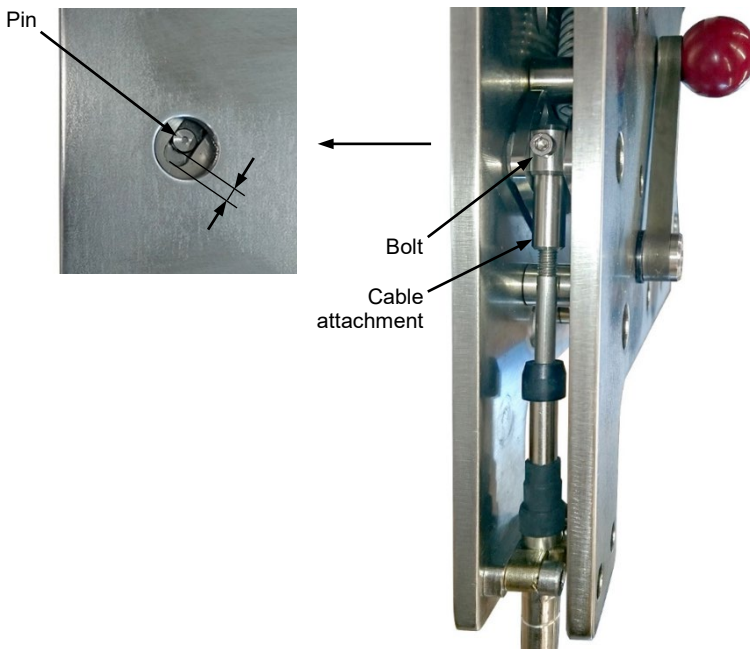
- 1** Make sure that the hook is open. Make sure that there is no nut on the cable.
- 2** Connect the cable attachment to the cable.
Make sure that the cable goes all the way into the attachment.
- 3** Attach the cable with the clamp and the bolts onto the hook, but do not tighten yet.
- 4** Place the cable attachment into the groove of the release arm.



HPHA

HOOK WITH CABLE - HPHA 2,5

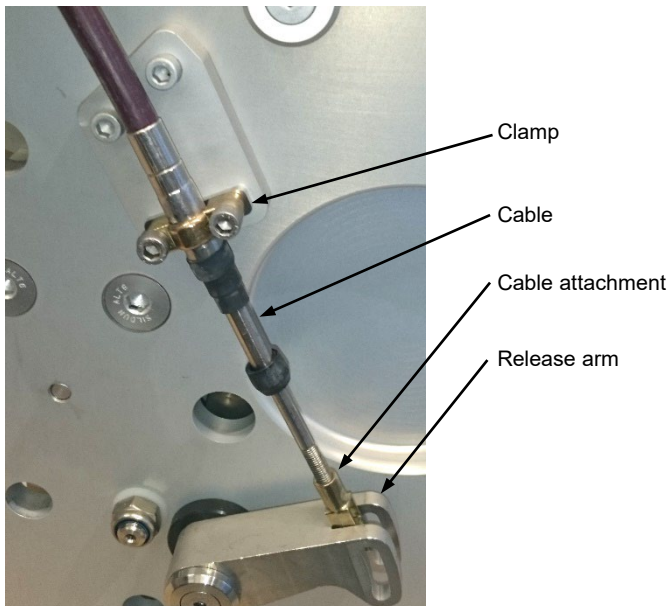
- 5 Insert the pin through the release arm and the cable attachment.
- 6 Make sure that there is a gap between the pin and the end of the groove, refer to the illustration.
- 7 Adjust the position of the cable attachment if necessary.
- 8 Lock the pin with the bolt in the cable attachment.
- 9 Tighten the bolts at the cable clamp.
Apply Loctite 243 or equivalent on the bolts.



HPHA

HOOK WITH CABLE - HPHA 5

- 1** Make sure that the hook is open. Make sure that there is no nut on the cable.
- 2** Connect the cable attachment to the cable. Make sure that the cable goes minimum 5 mm deep into the attachment.
- 3** Attach the cable with the clamp and the bolts onto the hook, but do not tighten yet.
- 4** Place the cable attachment into the groove of the release arm.





HPHA

HOOK WITH CABLE - HPHA 5

- 5** Push the release arm gently towards the cable to align the holes refer to the illustration. Adjust the position of the cable attachment if necessary.



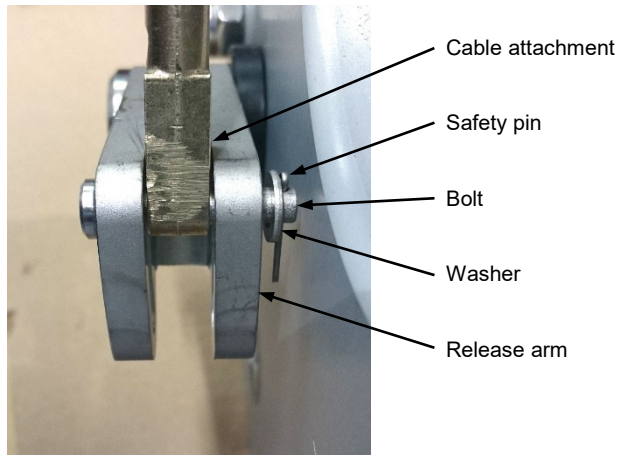
- 6** Insert the bolt through the release arm and the cable attachment.



HPHA

HOOK WITH CABLE - HPHA 5

- 7** Pull slowly the remote handle to open the hook.
Make sure that the cable can move at least 5 mm more in the opening direction after the hook has been opened.
Release the remote handle and adjust the position of the cable attachment if necessary.
- 8** Place the washer and insert the safety pin into the bolt, refer to the illustration.

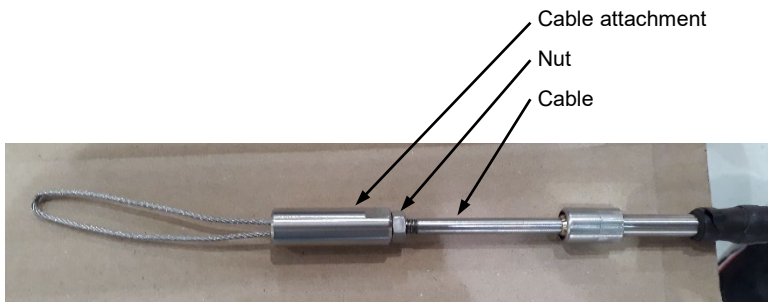


- 9** Tighten the bolts at the cable clamp. Apply Loctite 243 or equivalent on the bolts.

HPHA

HOOK WITH CABLE - HPHA 7

- 1** Make sure that the hook is closed.
- 2** Connect the cable attachment with wire loop to the cable.
Make sure that the cable goes minimum 5 mm deep into the attachment.
Lock the cable attachment with the nut.

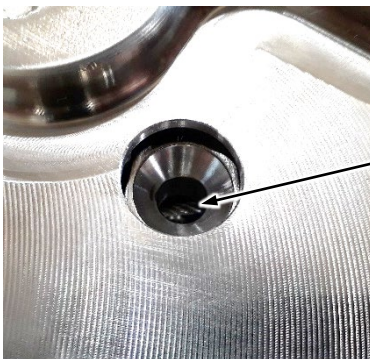


HPHA

HOOK WITH CABLE - HPHA 7

- 3 Insert the cable inside the hook and make sure that the loop is at the right position at the locking bolt.

The photo under is only an illustration of the path of the cable. The cable shall be inside the hook when mounting.



Loop on the cable attachment

HPHA

HOOK WITH CABLE - HPHA 7

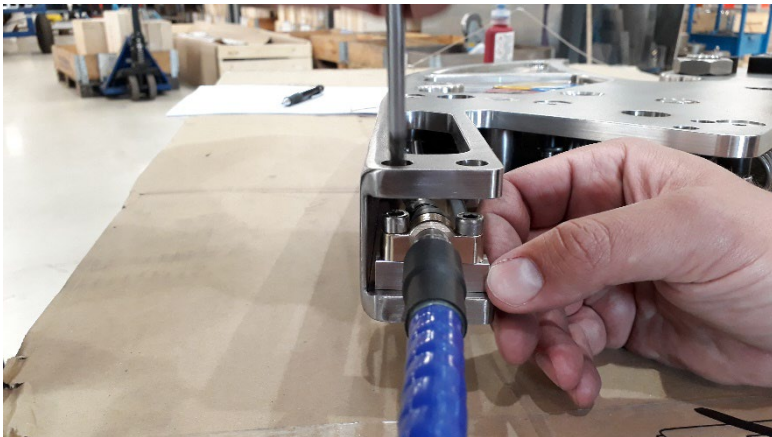
- 4** Lock the loop with the bolt.
Apply Loctite 243 or equivalent on the bolt.



- 5** Attach the cable clamp onto the cable and align it with the mounting plate in the hook.

Apply Loctite 243 or equivalent on the bolts.

Tighten the bolts.



HPHA

FUNCTIONAL TEST

Do a functional test of the following after mounting the hook and the remote unit on the boat:

- The hook element can open fully.
- The catching line should enter approximately at the middle of the jaw of the hook at recovery.
- The painter line shall be inserted simply and safely.
- The remote cable moves freely.
- The remote handle shall have a free movement (min. 10° angle) before you can feel the resistance point caused by the release mechanism in the hook.
- The hook opens immediately when you pull the remote handle.
- The remote handle goes back fully to the closed position after you release it.

Do a functional test of the following when the boat is waterborne:

- The catching line enters approximately at the middle of the jaw of the hook and properly locks the hook at recovery.
- The operation angle of the painter line is within the operational angle of the painter hook.
- It is safe to connect the painter line.
- It is safe to release the boat at operational speed (under load).

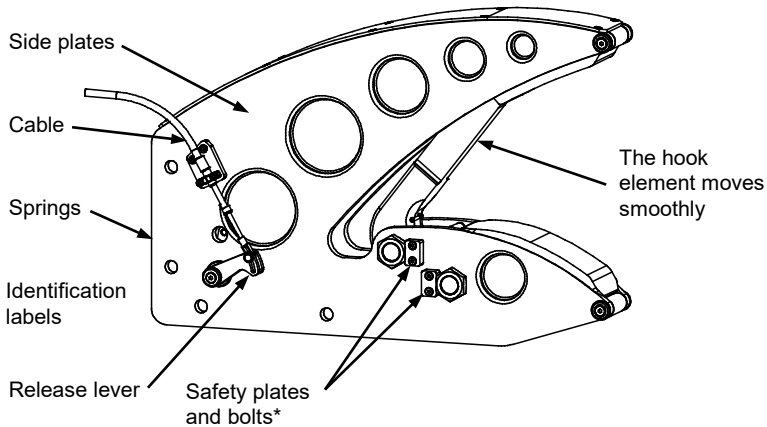
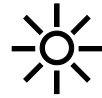
Increased attention is recommended during the initial tests on the sea.

We recommend to prevent the hook against any ice to build up.



HPHA

- 1 For safety reasons carry out the control in good lighting conditions.
- 2 Remove all impurities (salt, grease, dust, etc.) with fresh water. Remove ice if necessary.
- 3 Check that the following parts are free from deformations and defects:



* Make sure that the safety plates are properly mounted!
Do not remove the safety plates!

Contact the manufacturer in case of any deviation!

HPHA

- 4** Check the following:
- The hook element can open fully.
 - The catching line enters approximately at the middle of the jaw of the hook and properly locks the hook at recovery.
 - The painter line shall be inserted simply and safely.
 - The remote cable moves freely.
 - The remote handle shall have a free movement (min. 10° angle) before you can feel the resistance point caused by the release mechanism in the hook.
 - The hook opens immediately when you pull the remote handle.
 - The remote handle goes back fully to the closed position after you release it.

We recommend to prevent the hook against any ice to build up.

5 DO NOT PAINT ANY PART OF THE HOOK!



Contact the manufacturer in case of any deviation!

HPHA

SAFE LAUNCH – USED AS CAPTURE CLAW

- 1** The operators make sure that the boat is in the correct position and ready to be launched.
- 2** The crew of the boat stands back and takes a safe stand-by position.
- 3** The hook operator opens the hook, and the hook releases the catching line.
- 4** The coxswain can help with the engine if necessary and maneuvers the boat away from the vessel.

S
A
F
E

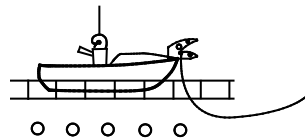
U
S
E



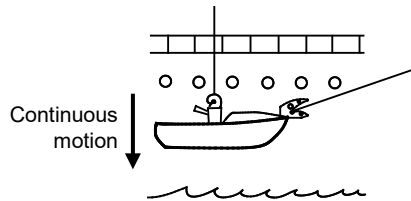
HPHA

SAFE LAUNCH – USED AS PAINTER HOOK

1 The hook operator connects the lifting ring and the painter line before launch, and then gives a signal to the crane operator that the lowering process can start.



2 The crane operator starts the lowering process with a continuous motion.



3 The operators make sure that there are no obstacles under the boat and continue the launch process.

S
A
F
E

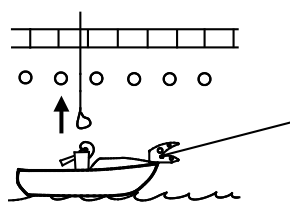
U
S
E



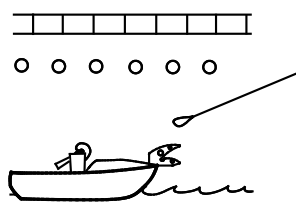
HPHA

SAFE LAUNCH – USED AS PAINTER HOOK

4 When the boat is waterborne and the lifting hook has released the lifting ring, the crane operator lifts the lifting line to avoid collision with the boat or the crew.



5 The coxswain or the hook operator releases the painter line when the boat and the crew is ready.



6 The coxswain maneuvers the boat ahead and away from the vessel.

S
A
F
E

U
S
E

HPHA

SAFE RECOVERY – USED AS CAPTURE CLAW

- 1** The operator on the mother vessel makes sure that the catching line is properly suspended and gives a signal to the coxswain on the boat.

- 2** The operators both on the mother vessel and on the boat take a safe stand-by position away from the suspended catching line.

- 3** The coxswain maneuvers the boat with the proper speed to catch the catching line.

Repeat this operation if the connection failed.

- 4** The coxswain makes sure that the hook is properly closed and holding the catching line.

- 5** The operators on the vessel can secure the boat with an additional line to reduce the load on the catching line.

S
A
F
E

U
S
E

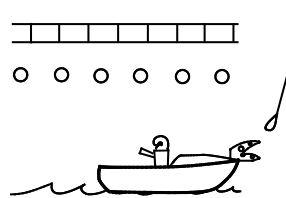


HPHA

SAFE RECOVERY – USED AS PAINTER HOOK

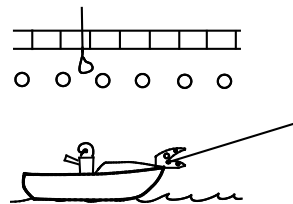
1 The operators make sure that the lifting hook is reset, and the hook element of the painter hook is in open position.

2 The coxswain maneuvers the boat close to the vessel to let the hook operator safely get the painter line.

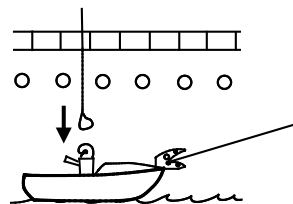


3 The hook operator connects the painter line.

4 The coxswain reduces the speed of the boat to get in the correct position below the lifting line.



5 The crane operator lowers the lifting line to let the hook operator safely get it.



S
A
F
E

U
S
E

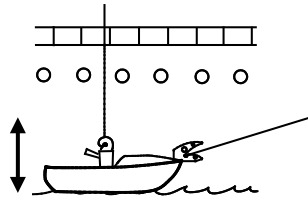


HPHA

SAFE RECOVERY – USED AS PAINTER HOOK

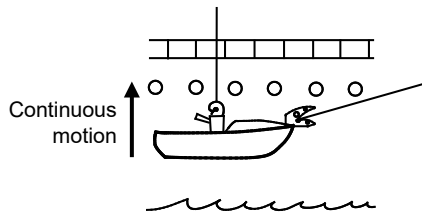
6 The hook operator connects the lifting ring and gives a signal to the crane operator.

The crane operator starts the automatic tensioning system (if available) to give tension in the wire.

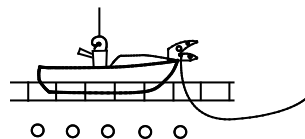


7 The hook operator stands back and takes a safe stand-by position.

8 The crane operator starts the lifting process with a smooth motion as the boat moves upwards on a wave.



9 The crane operator completes the lifting process with a continuous motion and places the boat into the crib.



S
A
F
E

U
S
E