



Rescue Systems

User's Manual

Type Approved



Training is Required Before Using C-Hero® Rescue Products

- **The warranty of each product is tied in with eTraining**
- **Lifesaving equipment works if the crew is properly trained**
- **Computer-based eTraining is included with all products**
- **The company dashboard keeps track of the crew's progress**
- **Courses for each product & proper drilling means crew success**

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Rescue Systems

User's Manual

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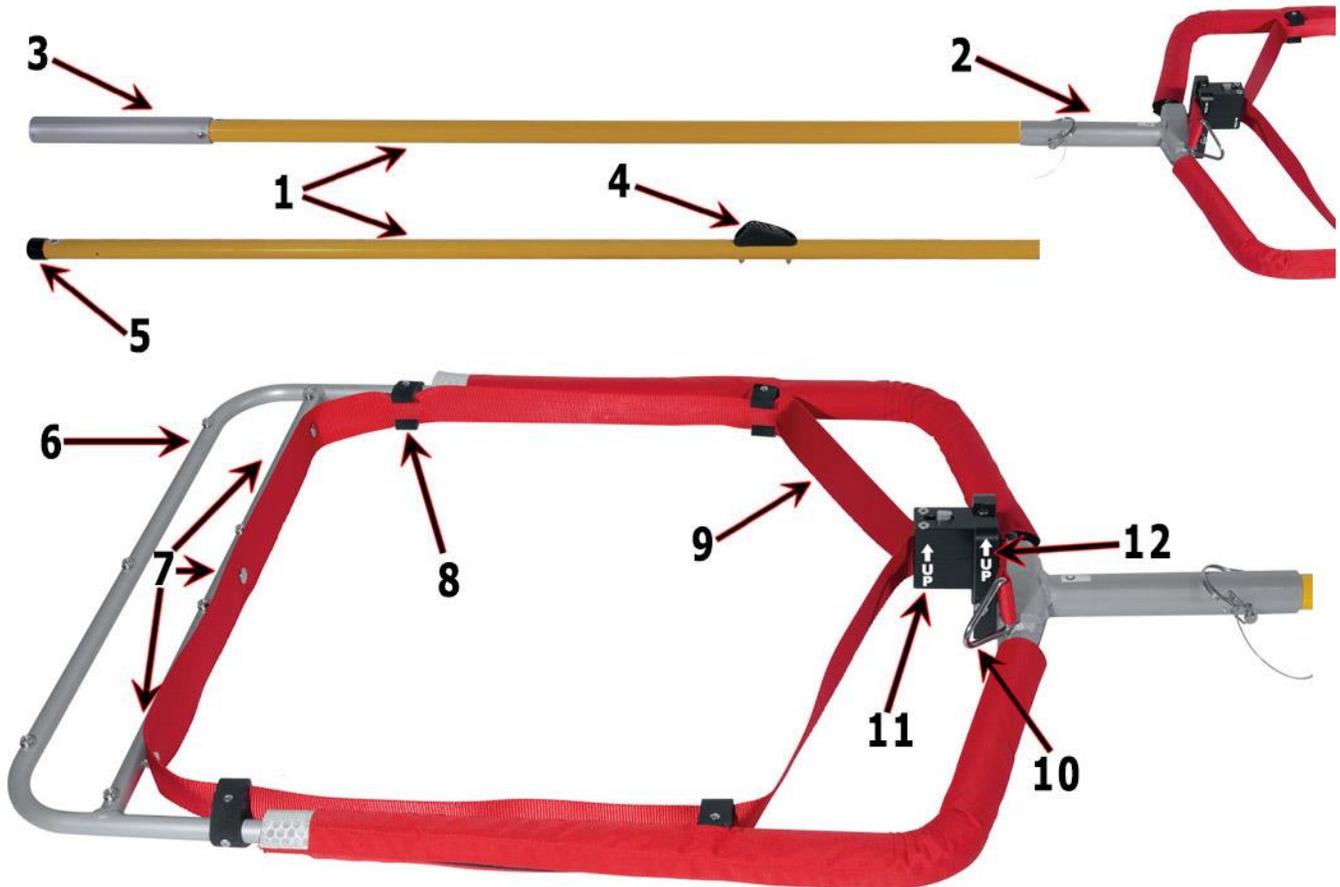
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IN 145 - VR-12 Rescue Pole MWL 550 lbs.

Product and Major Parts List:



1. Two 6' x 1.25" OD connected foam filled poles with tethered pins
2. Connector on hoop with quick connect pins for first pole section
3. Coupler on first pole section with quick connect pins for second pole section
4. V-Cleat on second pole section for holding 10 mm lift line
5. End cap for pole with a hole for tether line (not included)
6. 7' hoop, partially foam and nylon covered with SOLAS reflecting tape
7. Three (3) male snaps at back of hoop, with 3 matching female snaps on strap
8. Four (4) rubber web strap holding blocks, 2 on each side
9. 3,500 lb. 2" x 7' closed loop lifting strap
10. Integrated 8,000 lb. Lifting triangle
11. One-way slide buckle on the lifting strap
11. Slide Buckle holder (shipped separately for attachment by customer)
12. Weight: 14.5 lbs. (6.6 kg)

Image A1: IN 145 - VR-12 Rescue Pole

Set-up:

Supplied: Two connecting poles, an aluminum hoop, a lifting strap with slide buckle, buckle holder, and connecting hardware.

- Installation:** The buckle holder and the hardware have been shipped in the plastic bag that is stapled to the hoop. All the hardware for the buckle holder is provided in this bag. Assemble the buckle holder with the countersunk holes facing out so that the provided 5/32" Allen cap screws will fit flush. (5/32" Allen wrench not provided)
Adjustment Note: The slide buckle holding tension can be adjusted with side nuts 7/16", and the enclosed **LOCTITE**[®].

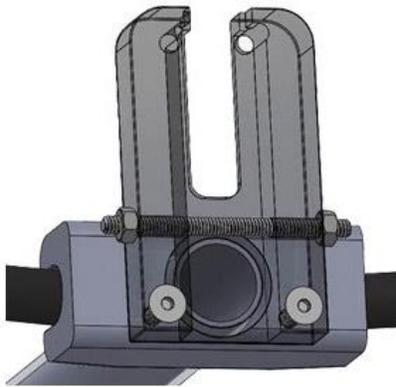


Image A2 - Slide Buckle Holder

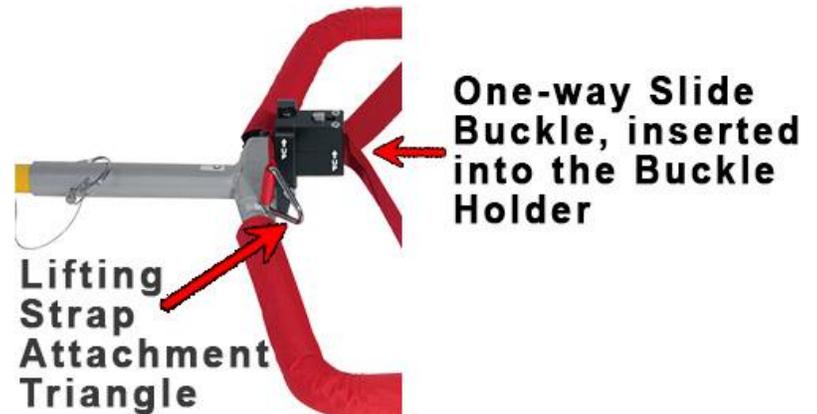


Image A3 - Slide Buckle inserted in Buckle Holder

- Lay the poles and hoop out. Lay the flat side of the hoop down, buckle holder up.
 - The pole with the aluminum coupler fits into the hoop
 - The other pole with the black V-cleat fits into the first pole
 - The V-cleat should face up, as shown in **Image A4** (the same direction as the buckle holder which is labeled with an up arrow).



Image A4 - The 2 Rescue Pole sections

- Use the attached pins to secure the poles together.
Note: Optional stainless nut and bolt are included for a permanent connection

IN 145 - VR-12 Rescue Pole Set-up - Continued

Loading the Lifting Strap onto the Rescue Pole hoop:

4. The end of the pole has a hole for a tether. (Not supplied)
5. Place the slide buckle into the holder (**Image A3**), matching up arrows, as shown in **Image A4**.
6. The lifting triangle goes on the outside of the holder, as shown in **Image A4**
7. Move the lever on the top of the slide buckle, pulling all the Lifting Strap webbing towards the center of the hoop. Make sure there are no twists before attaching, as shown in **Image A5**.
8. Fasten the 3 snaps to the hoop crossbar, then load the webbing into the rubber holding blocks (2 per side). The easiest technique is to place the bottom edge of the strap under the bottom edge of the rubber, then work the top edge in completely **under the rubber** as shown in **Image A6**. The rubber can be bent to help with loading.



Image A5 – Lifting Strap stretched out with no twists



A-6 – Lifting Strap loaded into one of the 4 rubber holding blocks

9. It is always best to load the Lifting Strap in the hoop while it is on deck.



A-7 – Lifting Strap fully loaded with all 3 snaps attached and 4 rubber holding blocks loaded



Important Tip: Make sure that the lifting strap is secured under both the top and bottom lips of the rubber blocks.



Image A8 - Complete C-Hero® VR-12 Rescue Pole with V-Cleat pointing up

Using the Rescue Pole to Attach the Lifting Strap to a PIW (Person in Water):

1.  Do not attach the lifting strap around the neck or abdomen for the lift. This will cause severe injury or death! **Always use your legs when lifting, not your back.**
2. We recommend that you always use a [Rescue Dummy](#) during man overboard drills to eliminate any possibility of deckhand injury. The United States Coast Guard requires Man Overboard drills to be performed as if it is an emergency.
3. Connect the lift line snap hook to the triangle and on to the V-cleat on the pole, with tension, (this keeps the line out of the way).
4. In most cases the PIW will be floating vertically. The idea is to try and “surf” the web strap on the PIW and get under the arms, in the armpits, in a smooth quick action. The lift line from the web strap is the top, for indexing purposes.
5. **Note:** The Rescue Pole can be used upside-down and it will work, however you will have to lift the pole up with the PIW.
6. Use the Rescue Pole to move the PIW in the water, closer or to another part of the boat.
7. If the PIW has one arm up and another down:
 - a. Put one side of the hoop under one arm, (get the easiest arm to access), with the line facing away from the PIW, (turn at 90 degrees, from the water), and raise the Rescue pole hoop all the way into the armpit as shown in **Image A9**.
 - b. Then rotate the hoop over the head. Once over the head, (keeping the lift line facing up, lined up with torso of PIW).
 - c. Next move the hoop down the PIW to get past the other arm as shown in **Image A10**.
 - d. Go back up so the strap is under both arms, and under both armpits. (**Image A11**)



Image A9: Start under one arm, up to the arm pit and rotate the hoop over the head



Image A10: Move pole down to get under the other arm

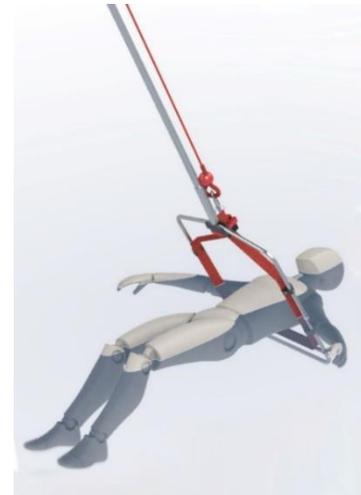


Image A11: Position the hoop up under both arm pits

IN 145 - VR-12 Rescue Pole Operation - Continued

8. Once the Web strap is under the arm pits, keep the back of pole hoop against the back of PIW, grab the line from the V-cleat. Hold back on the lift line firmly and press the pole to the PIW, (the pole will push the one-way slide buckle towards PIW, not allowing it to back out). See the diagram in **Image A12**.
9. Pull back on the pole, in a quick short pull (jerk) movement, to release the buckle from the buckle holder.
10. Take the pole from the PIW, and bring PIW aboard.
Note: A tether will keep the Rescue Pole from getting away from you. (Not supplied)
11. In the event the PIW is horizontal, it can be easiest to place the hoop starting with the legs, but be sure the lift line is facing toward the head (**Image A13**)
We have found that using the hoop only, on deck with someone else helps with understanding how it works. Put the hoop over their PIW, under the arms, and use your finger in the triangle. This will show how it works, and how much force is needed to release the slide buckle from the buckle holder.
12. Practicing in the controlled environment of a swimming pool, or at the dock is the easiest way to master the VR-12 Rescue Pole.
13. Move to a lower part of the boat if you need to get closer to the PIW.



HOLD LINE AND PUSH POLE

Image A12

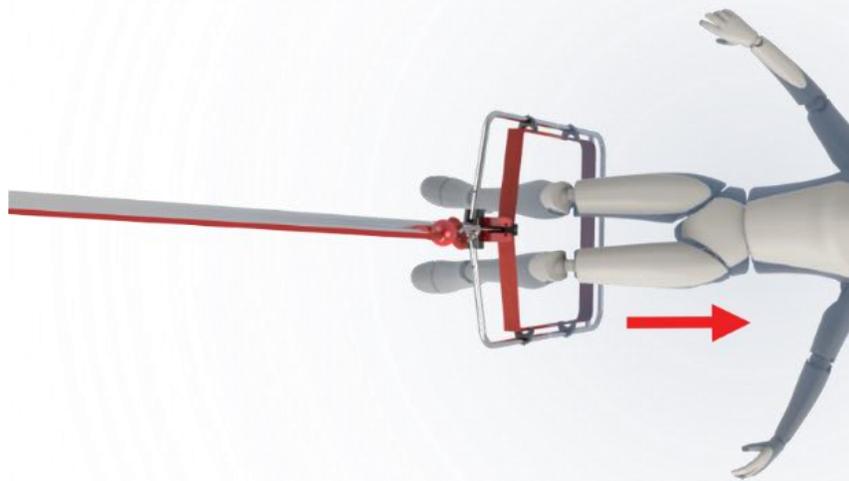


Image A13: *If the PIW is floating in a horizontal position, it can be easiest to place the hoop starting with the legs, but be sure the lift line is facing toward the head*

Inspection:

1. Every Month before MOB Drill: Inspect all screws and pins on slide buckle and holder for tightness and damage.
2. Every Month after MOB Drill: Rinse and inspect rubber blocks and webbing for wear, cracking or fraying. If found, report the items for replacement.
3. Once a year, remove and inspect hoop float covers, and re-attach.

Storage:

1. Inspect after every use and rinse before stowing, to make ready for the next drill or rescue.
2. The Rescue Pole with Lifting Strap fully loaded should look like the image below. It is ready for storage, and ready for the next MOB drill or an actual rescue.



Image A14

**Rescue Pole hoop with Lifting Strap loaded.
Ready for storage, drill or actual rescue**

3. The pole should be stowed somewhere close to where the designated rescue will happen, out of the sun.
4. The Rescue Pole with Recovery Strap should always be stored in a fully assembled and loaded condition, so that it is ready for immediate use in an emergency, as shown below. Note: One or two poles can be stored separately if needed due to space limitations. Hoop covers are available from C-Hero®.
5. If you remove the V-cleat end of the rescue pole for storage, the pole with the V-cleat must always align with the buckle holder when you re-attach it.



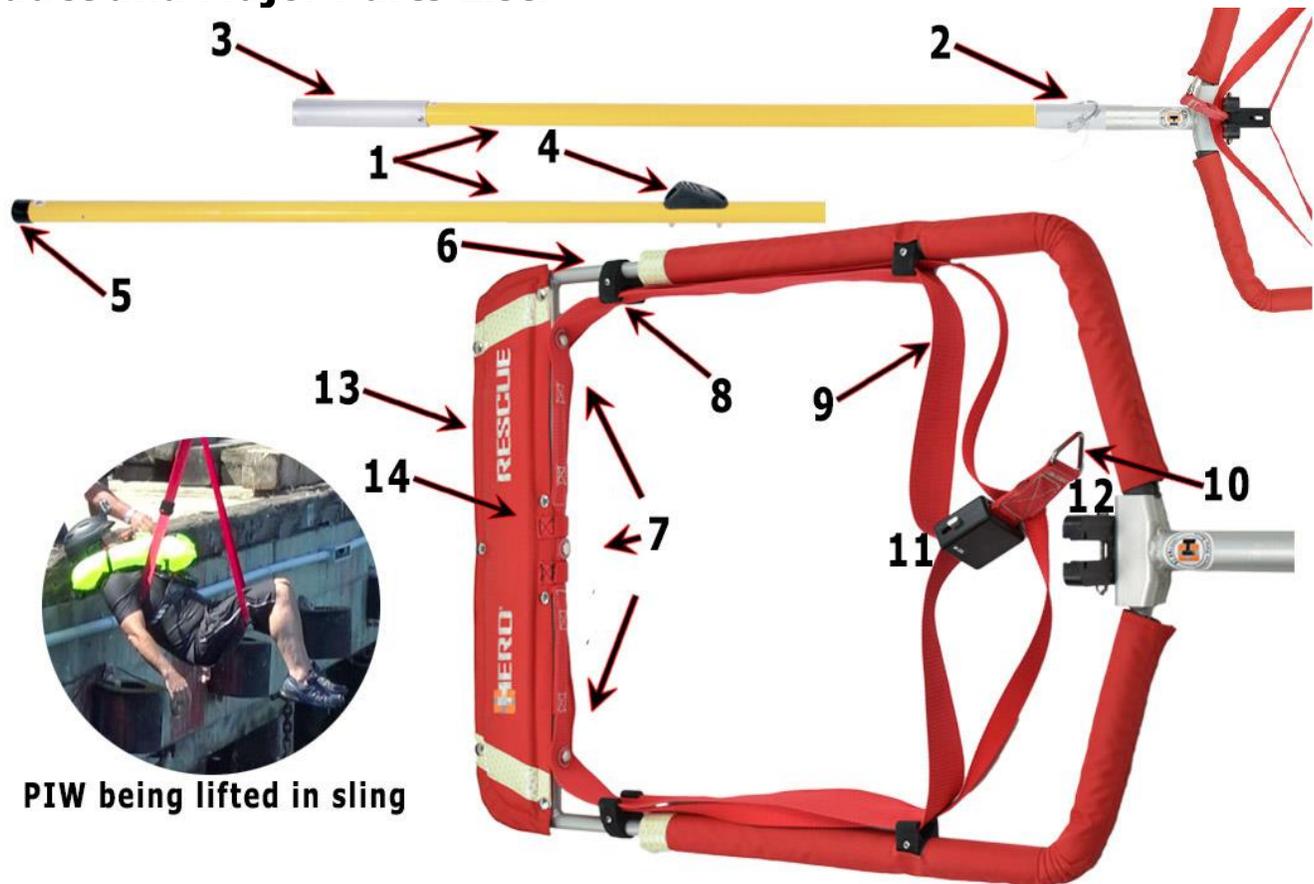
Image A15 - The entire C-Hero® Rescue Pole, ready for storage, drill or actual rescue



IN 145 - VR-12 Rescue Pole Man Overboard Drills

Man Overboard Drills:

1. The United States Coast Guard requires Man Overboard drills to be performed as if it is an emergency, and your company safety program will specify frequency. We always recommend using a rescue dummy for drills, you should not have a crew member get in the water.
2. Someone immediately advises the wheelhouse that there is a rescue dummy in the water.
3. The wheelhouse sounds the general alarm, and 3 prolonged blasts on the ships whistle. Manually push MOB on the chart plotter. Use the loud hailer to let the crew know there is a man overboard.
4. Stop the boat.
 - a. If applicable let traffic know your intentions on Ch. 13.
 - b. The deckhand goes on deck with PPE, a handheld VHF to a prearranged Ch., and directs the Captain to the rescue dummy, and gets the boat close.
 - c. While the boat is headed back to the rescue dummy, and you are keeping an eye on the rescue dummy is the time to ready the pole and lifting source.
5. While the boat is maneuvering back to the rescue dummy, put the Rescue Davit on the desired bitt, deploy the davit and swing outboard. Or deploy your own davit.
6. Get the Rescue Pole ready, by checking the following:
 - a. The Rescue Strap is loaded correctly
 - b. All connections are tight, including the connection of the two pole sections
 - c. The V-cleat is lined up with the Slide Buckle and holder
7. Deploy a life ring and use it to get the rescue dummy alongside if the boat can't get closer. Tie off the line at the bitts not being used.
8. Connect the lift line snap hook to the Rescue Pole triangle, then put the line into the V-cleat.
9. Deploy the Rescue Pole and put it over the rescue dummy and under the arms, as close to the armpits as possible.
10. When in place, hold the lift line firmly, and push the pole towards the rescue dummy. Always stay inside the bulwarks for safety.
11. Remove the pole from the rescue dummy, then pull the slack out at the Rescue Davit winch. Make sure the line brake is closed, then winch up the rescue dummy.
12. On a C-Hero® Davit, use the side handle to swing the rescue dummy to the side of the boat and bring it back aboard.
13. Discuss company protocol for shock, injuries, or hypothermia of a recovered person as if this were a real emergency with a PIW.

Product and Major Parts List:**PIW being lifted in sling**

1. Two 6' x 1.25" OD connected foam filled poles with tethered pins
2. Connector on hoop with quick connect pins for first pole section
3. Coupler on first pole section with quick connect pins for second pole section
4. V-Cleat on second pole section for holding 10 mm lift line
5. End cap for pole with a hole for tether line (not included)
6. 7' hoop, partially foam and nylon covered with SOLAS reflecting tape
7. Three (3) male snaps at back of hoop, with 3 matching female snaps on strap
8. Four (4) rubber web strap holding blocks, 2 on each side
9. 3,500 lb. 2" x 7' closed loop lifting strap
10. Integrated 8,000 lb. Lifting triangle
11. One-way slide buckle on the lifting strap
12. Slide Buckle holder (shipped separately for attachment by customer)
13. Top cover with 7 snaps, reflective tape and 1/2" foam sewn in
14. The enclosed folded up mesh sling lifts the PIW in horizontal position
15. Weight: 16.9 lbs. (7.7 kg)

Image B1: IN 146 - HR-12 Horizontal Rescue Pole

IN 146 - HR-12 Horizontal Rescue Pole MWL 550 lbs. - Set-Up

Set-up:

Supplied: Two connecting poles, an aluminum hoop, a lifting strap with mesh PIW (Person in Water) sling and slide buckle, buckle holder, hoop cover, and connecting hardware.

1. **Installation:** The buckle holder and the hardware have been shipped in the plastic bag that is stapled to the hoop. All the hardware for the buckle holder is provided in this bag. Assemble the buckle holder with the countersunk holes facing out so that the provided 5/32" Allen cap screws will fit flush. (5/32" Allen wrench not provided)
Adjustment Note: The slide buckle holding tension can be adjusted with side nuts 7/16", and the enclosed **LOCTITE**®.

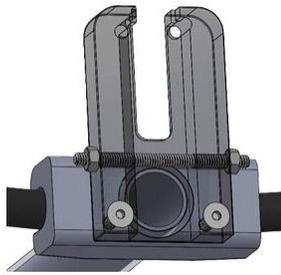


Image B2 - Slide Buckle Holder



Image B3 – Slide Buckle has 1" strap around it

2. Lay the poles and hoop out. Lay the flat side of the hoop down, buckle holder up.
 - a. The pole with the aluminum coupler fits into the hoop
 - b. The other pole with the black V-cleat fits into the first pole
 - c. The V-cleat should face up, as shown in **Image B4**

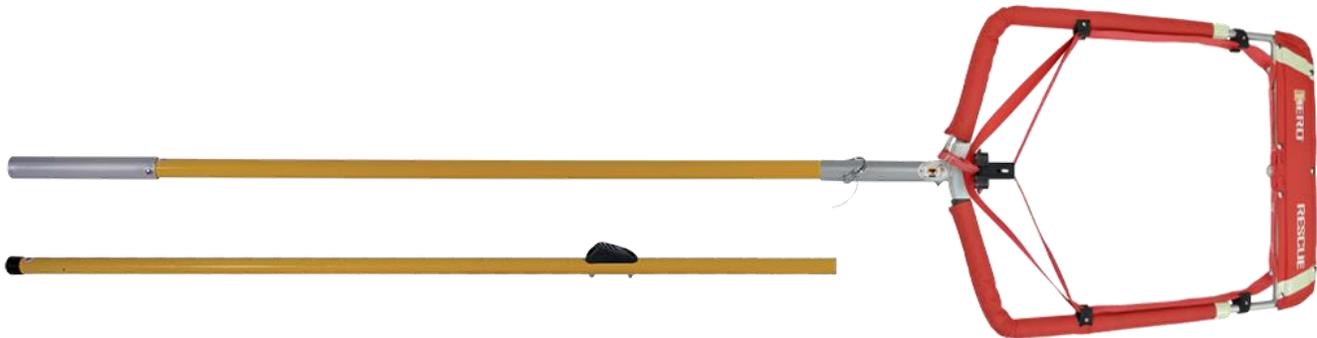


Image B4 – The 2 Rescue Pole sections with loaded hoop, ready for rescue

3. Use the attached pins to secure the poles together.
Note: Optional stainless nut and bolt are included for a permanent connection
4. The end of the pole has a hole for a tether. (Not included)

IN 146 - HR-12 Horizontal Rescue Pole Set-up - continued

Loading the Lifting Strap and attached Mesh PIW Sling:

1. Confirm that the red top cover, with "C-HERO® RESCUE" is snapped on
 - a. The hoop gets loaded from the bottom. Turn the hoop over so it's resting safely on the slide buckle holder, with the "UP" sticker facing down.
 - b. Loading instructions are from the snap end, or opposite the slide buckle holder.



Image B5

2. Ready to load mesh PIW (Person in Water) sling.



Image B6

3. Pick up the black sling from the center of the YELLOW weighted end labeled "END".
 - a. The sling and webbing will be hanging, the writing "To ^ HOOP" on the BLUE strap material should be facing up or the center of the webbing, so you can read it.
 - b. Check to make sure there are no twists in any of the web straps.



Image B7

Loading the Lifting Strap and attached Mesh PIW Sling - continued

4. Lay the sling flat over the end of the hoop, aligning both the center snap from the large Red lifting strap, and the hoop snap.
 - a. Move the slide buckle, all the way to the end by the lifting triangle.
 - b. The slide buckle should have the "UP" sticker facing down

Note: The 2 red sling releases go between the bar and the blue band (to hoop).



Image B8

5. Snap the center snap of the 2" lifting strap to the hoop center snap, then flip the sling releases over the large 2" RED lifting strap out of the way.



Image B9

6. Move the small RED webbing, coming from the YELLOW off to both sides of the black sling.
 - a. Fold the black sling, starting from the BLUE strap, and fold evenly in an accordion style, approx. 2" folds, to evenly fill the pocket neatly
 - b. Follow stitching on the sling, and lay on the RED top cover

The YELLOW of the sling will end up on top of the folds, and should be lying flat and neatly in the hoop pocket.



Image B10

Loading the Lifting Strap and attached Mesh PIW Sling - continued

7. Pull the RED sling releases tight, over the folded sling, and fasten at the hoop.
Note: The 2 release straps can be adjusted with the Velcro as needed to make the connection firm.

- a. Fasten the 2 remainder snaps on the 2" RED lifting strap to the hoop.



Image B11

8. Pull the small side web straps coming from the ends of the YELLOW tight, as you load into the rubber blocks first, then the larger 2" strap second to hold it in.

- a. Check for no twists, do the same on all the blocks.



Image B12

9. Turn the hoop over, so the slide buckle holder is facing up, and then put the small side webbing around the slide buckle holder.

- a. Move the slide buckle as needed to fit in to the holder, (the slide buckle and holder must both have "UP" in the same direction).
- b. Check to make sure that the large webbing is properly secured behind all of the rubber blocks.

NOTE: The small web straps get loaded first then the large strap after it. They must both be completely secured in the rubber blocks, and under the rubber lip.



Image B13

Loading the Lifting Strap and attached Mesh PIW Sling - continued

10. Fully loaded ready to go and ready for MOB drill or rescue.



Image B14



IN 146 - HR-12 Horizontal Rescue Pole Operation

Using the Rescue Pole to Attach the Lifting Strap to a PIW (Person in Water):

1.  Do not attach the lifting strap around the neck or abdomen for the lift. This will cause severe injury or death! **Always use your legs when lifting, not your back.**
2. We recommend that you always use a [Rescue Dummy](#) during man overboard drills to eliminate any possibility of deckhand injury. The United States Coast Guard requires Man a Overboard drill to be performed as if it is an emergency.
3. Connect the lift line snap hook to the triangle and on to the V-cleat on the pole, with tension, (this keeps the line out of the way).
4. In most cases the PIW will be floating vertically. The idea is to try and “surf” the web strap on the PIW and get under the arms, in the armpits, in a smooth quick action. The lift line from the web strap is the top, for indexing purposes.
5. **Note: The lifting sling must be put on, with the slide buckle up and at the front of the PIW and the sling at their back!**
6. Use the Rescue Pole to move the PIW in the water, closer or to another part of the boat.
7. If the PIW has one arm up and another down:
 - a. Put one side of the hoop under one arm, (get the easiest arm to access), with the line facing away from the PIW, (turn at 90 degrees, from the water), and raise the Rescue pole hoop all the way into the armpit as shown in **Image B15**.
 - b. Then rotate the hoop over the head. Once over the head, (keeping the lift line facing up, lined up with torso of PIW's PIW).
 - c. Next move the hoop down the PIW to get past the other arm as shown in **Image B16**.
 - d. Go back up so the strap is under both arms, and under both armpits. (**Image B17**)



Image B15: Start under one arm, up to the arm pit and rotate the hoop over the head



Image B16: Move pole down to get under the other arm

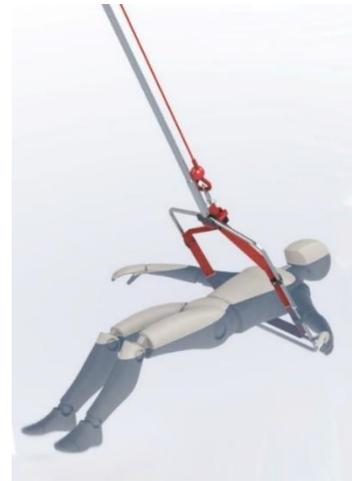


Image B17: Position the hoop up under both arm pits

Note: Above images do not show the Horizontal Pole, however the technique is the same

IN 146 - HR-12 Horizontal Rescue Pole Operation - Continued

8. Hold the hoop against the back of the PIW, when in position take hold of the lift line from the V-cleat, (make sure the slide buckle is in the center of the PIW's chest, and not off to the side), then push the pole to the PIW, pull back on the pole, in a quick (jerk) movement, to release from the buckle holder. Hold the lift line with a little tension, until the pole clears the PIW, (so the sling doesn't get fouled in the hoop). Once the pole is clear, slack the line, and the sling will deploy.

Note: The pole needs to clear the PIW, by way of the feet.

9. Hold the lift line until the pole clears the rescue dummy, by way of the feet. If the mesh sling is not fully deployed, you can use pole or the lift line to stretch out the sling, moving the rescue dummy to a horizontal lift position. If using the lift line, you may need to take some slack out of the winch.

Notes: A tether will keep the Rescue Pole from getting away from you. (Not supplied)

Moving the lift line away from the head of the PIW, while pulling up till there is tension on the line, will position or stretch out the sling.

10. When the slack is out of the line, finish taking the pole off over the feet.
11. Use the winch to lift the PIW back aboard and treat as per company protocol.
12. We have found that using the hoop only, on deck with someone else helps with understanding how it works. Put the hoop over their PIW, under the arms, and use your finger in the triangle. This will show how it works, and how much force is needed to release the slide buckle from the buckle holder. Practicing in the controlled environment of a swimming pool, or at the dock is the easiest way to master the HR-12 Rescue Pole.
13. Move to a lower part of the boat if you need to get closer to the PIW.
14. Rinse the equipment and reload. Log the event and note any discrepancies.



HOLD LINE AND PUSH POLE

Image B18

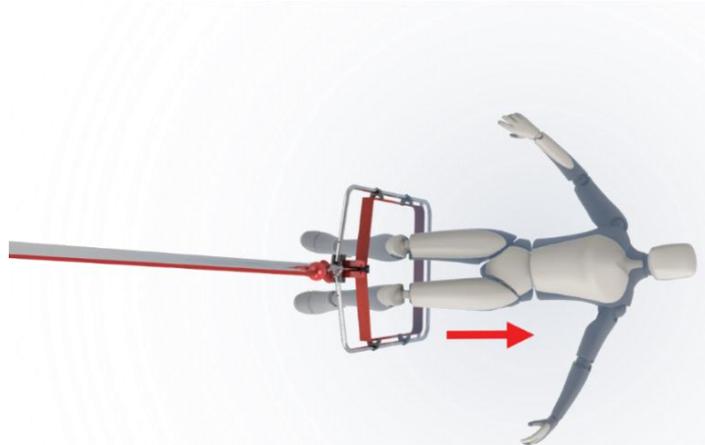


Image B19: If the PIW is floating in a horizontal position, it can be easiest to place the hoop starting with the legs, but be sure the lift line is facing toward the head

IN 146 - HR-12 Horizontal Rescue Pole Inspection and Storage

Inspection:

1. Every Month before MOB Drill: Inspect all screws and pins on slide buckle and holder for tightness and damage.
2. Every Month after MOB Drill: Rinse and inspect rubber blocks and webbing for wear, cracking or fraying. If found, report the items for replacement.
3. Once a year, remove and inspect hoop float covers, and re-attach.

Storage:

4. Every Month after MOB Drill:
5. Inspect after every use and rinse before stowing, to make ready for the next drill or rescue.
 - a. Rinse and inspect rubber blocks and webbing for wear, cracking or fraying
Report items for replacement if they show wear, cracking or fraying
 - b. Inspect all stitches in sling before folding it to make ready for storage
 - c. The HR-12 Rescue Pole fully loaded should look like the image below.
 - d. It is ready for storage, and ready for the next MOB drill or an actual rescue.
6. The pole should be stowed somewhere close to where the designated rescue will happen, out of the sun.
7. The HR-12 Rescue Pole should always be stored in a fully assembled and loaded condition, so that it is ready for immediate use in an emergency, as shown below.
8. Note: One or two poles can be stored separately if needed due to space limitations.
9. Use the hoop cover that is provided.
10. If you remove the V-cleat end of the rescue pole for storage, the pole with the V-cleat must always align with the buckle holder when you re-attach it.



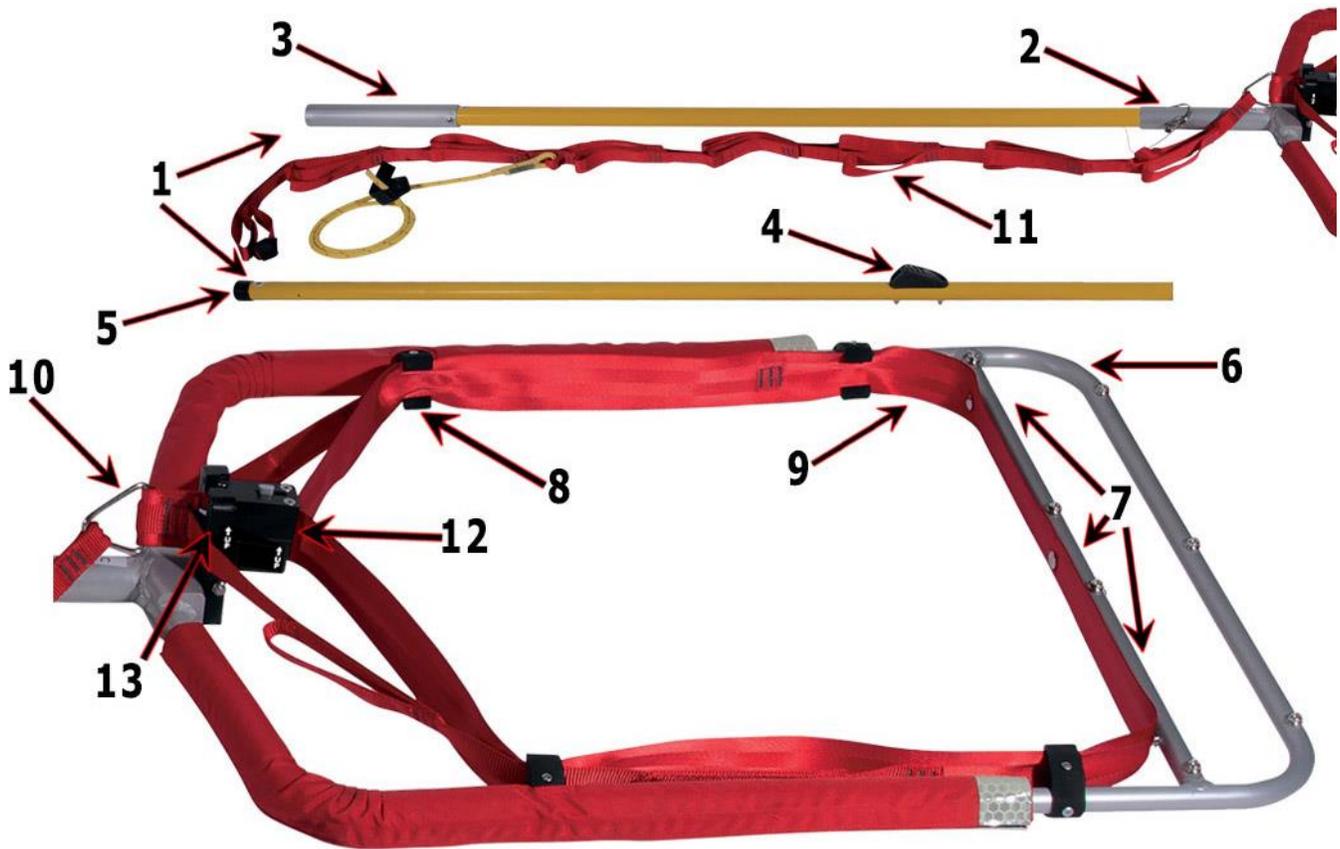
Image B20
HR-12 Rescue Pole loaded. Ready for storage, drill or actual rescue



IN 146 - HR-12 Horizontal Rescue Pole Man Overboard Drills

Man Overboard Drills:

1. The United States Coast Guard requires Man Overboard drills to be performed as if it is an emergency, and your company safety program will specify frequency. We always recommend using a rescue dummy for drills, you should not have a crew member get in the water.
2. Someone immediately advises the wheelhouse that there is a rescue dummy in the water.
3. The wheelhouse sounds the general alarm, and 3 prolonged blasts on the ships whistle. Manually push MOB on the chart plotter. Use the loud hailer to let the crew know there is a man overboard.
4. Stop the boat.
 - a. If applicable let traffic know your intentions on Ch. 13.
 - b. The deckhand goes on deck with PPE, a handheld VHF to a prearranged Ch., and directs the Captain to the rescue dummy, and gets the boat close.
 - c. While the boat is headed back to the rescue dummy, and you are keeping an eye on the rescue dummy is the time to ready the pole and lifting source.
5. While the boat is maneuvering back to the rescue dummy, put the Rescue Davit on the desired bitt, deploy the davit and swing outboard. Or deploy your own davit.
6. Get the Horizontal Rescue Pole ready, by checking the following:
 - a. The top cover is snapped on, the sling is loaded and snapped, all straps are in the rubber blocks
 - b. All connections are tight, including the connection of the two pole sections
 - c. The V-cleat is lined up with the Slide Buckle and holder
7. Deploy a life ring and use it to get the rescue dummy alongside if the boat can't get closer. Tie off the line at the bits not being used.
8. Connect the lift line snap hook to the Rescue Pole triangle, then put the line into the V-cleat.
9. Deploy the Rescue Pole and put it over the rescue dummy and under the arms, as close to the armpits as possible.
10. When in place, hold the lift line firmly, making sure that the slide buckle is in the center of the front of the rescue dummy. Push the pole towards the rescue dummy, or rescue dummy. Always stay inside the bulwarks for safety.
11. Hold the lift line until the pole clears the rescue dummy, by way of the feet. If the mesh sling is not fully deployed, you can use pole or the lift line to stretch out the sling, moving the rescue dummy to a horizontal lift position. If using the lift line, you may need to take some slack out of the winch.
12. Close the line brake and winch up the rescue dummy.
13. Discuss company protocol for shock, injuries, or hypothermia of a recovered person as if this were a real emergency with a PIW.

Product and Major Parts List:

1. Two 6' x 1.25" OD connected foam filled poles with tethered pins
2. Connection on hoop with quick connect pins for first pole section
3. Coupler on first pole section with quick connect pins for second pole section
4. V-Cleat on second pole section for holding 10 mm lift line
5. End cap for pole with a hole for tether line (not included)
6. 7' hoop, partially foam and nylon covered with SOLAS reflecting tape
7. Three (3) male snaps at back of hoop, with 3 matching female snaps on strap
8. Four (4) rubber web strap holding blocks, 2 on each side
9. 3,500 lb. 2" x 7' closed loop lifting strap
10. Integrated 8,000 lb. Lifting triangle
11. Two 1,750 lb. 1" Recovery Straps (Velcroed® together or split for 2-person lift)
12. One-way slide buckle on the lifting strap
13. Slide Buckle holder (shipped separately for attachment by customer)
14. Weight: 14.5 lbs. (6.6 kg)

Image C1: VR-12 Rescue Pole with Recovery Straps

Set-up:

Supplied: Two connecting poles, an aluminum hoop, a lifting/recovery strap with slide buckle, buckle holder, and connecting hardware.

1. **Installation:** The buckle holder and the hardware have been shipped in the plastic bag that is stapled to the hoop. All the hardware for the buckle holder is provided in the bag. Assemble the buckle holder with the countersunk holes facing out so that the provided 5/32" Allen cap screws will fit flush. (5/32" Allen wrench not provided)
Adjustment Note: The slide buckle holding tension can be adjusted with side nuts 7/16", and the enclosed **LOCTITE**[®].

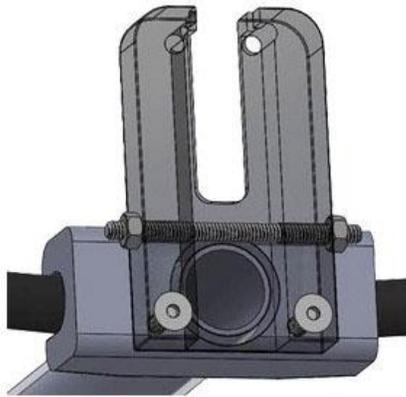


Image C2 - Slide Buckle Holder

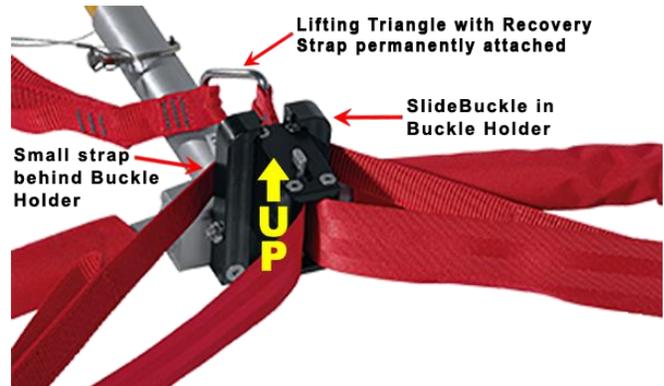


Image C3 – Slide Buckle inserted in Buckle Holder

2. Lay the poles and hoop out. Lay the flat side of the hoop down, buckle holder up.
 - a. The pole with the aluminum coupler fits into the hoop
 - b. The other pole with the black V-cleat fits into the first pole
 - c. The V-cleat should face up as shown in **Image C 4**, the same direction as the buckle holder which is labeled with an up arrow.



Image C4 – First pole is inserted, second pole is ready to insert with the V-Cleat in the up position

3. Use the attached pins to secure the poles together.
Note: Optional stainless nut and bolt are included for a more permanent connection
4. The end of the pole has a hole for a tether line. (Not supplied)

IN 147 - VR-12 Rescue Pole with Recovery Straps Set-up - Continued

5. Loading the Recovery Strap onto the Rescue Pole hoop

Place the slide buckle into the holder (**Image C5**), matching the up arrows.

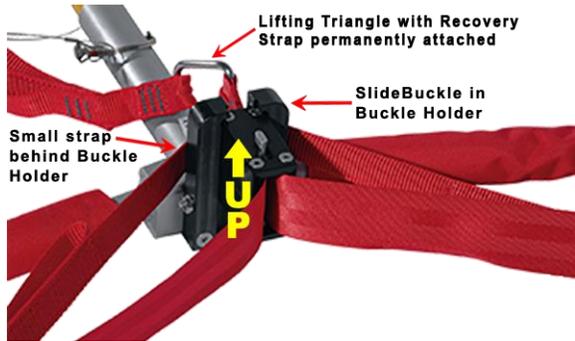


Image C5 - Slide Buckle inserted in Buckle Holder



Image C6 – Lifting Strap stretched out with no twists

6. The lifting triangle and the small strap both go on the outside of the buckle holder.
7. Move the lever on the top of the slide buckle, pulling all the webbing towards the center of the hoop. Make sure there are no twists before attaching. (**Images C6 & C7**)
8. Install slide buckle into slide buckle holder.
9. Fasten the 3 snaps to the hoop crossbar (**Image C7**), then load the webbing into the rubber holding blocks (2 per side), with the small strap in first. The easiest technique is to place the bottom edge of the strap under the bottom edge of the rubber, then work the top edge in completely **under the rubber**. The rubber can be bent to help with loading.
10. It is always best to load the Lifting Strap in the hoop while it is on deck.



C7 – Lifting Strap with the three snaps attached



C8 – Lifting Strap loaded into one of the 4 rubber holding blocks



Important Tip: Make sure that the lifting strap is secured under both the top and bottom lips of the rubber blocks.

11. Attach both sides of the webbing with the Velcro, as shown in **Image C9**.
12. Use a light pressure on the strap, keeping it aligned and not twisted with the yellow line into the V cleat.



Image C9 – Rescue Pole with Recovery Strap, fully assembled

Using the Rescue Pole to Attach the Lifting Strap to a PIW (Person in Water):

1.  Do not attach the lifting strap around the neck or abdomen for the lift. This will cause severe injury or death! **Always use your legs when lifting, not your back.**
2. We recommend that you always use a [Rescue Dummy](#) during man overboard drills to eliminate any possibility of deckhand injury. The United States Coast Guard requires Man Overboard drill to be performed as if it is an emergency.
3. Connect the lift line to the triangle and on to the V-cleat on the pole, with tension, (this keeps the line out of the way).
4. In most cases the PIW will be floating vertically. The idea is to try and “surf” the web strap on the PIW and get under the arms, in the armpits, in a smooth quick action. The lift line from the web strap is the top, for indexing purposes.
5. **Note:** This is important. The Rescue Pole can be used upside-down and it will work, however you will have to lift the pole up with the PIW.
6. Use the Rescue Pole to move the PIW in the water, closer or to another part of the boat.
7. If the PIW has one arm up and another down:
 - a. Put one side of the hoop under one arm, (get the easiest arm to access), with the line facing away from the PIW, (turn at 90 degrees, from the water), and raise the Rescue pole hoop all the way into the armpit, as shown in **Image C10**.
 - b. Then rotate the hoop over the head. Once over the head, (keeping the lift line facing up, lined up with torso of PIW's PIW).
 - c. Next move the hoop down the PIW to get past the other arm as shown in **Image C11**.
 - d. Go back up so the strap is under both arms, and under both armpits. (**Image C12**)



Image C10: Start under one arm, up to the arm pit and rotate the hoop over the head



Image C11: Move pole down to get under the other arm

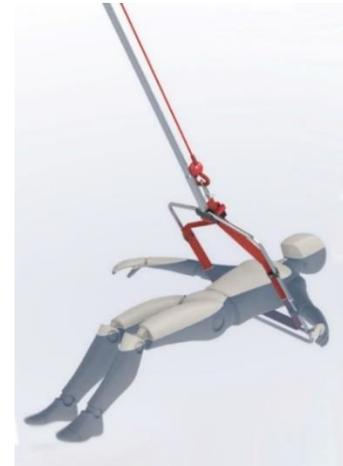
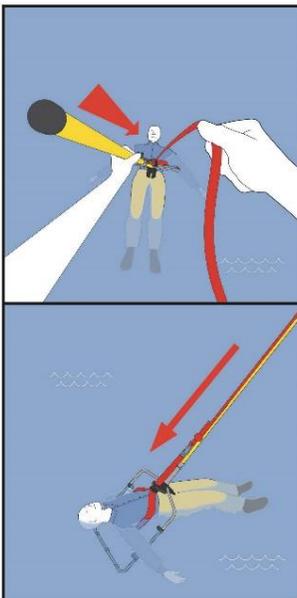


Image C12: Position the hoop up under both arm pits

Note: Above images do not show the Recovery Strap, however the technique for is the same

IN 147 - VR-12 Rescue Pole with Recovery Straps Operation Continued

8. Once the Web strap is under the arm pits, keep the back of pole hoop against the back of PIW, grab the yellow line from V-cleat. Hold back on the lift line firmly and press the pole to the PIW, (the pole will push the one-way slide buckle towards PIW, not allowing it to back out). See the diagram in **Image C13**.
9. Pull back on the pole, in a quick short pull (jerk) movement, to release the buckle from the buckle holder.
10. Remove the pole from the PIW and bring aboard.
11. **Note:** A tether will keep the Rescue Pole from getting away from you. (Not supplied)
12. In the event the PIW is horizontal, it can be easiest to place the hoop starting with the legs, but be sure the lift line is facing toward the head (**Image C14**)
13. We have found that using the hoop only, on deck with someone else helps with understanding how it works. Put the hoop over their PIW, under the arms, and use your finger in the triangle. This will show how it works, and how much force is needed to release the slide buckle from the buckle holder. Practicing in the controlled environment of a swimming pool, or at the dock is the easiest way to master the VR-12 Rescue Pole with the Recovery Strap.
14. Move to a lower part of the boat if you need to get closer to the PIW.
15. Two persons can lift at the same time by pulling apart the Velcro holding the two parts of the Recovery Strap.



HOLD LINE AND PUSH POLE

Image C13

Note: Above images do not show the Recovery Strap, however the technique is the same.

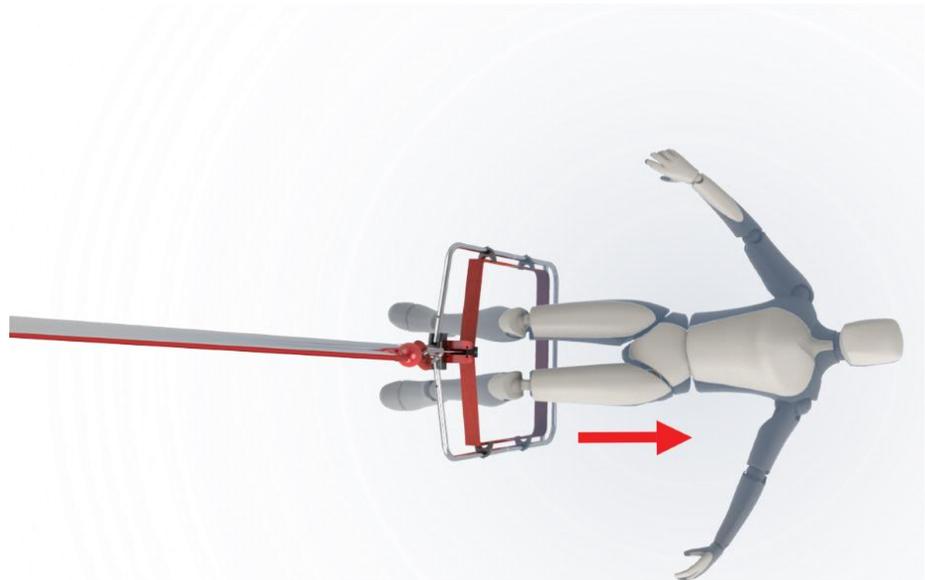


Image C14: If the PIW is floating in a horizontal position, it is easiest to place the hoop starting with the legs, but be sure the lift line is facing toward the head



IN 147 - VR-12 Rescue Pole with Recovery Straps Inspection and Storage

Inspection:

1. Every Month before MOB Drill: Inspect all screws and pins on slide buckle and holder for tightness and damage.
2. Every Month after MOB Drill: Rinse and inspect rubber blocks and webbing for wear, cracking or fraying. If found, report the items for replacement.
3. Once a year, remove and inspect hoop float covers, and re-attach.

Storage:

1. Inspect after every use and rinse before stowing, to make ready for the next time. The pole should be stowed somewhere close to where the designated rescue will happen, out of the sun.
2. The Rescue Pole with Recovery Strap should have both sections Velcro connected, with the Recovery Handles lined up. It is ready for storage, and ready for the next MOB drill or an actual rescue.
3. The Rescue Pole with Recovery Strap should always be stored in a fully assembled and loaded condition, so that it is ready for immediate use in an emergency, as shown below.
Note: One or two poles can be stored separately if needed due to space limitations.

Optional hoop covers are available from C-Hero®.

5. If you remove the V-cleat end of the rescue pole for storage, the pole with the V-cleat must always align with the buckle holder when you re-attach it.



Image C16

The entire Rescue Pole, ready for storage, drill or actual rescue



IN 147 - VR-12 Rescue Pole with Recovery Straps Man Overboard Drills

Man Overboard Drills:

The United States Coast Guard requires Man Overboard drills to be performed as if it is an emergency, and your company safety program will specify frequency. We always recommend using a rescue dummy for drills, you should not have a crew member get in the water.

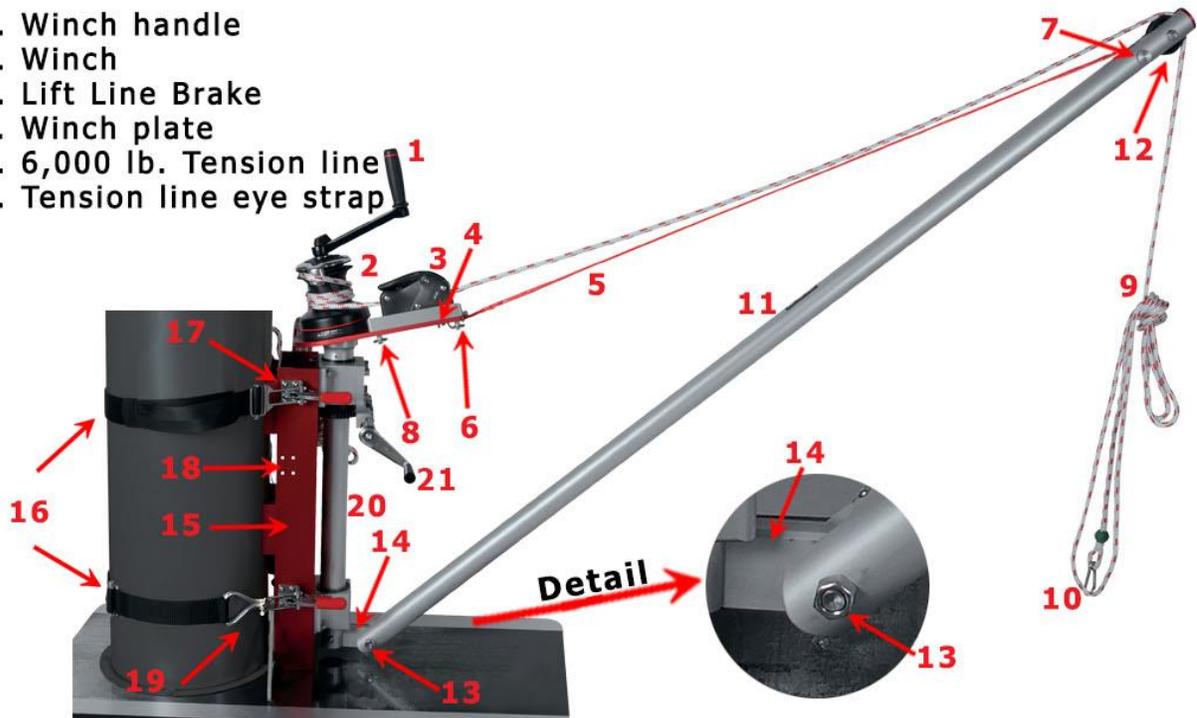
1. Someone immediately advises the wheelhouse that there is a Rescue Dummy in the water.
2. The wheelhouse sounds the General Alarm, and 3 prolonged blasts on the ships whistle. Manually push MOB on chart plotter. Use the loud hailer to let crew know there is a man overboard.
3. Stop the boat.
 - a. If applicable let traffic know your intentions on Ch. 13.
 - b. The deckhand goes on deck with PPE, a handheld VHF to a prearranged Ch., and directs the Captain to the rescue dummy, and gets the boat close.
 - c. While the boat is headed back to the rescue dummy, and you are keeping an eye on the rescue dummy is the time to ready the pole.
4. Get the Rescue Pole ready, by checking the following:
 - a. The Rescue Strap is loaded correctly
 - b. All connections are tight, including the connection of the two pole sections
 - c. The V-cleat is lined up with the Slide Buckle and holder
 - d. The handles on the recovery strap are all lined up and the two sections are Velcro attached
5. Deploy a life ring and use it to get the rescue dummy alongside if the boat cannot get closer. Tie off the line at the bits not being used.
6. Deploy the Rescue Pole and put it over the rescue dummy and under the arms, as close to the armpits as possible.
7. When in place, hold the lift line firmly, and push the pole towards the rescue dummy. Always stay inside the bulwarks, for safety.
8. Remove the pole and lift the rescue dummy with the Recovery Strap handles.
Note: The strap handles can be pulled apart at the Velcro connections for a 2-person lifting operation.
9. Discuss company protocol for shock, injuries, or hypothermia of a recovered person as if this were a real emergency with a PIW.



IN 144 – Bitt Mount Rescue Davit MWL 350 lbs. - Set-up

Product and Major Parts List:

1. Winch handle
2. Winch
3. Lift Line Brake
4. Winch plate
5. 6,000 lb. Tension line
6. Tension line eye strap



7. Tension line boom pin and cotter pin
8. Tension line adjustment buttons
9. 6,000 lb. Lift line with stopper ball
10. 8 kN Snap hook
11. 6' 8" Boom
12. Boom sheave
13. Boom connection bolt
14. Boom connection to Davit
15. Base, Channel (red)
16. Upper and lower straps
17. Latch clamp (1 on each strap)
18. Mounting holes, Upper Strap
- Optional for short bitt
19. Lower Strap connection hook
20. Vertical spindle tube, with spindle blocks top and bottom
21. Side handle for moving boom left & right
Worm and Spindle gears, see Image D41
22. Red feet (4) to adjust fit for the bitt
23. Inside mounting holes for red feet,
for bitts with smaller diameter
24. Center mounting holes for red feet
for bitts shorter than 23"
25. Side Stabilizers
26. Weight 38 lbs.(17.3 Kg.)

Back of Davit

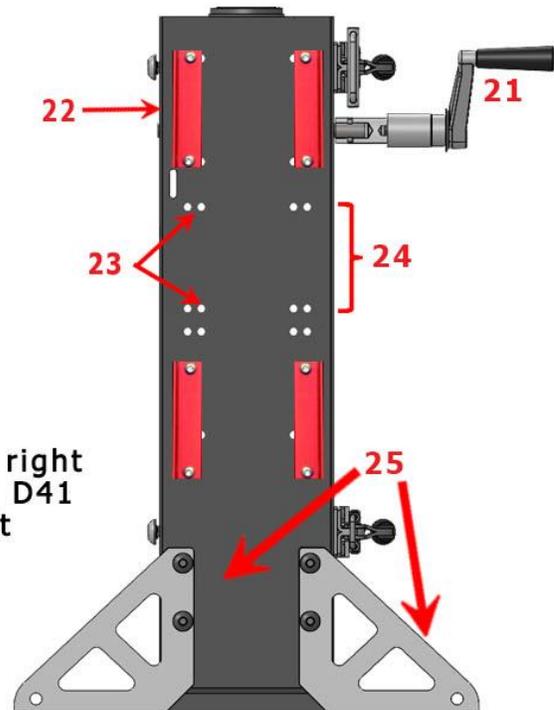


Image D1 – The Bitt Mount Rescue Davit, deployed position, and back view



IN 144 - Bitt Mount Rescue Davit Set-up

Set-up (one time for the boat)

Supplied: Winch handle, Lift line with stopper ball and snap hook, connecting hardware, and LOCTITE®

Other Tools Needed: 3/4" box wrench, Allen Wrenches: 5/32", & 5/16", Pliers, Tape Measure, NEVER•SEEZ® (Regular Grade or Mariner's Choice), duct tape, and a small diameter line for tethering to prevent davit from going overboard.

Note: The C-Hero® Bitt Mount Davit will fit on most bitts with no adjustments. If the height is between 23" and 30", and the diameter is between 8½" and 13½", you will be able to use the davit as shipped. Sections 2 and 3 are only needed if your bitt is not within the above measurements.

1. **SELECT BITT, MEASURE AND INSPECT:** Selecting a bitt to be used for rescues:

Typically, the bitt on the quarter is used because it's closer to the water. The bow bitt might be the only choice if there are no bitts aft or the bitts aft are too tall. The forward bitt for the davit works fine, as the crews will use the Rescue Pole aft so it's closer to the water.

Any welds that are in the way, or a top flange that needs to be cut down, in just the area the unit will go, should be done now. Use a small grinder and metal cutting wheel if needed.

Note: Ensure that the grinding of weld(s) or other modifications do not diminish the integrity of the bitt itself.

Height of Bitt: Most bitts are 23" - 28" tall, and the upper strap is set in the top position at the factory for this height.

If your bitt is under 23" the upper strap and upper feet on back of davit will need to be moved down to the middle set of holes. Measure the outboard side of the bitt, as shown in **Image D3**.

Measuring the Bitt:



Image D2 – Measure diameter



Image D3 – Measuring bitt height

IN 144 - Bitt Mount Rescue Davit – Set-up – Continued



D4 - This shows how it should fit, not bottoming out and touching the bitt between the red feet



D5 - This shows a properly installed Rescue Davit, side stabilizers are more easily seen on back view of davit on Images D11 & D12



D6 - This shows the big top flange, and how it was cut off to make the unit work.



D7 - This shows dome top that was welded on. Weld will be cleaned up where the davit will sit.

IN 144 - Bitt Mount Rescue Davit – Set-up – Continued

SKIP step 2 if your bitt is taller than 23"

2. **UPPER STRAP - MOVE:**

To move, use a 5/32" Allen wrench to move the clamp, and a 5/16" Allen wrench on the end of the strap connected to unit, with a 3/4" box wrench. When putting the strap in its lower position, use a piece of tape over the box wrench to hold the nut in, (your hand won't fit in the tubing). Make sure the strap is straight, like the bottom strap.

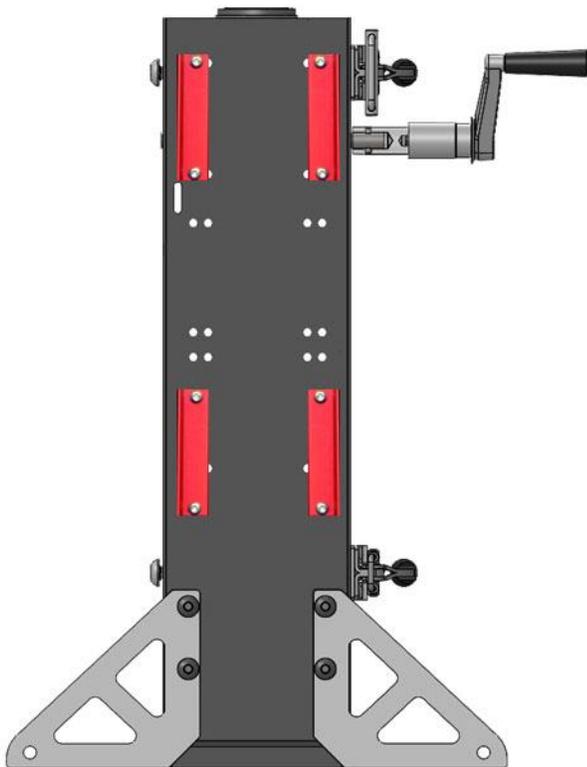
BACK FEET – MOVE DOWN:

The Feet on the back will (in red on **Image D8** below) need to be moved (**Image D9**) if the strap is moved, or the bitt diameter is smaller than 8½" (21.59 cm). Use a 5/32" Allen wrench to relocate. The back of the unit should not bottom out against the bitt.

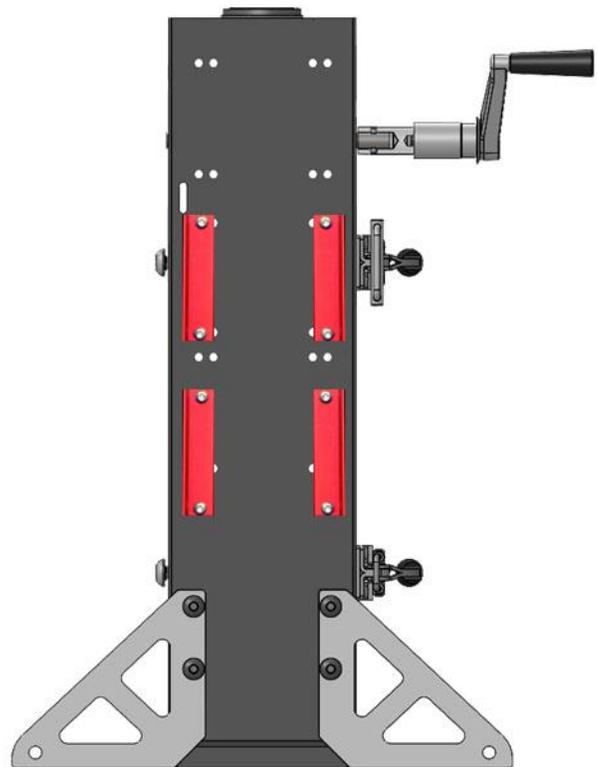
SKIP step 3 if your bitt DIAMETER is more than 8½":

3. **BACK FEET – MOVE IN:**

The inside holes on the back of unit, should be used for smaller diameter bitts, (less than 8½" [21.59 cm] diameter). Use a 5/32" Allen wrench to relocate. The back of the unit should not bottom out against the bitt.



D8 – Back of Davit as shipped from factory. This fits 80% of bitts that have height is between 23" and 30", and the diameter is between 8½" and 13½"



D9 – For shorter bitts, the top red feet and band attachments have been moved down to the lower sets of holes. Note: All 4 red feet would also be moved in for a bit diameter less than 8½"

IN 144 - Bitt Mount Rescue Davit – Set-up – Continued

4. Strap Buckle Assembly:

Top Strap

- a. Open the top clamp, and thread the strap through it, making sure there are no twists.
- b. To **Tighten** the strap, pull it tight against the bitt, and close the clamp.



D10 - Top Buckle thread



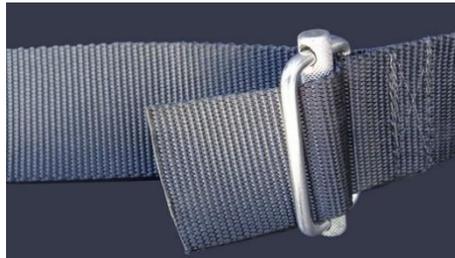
D11 – Top Buckle finished

Bottom Strap:

- c. Check the bottom strap to make sure the strap is not twisted, and the hook will be facing away from the bitt, as shown in **Image D14**.
- d. **To Tighten** the strap, once the hook is in, pull the tail of the strap tight, and close the clamp.
- e. **To Loosen** the strap, open the clamp move the adjuster, and take the hook out of the clamp. Follow **Image D15** below
- f. Stow the bottom strap in the base and use the side Velcro to help secure.



D12 – Bottom Buckle thread



D13- Bottom finish



D14 – Bottom hook in place

5. **DAVIT TETHER:** ⚠️

Use a small line secured to the winch collar, under the winch. The line should be long enough to have enough slack to get the unit on the bitt, while still on deck. Connect the tether to the side of the bitt not being used.



Image D15 - Tether Line (Not included) on winch collar

IN 144 - Bitt Mount Rescue Davit – Set-up – Continued

6. DAVIT BOOM INSTALL:

- a. Stand the base unit up against the bulkhead.
- b. The side handle is used to move the boom left and right. Use the side handle (**Image D16**) to bring the davit boom connection point at the bottom, to the center of the unit, (where the nut and bolt are, at the bottom of the base).
- c. Take the nut and bolt off the davit connection point.
- d. Lay the davit boom on the deck (**Image D17**), with the slot for the tension line facing up (towards the unit). Tighten with a 5/16" Allen wrench and 3/4" wrench, using Never-Seez® (Regular Grade or Mariner's Choice)



D16 - Side Handle

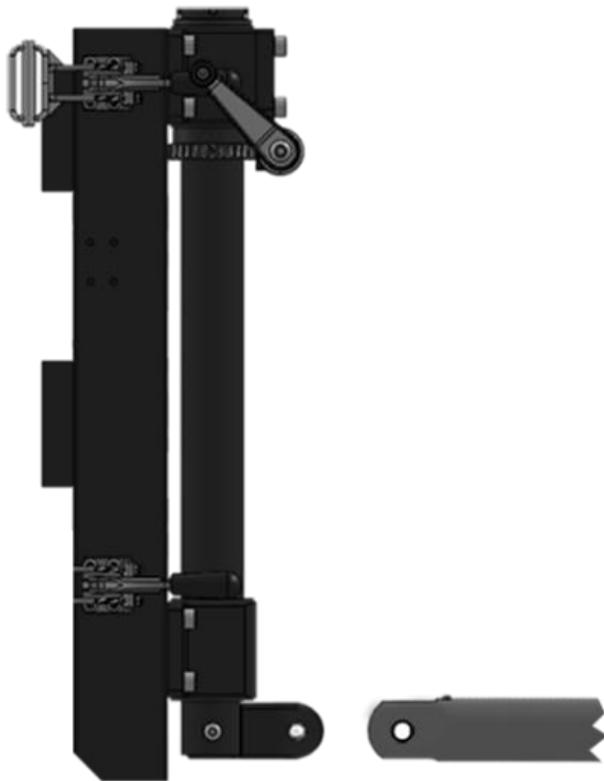
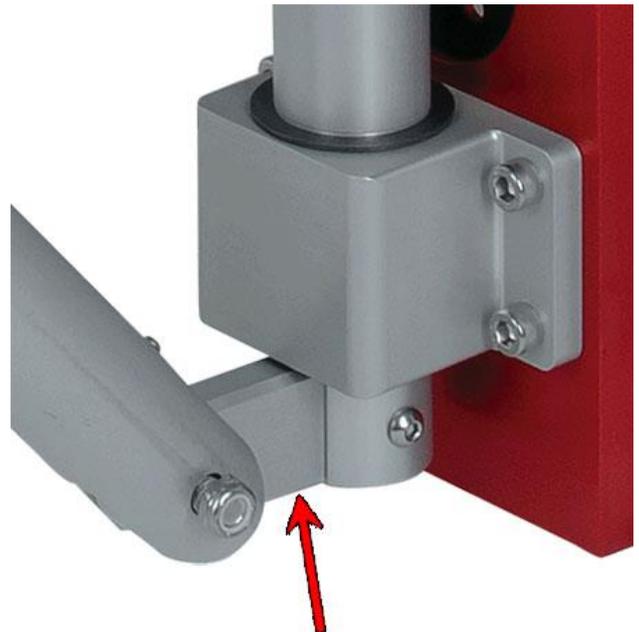


Image D17 – Side view of base with davit boom ready to insert



**Image D18
Boom Connection Point
facing away from davit base**

IN 144 - Bitt Mount Rescue Davit – Set-up – Continued

7. DAVIT Red Tension Line Install:

- Take the pin out of the end of the davit boom.
- Prop up the davit boom, then grab the red tension line from under the winch plate.
- Place the eye of the red tension line in the slot and then pin it as shown in **Image D19**. Bend the cotter pin to secure it as shown in **Image D20**.



Image D19 – Tension line around pin inside the boom with cotter pin inserted



Image D20 – Cotter pin bent to secure it in place

8. LIFT LINE INSTALL:

- Thread the lift line with stopper ball an, into the sheave at the end of the davit boom. As shown in **Image D20**.
- Check the lift line to make sure that it is not crossed with the tension line.
- Open the line brake handle (**Image D21**), and thread the line through with a rolling motion. The line gets wrapped clockwise 4 wraps, over the chrome tailing arm, and into the jaws. Leave 1 ft. of line after the winch is loaded and close the line brake as shown in **Image D22**.
- Tie an overhand knot on the end of the lift line, to prevent it from running out.
- Winch handle (**Image D23**) goes into the top of the winch, use thumb lock. Snap the line brake closed. Best practice is to store the handle in the winch.
- Move the davit boom into davit gate. Pin Davit gate to secure it as shown in **Image D24**.



Image D21 – Line brake open, line out of jaws, ready to ease the line off the winch and lower the dummy to the deck



Image D22 – Line brake closed, line wrapped, in winch jaws. Tailed off the chrome tailing arm, ready to lift



Image D23 – Winch Handle with thumb lock



Image D24 - Davit folded up & pinned

IN 144 - Bitt Mount Rescue Davit – Set-up – Continued

9. INSTALLATION OF DAVIT AND FIT CHECK ON THE BITT:

a. DAVIT READY FIT CHECK:

1. The Bitt should be checked first to assure that any welds or any top flange interference was taken care of.
2. Open both clamps and place the tether on the bitt not being used. Place the unit on the outboard side of the bitt and put the top strap over the bitt. Check that the feet on the back are touching the bitt, and not the unit. Make sure the side stabilizers are making contact at the base of the bitt. Tighten the clamp when ready.

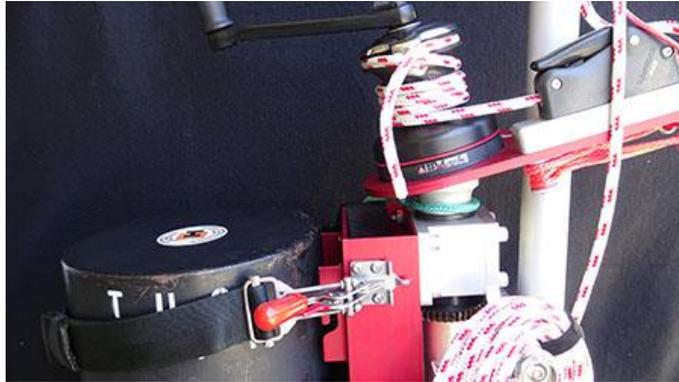


Image D25 – Top strap with clamp ready to be closed

b. BOTTOM STRAP ON:

1. The bottom strap goes on after the top strap and comes off the bitt before the top strap comes off. Take the strap out of the base and place the hook into the open clamp facing away from the bitt, pull the strap tight and close the clamp.
2. To Loosen the strap, open the clamp and move the adjuster, take the hook out of the clamp, which is shown in **Image D26**.
3. Stow the bottom strap in the base and use the side Velcro to help secure.
4. Hold the red tension line, and release the pin, and slowly lower davit boom.



Image D26 – Hook is in the clamp

IN 144 - Bitt Mount Rescue Davit – Set-up – Continued

9. INSTALLATION OF DAVIT AND FIT CHECK ON THE BITT - Continued

c. DAVIT BOOM HEIGHT ADJUSTMENT: (With Davit attached to the bitt)

The boom tension line is a fixed piece of line that is always connected, and may need to be adjusted, depending on the angle of the bitt to be sure the lift line will clear the tires and fenders.

1. Deploy the davit boom and lift line, and see where the snap hook hangs, it should clear the outboard rubber.

Note: In most cases a 45- degree angle on the davit boom is optimum.

2. The davit boom can be lifted by the red tension line, and slack taken out of it under the winch on the adjusting buttons, as shown in **Image D27**, and the video below.

Boom height adjustment, with davit attached to bitt:

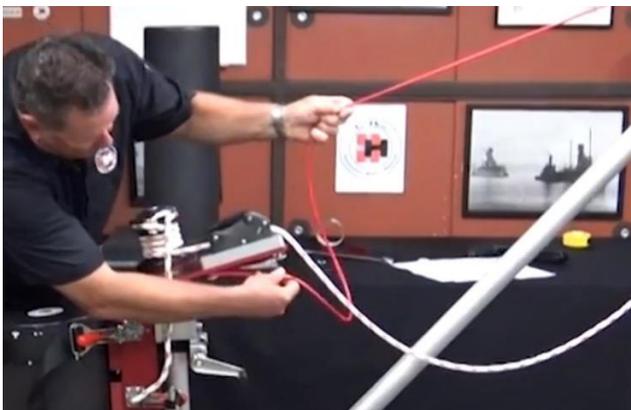


Image D27 – Holding Tension Line to lift Davit boom to approximately 45°, while wrapping the Tension Line round the adjusting buttons under the winch plate

3. Use a figure “8” or round turns around the buttons as shown in **Images D28 and D29**
4. It may take a couple of times to get the desired angle.
5. Once the angle is set, check to make sure the wraps are tight and seated, with a half hitch on one of the buttons, to help seat the wraps from not coming off.



Image D28 - Beginning wrap to adjust height



Image D29 – Wraps on buttons with a half hitch finish

10. Final Adjustment on Deck -Tension Line Centering and Securing:

- a. The red tension line will get lead through the eye strap under the winch plate. This keeps the tension line centered and always ready. This should be done on deck to avoid losing the bolt.
- b. Remove the bolt from the eye strap holding the tension line, on the end of the winch plate, with a 5/32" Allen wrench, as shown in **Image D30**.
- c. Loosen the second bolt, just enough to be able to move the eye strap towards where the davit boom stows.
- d. Slip the red tension line into the cradle of the eye strap. Secure the eye strap with the bolt and Never-Seez[®] (Regular Grade or Mariner's Choice), then tighten the other bolt, as shown in **Image D31**.



Image D30 – Eye strap, one end unscrewed and opened with tension line through it



Image D31 – Eye strap re-attached with the tension line secured inside the eye.





**Image D35 – Rescue Davit,
attached and ready to deploy**



**Image D36 – During
an MOB drill**

11. THE RESCUE DAVIT ONE TIME ADJUSTMENTS ARE COMPLETE:

- a. The Rescue Davit location and selected rescue bitt information should be visibly posted
- b. Initial setup is a great time to refer to the manual for pictures of different types of bitts
- c. Moving a Davit to another boat? Refer to the manual for setup.

Attachment to the Bitt:

1. **Always use your legs when lifting, not your back.**
2. Move the Rescue Davit to the bitts to be used.
3. Connect the tether line (Not supplied) to something secure, and open both clamps.
4. **Dual Bitts: Attach the Rescue Davit to the outboard side of the bitt, on the bitt closest to the direction you will swing the PIW (Person in Water) after you winch them up.**
5. Put the top strap over the bitt. Close the clamp and check strap tension, adjust as needed.
6. Take the hook out of the tubing base and place it into the open clamp, with the hook facing away from the bitt. Pull the tail of the strap tight and close the clamp.
7. Hold the red tension line and release the pin, while slowly lowering the davit boom.
8. Connect the lift line snap hook to the Rescue Pole and secure the lift line in the V-cleat.
9. Use the Rescue Pole to steady the PIW, at the lowest part of the vessel, if possible.
10. If more line is needed, it is ok to take line off the winch, but not out of the line brake.
11. Deploy the Rescue Pole and put it over the rescue dummy and under the arms, as close to the armpits as possible.
12. When the PIW is ready to be lifted, pull the slack out at the winch. Before lifting, check that the wraps on the winch aren't crossed, and that the line is over the chrome tailing arm and in the jaws. Snap the line brake closed, if not already, as shown in **Image D37**.
13. Winch the PIW up using the winch handle, till the green stopper ball is at the davit end. Use the side handle to move the PIW to the side of the boat.
Note: The winch handle can be operated as a ratchet.
14. Once the PIW is at the side of the boat, and more clearance is needed, use the winch handle to continue lifting the PIW higher, and bring the PIW aboard. To lower the PIW on deck, leave the wraps on the winch, and open the line brake, as shown in **Image D38**. Then carefully ease the line off the winch, to lower slowly.



⚠ Never open the line brake with a load on the line without wraps on the winch.



Image D37 – Line brake closed, line wrapped, and in winch jaws. Tailed off the chrome tailing arm, ready to lift



Image D38 – Line brake open, line out of jaws, ready to ease the line off the winch and lower the dummy to the deck

IN 144 - Bitt Mount Rescue Davit - Operation - Continued

Removal from the Bitt:

1. Center the davit boom to the over the water position, while the davit is still deployed. Use the red tension line to lift the davit boom and secure it at the davit gate with the pin.
2. The lift line should all be loaded on the winch, with only 1 foot of line after the winch. The line should be coiled neatly and ready for use.
3. Open the lower clamp first and move the adjusting buckle to slack the strap. Take the snap hook out of the clamp and secure the strap in the base, using the Velcro on the side to help secure it.
4. Open the top clamp, and carefully remove the Rescue Davit from the bitt, once on deck take off the tether line.

NOTES:

- A. Do not hang the unit horizontally, with it hanging on the davit gate.**
- B. Best practice: Leave the winch handle in the winch using the thumb lock, and keep everything ready, unless you are using the optional C-HERO® bulkhead mount and cover, when you will stow the winch handle in the cover.**
- C. Moving a Davit to another boat? Refer to the manual for setup.**

Inspection:

1. After each Monthly MOB Drill:

- Rinse and inspect
- Inspect Both Top and Bottom straps and clamps
- Check that the cotter pin is bent at the pin securing the tension line to the end of the boom.
- Check tension, lift, and tether lines for fraying. If any are frayed, report them for replacement.
- Inspect and lubricate the worm and spindle gears with *Harken® White Winch Grease (or equivalent)* (**Images D39 and D41**)



Image D39



Image D40

2. Every 6 months:

- Complete Monthly inspections above
- Inspect worm and spindle gears, handle, davit boom bolts, sheave, and lift line snap hook

3. Annually:

- Inspect overall condition, and log
- Lubricate boom sheave with **McLube One Drop (Image D40)**
- Lubricate winch, see [HARKEN® PAGE](#)
- Complete Monthly and 6 months inspections above
- Line Brake needs to be lubricated with **WD-40®** silicone spray /
- Check all the lines for fraying. Check that all bolts, tension line adjustment, tension buttons, tension eye strap bolts, latch clamps.
- Use *Harken® White Winch Grease* for the Winch

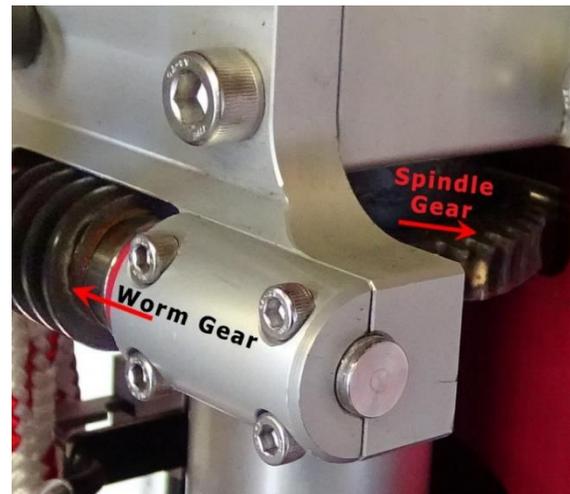


Image D41

Worm and Spindle gears, operated by the small handle to move the boom to the left and right

Storage:

- Best practice:** To leave the winch handle in the winch using the thumb lock, and keep everything ready, unless you are using the optional C-HERO® bulkhead mount and cover, when you will stow the winch handle in the cover.
- Do not hang the unit horizontally, with it hanging on the davit gate.
- Store out of the sun if possible.



IN 144 - Bitt Mount Rescue Davit Man Overboard Drills

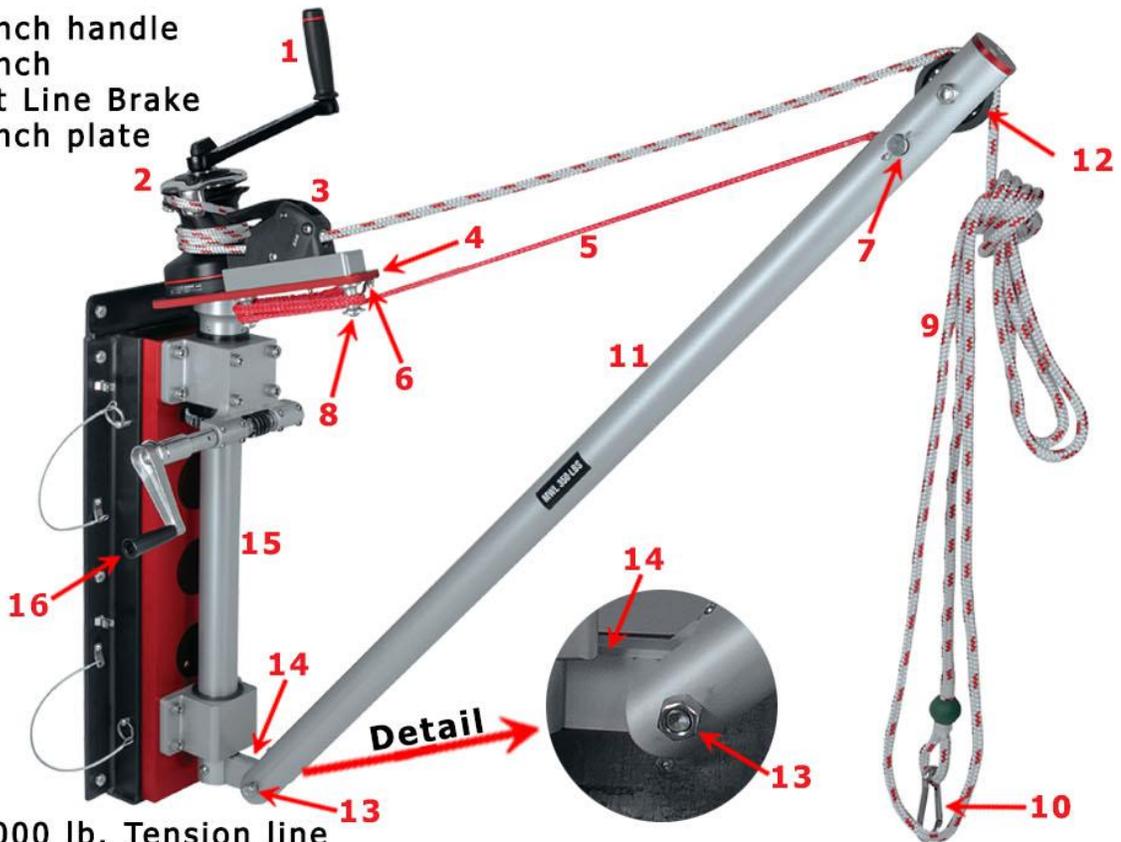
Man Overboard Drills:

The United States Coast Guard requires Man Overboard drills to be performed as if it is an emergency, and your company safety program will specify frequency. We always recommend using a rescue dummy for drills, you should not have a crew member get in the water.

1. Someone immediately advises the wheelhouse that there is a rescue dummy in the water.
2. The wheelhouse sounds the General Alarm, and 3 prolonged blasts on the ships whistle.
3. Manually push the MOB icon on the chart plotter. Use the loud hailer to let the crew know there is a man overboard.
4. Stop the boat.
 - a. If applicable let traffic know your intentions on Ch. 13.
 - b. The deckhand goes on deck with PPE, a handheld a VHF to a prearranged Ch., and directs the Captain to the rescue dummy, and gets the boat close.
 - c. While the boat is headed back to the rescue dummy, and you are keeping an eye on the rescue dummy is the time to ready the pole and davit.
5. While the boat is maneuvering back to the rescue dummy, put the Rescue Davit on the desired bitt, deploy the davit and swing outboard.
6. Deploy a life ring and use it to get the rescue dummy alongside if the boat can't get closer. Tie off the line at the bitts not being used.
7. Connect the lift line snap hook to the Rescue Pole triangle, then put the lift line into the V-cleat.
8. Deploy the Rescue Pole and put it over the rescue dummy and under the arms, as close to the armpits as possible.
9. When in place, hold the lift line firmly, and push the pole towards the rescue dummy. Always stay inside the bulwarks, for safety.
10. Remove the pole from the rescue dummy, then pull the slack out at the C-Hero® Rescue Davit, and make sure the line brake is closed, then winch up the rescue dummy.
11. Use the side handle to swing the rescue dummy to side of the boat and bring back aboard.
12. Discuss company protocol for shock, injuries, or hypothermia of a recovered person as if this were a real emergency with a PIW.

Product and Major Parts List:

1. Winch handle
2. Winch
3. Lift Line Brake
4. Winch plate



5. 6,000 lb. Tension line
6. Tension line eye strap
7. Tension line boom pin and cotter pin
8. Tension line adjustment buttons
9. 6,000 lb. Lift line with stopper ball
10. 8 kN Snap hook
11. 4' 3" Boom
12. Boom sheave
13. Boom connection bolt
14. Boom connection to Davit
15. Vertical spindle tube, with spindle blocks top and bottom
16. Side handle that moves boom left & right
Worm and Spindle gears, see Image E29
17. Front view Davit in Mount
18. Davit Flat Mount
19. Tethered 3/8" Stainless Steel Pins
20. Weight: 34 lbs. (15.5 Kg.)

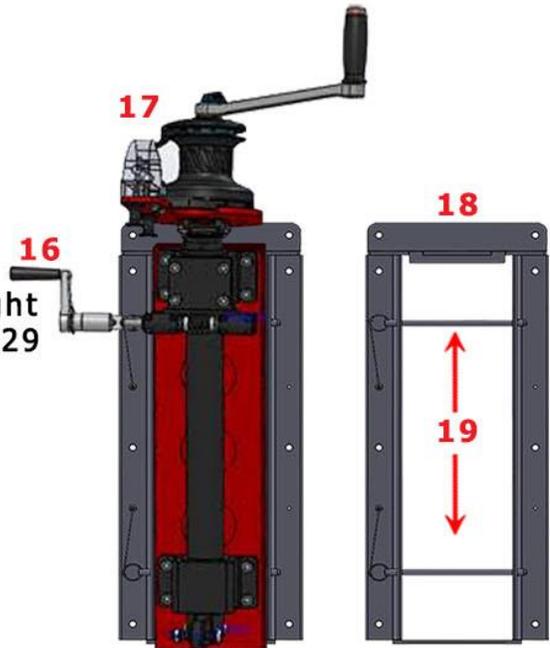


Image E1 - Flat Mount Rescue Davit, deployed position

Set-up (one time for the boat):

Supplied: Winch handle, Lift line with stopper ball and snap hook, connecting hardware, mount with tethered pins, and LOCTITE®

Tools and Supplies Needed: 3/4" box wrench, Allen Wrenches: 5/32", & 5/16," Eight 3/8" stainless-steel bolts, or stainless-steel U-bolts, Pair of pliers, A small diameter line for tethering to prevent davit from going overboard, and NEVER•SEEZ® (Regular Grade or Mariner's Choice)

Installation of the Flat Mount:



Image E2 – Flat Mount Davit in Mount



Image E3 – Closeup, mounted to railing with U-bolts

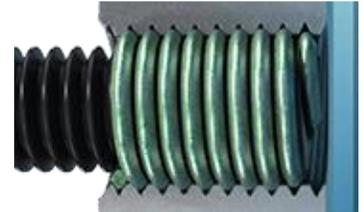


Image E4 – Heli-coil example

1. Determine the best location for the Rescue Davit, considering that it needs to be strong enough to support the loads, your company engineer, or boat architect must be involved and approve the mounting location and procedure.
2. Attach mount with eight 3/8" bolts, or with U-bolts if mounted to a railing that will handle the load. A325 or A490 Stainless Steel required to comply with MWL 550 lbs. (Not supplied)
3. In addition the thread connection strength can be increased by using a Heli-coil when blind threading. Image E4
4. If your boat manufacturer cannot help with mounting questions you may have, the C-Hero® - Harken® team will assist.
5. The mounting should take into consideration the 4' 3" tall davit boom, mount as high as possible (approximately shoulder high), and close to the edge.
6. A 6' 8" davit boom is available, but only if the mounting to the boat will support it.
7. There should be room for the davit to swing clear and the winch handle be operated. The Harken® winch is 20:1, with a 35:1 winch available as an option. The winch handle operates as a ratchet.

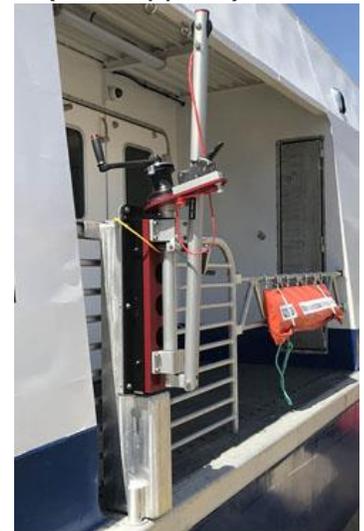


Image E5 - Mounted Flat Mount Davit

Set-up and Installation - continued

8. There should be room for the PIW (Person in Water) that is being rescued when you swing the rescued PIW to the edge of the rail with the side handle.
9. The side handle can be on either side to fit the mounting application, but C-HERO® has to be advised by calling 415-891-8353.

IN 162 - Flat Mount Rescue Davit Set-up & Installation – Continued

Davit Set-up:

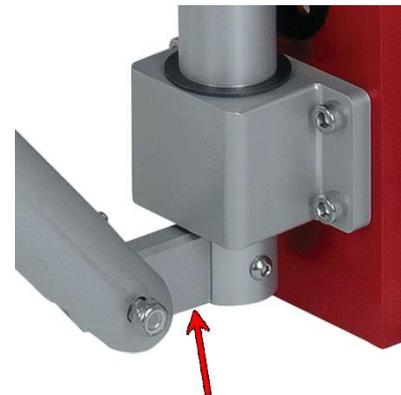
1. **DAVIT TETHER:** 
Use a small line secured to the winch collar, under the winch. The line should be long enough to have enough slack to get the unit in the mount, while still on deck. Connect the tether to something close to the mount.
2. **DAVIT BOOM INSTALL:**
 - a. Stand the base unit up against the bulkhead.
 - b. The side handle is used to move the boom left and right. Use the side handle (**Image E7**) to bring the davit boom connection point at the bottom, to the center of the unit, (where the nut and bolt are, at the bottom of the base).
 - c. Take the nut and bolt off the davit connection point.
 - d. Lay the davit boom on the deck (**Image E8**), with the slot for the tension line facing up (towards the unit).
 - e. Tighten with a 5/16" Allen wrench and 3/4" wrench, using Never-Seez[®] (Regular Grade or Mariner's Choice).



Image E6 - Tether Line (green) on winch collar (Not included)



E8 - Side Handle



**Image E9
Boom Connection Point
facing away from davit base**



Image E7 – Side view of base with davit boom ready to insert

3. DAVIT Red Tension Line Install:

- a. Take the pin out of the end of the davit boom.
- b. Prop up the davit boom, then grab the red tension line from under the winch plate.
 1. Place the eye of the red tension line in the slot and then pin it. Bend the cotter pin to secure it as shown in **Images E10 and E11**.



Image E10 – Tension line around pin inside the boom with cotter pin inserted



Image E11 – Cotter pin bent to secure it in place

4. Lift Line Install:

- a. Thread the lift line with stopper ball and snap hook, into the sheave at the end of the davit boom. As shown in **Image E10**.
 - b. Check the lift line to make sure that it is not crossed with the tension line.
 - c. Open the line brake handle (**Image E12**), and thread the line through with a rolling motion. The line gets wrapped clockwise 4 wraps, over the chrome tailing arm, and into the jaws. Leave 1 ft. of line after the winch is loaded and close the line brake as shown in **Image E13**.
 - d. Tie an overhand knot on the end of the lift line, to prevent it from running out.
 - e. Winch handle (**Image E14**) goes into the top of the winch, use thumb lock. Snap the line brake closed. Best practice is to leave the handle in the winch.
5. Move the davit boom into davit gate. Pin Davit gate to secure it as shown in **Image E15**.



Image E12 – Line brake open, line out of jaws, ready to ease the line off the winch and lower the PIW to the deck



Image E13 – Line brake closed, line wrapped, in winch jaws. Tailed off the chrome tailing arm, ready to lift



Image E14 – Winch Handle with thumb lock



Image E15 - Davit folded up & pinned

IN 162 - Flat Mount Rescue Davit Set-up & Installation - Continued

5. Installation of the Davit in the Mount:

- Tether the Rescue Davit if mounted over the water.
- Tip the top of the Rescue Davit into the mount, and under the top lip of the mount, then push the bottom of the Rescue Davit into the mount.
- Pin the Rescue Davit PIW with both of the tethered pins.
- Hold the red tension line and release the pin, while slowly lowering the davit boom.
- Lower the davit boom slowly to its full extension.
- Make sure the davit boom is centered, out over the water. Use the side **handle to move the davit boom**.

6. DAVIT BOOM HEIGHT ADJUSTMENT: (With Davit attached to the mount)

The boom tension line is a fixed piece of line that is always connected, and may need to be adjusted, depending on location of the davit mount to be sure the lift line will clear the tires and fenders.

- Deploy the davit boom and lift line, and see where the snap hook hangs, it should clear the outboard rubber.

Note: In most cases a 45- degree angle on the davit boom is optimum.

- The davit boom can be lifted by the red tension line, and slack taken out of it under the winch on the adjusting buttons, as shown in **Image E17**.



Image E17 – Holding Tension Line to lift Davit boom to approximately 45°, while wrapping the Tension Line round the adjusting buttons under the winch plate



Image E16 Mount showing top lip



IN 162 - Flat Mount Rescue Davit Set-up & Installation – Continued

7. DAVIT BOOM HEIGHT ADJUSTMENT: (With Davit attached to the mount) - Continued

- b. Use a figure "8" or round turns around the buttons as shown in **Images E18 and E19**.
- c. It may take a couple of times to get the desired angle.
- d. Once the angle is set, check to make sure the wraps are tight and seated, with a half hitch on one of the buttons, to help seat the wraps from not coming off.



Image E18 - Beginning wrap to adjust height



Image E19 – Wraps on buttons with a half hitch finish

8. Final Adjustment on Deck - Tension Line Centering and Securing:

- a. The red tension line will get lead through the eye strap under the winch plate. This keeps the tension line centered and always ready. This should be done on deck to avoid losing the bolt.
- b. Remove the bolt from the eye strap holding the tension line, on the end of the winch plate, with a 5/32" Allen wrench, as shown in **Image E20**.
- c. Loosen the second bolt, just enough to be able to move the eye strap towards where the davit boom stows.
- d. Slip the red tension line into the cradle of the eye strap. Secure the eye strap with the bolt and Never-Seez® (Regular Grade or Mariner's Choice), then tighten the other bolt, as shown in **Image E21**.



Image E20 – Eye strap, one end unscrewed and opened with tension line through it



Image E21 – Eye strap re-attached with the tension line secured inside the eye



IN 162 - Flat Mount Rescue Davit Set-up & Installation – Continued

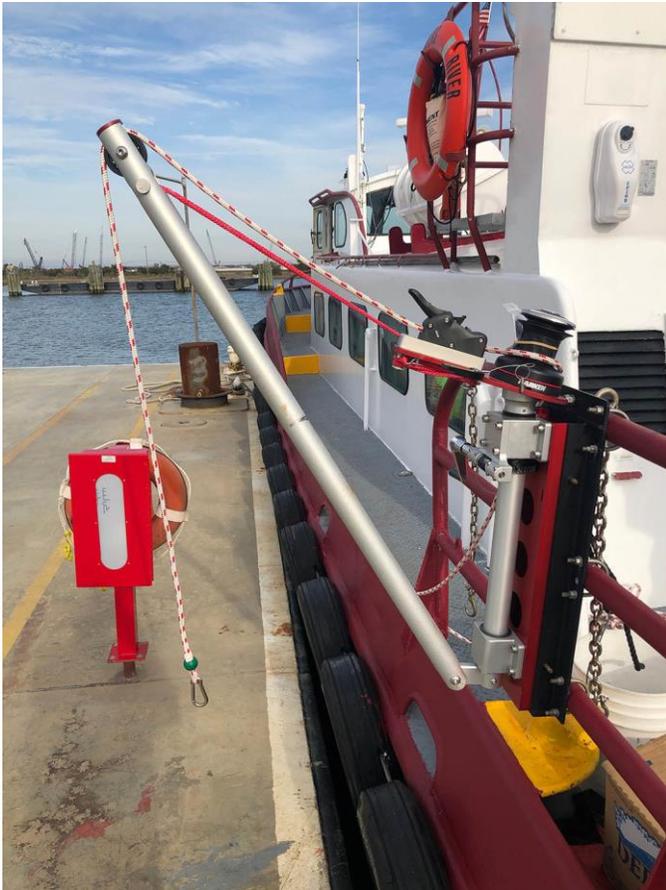


Image E22 – Flat Mount Davit on Crew Boat with stainless steel U-bolts on a sturdy railing



Image E23– Flat Mount Davit on Ferry Boat

9. THE RESCUE DAVIT ONE TIME ADJUSTMENTS ARE COMPLETE:

- a. The Rescue Davit location and location of the davit mount should be visibly posted
- b. Moving a Davit to another boat? Refer to the manual for setup.

Full Operation:

1. **Always use your legs when lifting, not your back.**
2. The Rescue Davit, if mounted over the water, needs to be tethered first. (Tether not supplied)
3. The winch handle should already be inserted into the top of the winch, do not snap it into the winch over the water
4. Tip the top of the davit into the mount, and under the top lip of the mount. Push the bottom of the davit into the mount and pin the davit with the two tethered pins.
5. Hold the red tension line and release the pin, while slowly lowering the davit boom.
6. Make sure the davit boom is centered and over the water, use the side handle to adjust as needed.
7. Connect the lift line snap hook to the Rescue Pole triangle.
8. Deploy the Rescue Pole and put it over the rescue dummy and under the arms, as close to the armpits as possible. If more line is needed, take line off the winch, but not out of the line brake.
9. After the lifting strap is on the PIW, remove the pole and pull all the slack out at the winch.
10. Check the wraps on the winch to make sure they are not crossed, and check that the line brake is closed, as shown in **Image E24**.
11. If the davit is mounted to a bulkhead, the winch handle will need to ratchet as it will not go all the way around in a full circle. Winch up the PIW until the green stopper ball touches the end of the boom tip.
Note: The winch handle can be operated as a ratchet.
12. Use the side handle to move the PIW to the side of the boat, and the winch handle to lift the davit tip up, raising the PIW.
13. Once the PIW is at the side of the boat, and more clearance is needed, use the winch handle to continue lifting the PIW higher, and bring the PIW aboard.
14. To lower the PIW on deck, leave the wraps on the winch, and open the line brake. Then carefully ease the line off the winch, to lower slowly, as shown in **Image E25**.

⚠ Never open the line brake with a load on the line without wraps on the winch.



Image E24 – Line brake closed, line wrapped, and in winch jaws. Tailed off the chrome tailing arm, ready to lift



Image E25 – Line brake open, line out of jaws, ready to ease the line off the winch and lower the dummy to the deck



IN 162 - Flat Mount Rescue Davit Operation – Continued

Taking Davit Out of the Mount:

1. Center the davit boom over the water, while the davit is still deployed. Use the red tension line to lift the davit boom, and secure at the davit gate with the pin.
2. The Rescue Davit can be left in place or taken off and stowed in a close by locker. A cover is available to keep it out of the weather.
3. Make sure the tether remains on the Rescue Davit, while it is over the water.
4. The Rescue Davit should be centered over the water before stowing. The lift line should all be loaded on the winch, with only 1 foot of line after the winch. The line should be coiled neatly and ready for use.
5. Pull both tethered pins out of the davit mount.
6. Take hold of the davit PIW and boom and move the bottom of the davit out of the mount while holding firmly.
7. Hold on firmly as it weighs 34 lbs.
8. Take the tether line off once it is safe to do so

NOTES:

- 1. Do not hang the unit horizontally, with it hanging on the davit gate.**
- 2. If a Davit is moved to another vessel, you must check the manual.**
- 3. Best practice: Leave the winch handle in the winch using the thumb lock, and keep everything ready, unless you are using the optional C-HERO® cover, when you stow the winch handle in the cover**

Inspection

1. After each Monthly MOB Drill:

- Rinse and inspect
- Check that the cotter pin is bent at the pin securing the tension line to the end of the boom.
- Check tension, lift, and tether lines for fraying. If any are frayed, report them for replacement.
- Inspect and lubricate the worm gear with *Harken® White Winch Grease (or equivalent)* as shown in **Images E26 and E29**



Image E26

2. Every 3 months:

- Complete Monthly inspections above
- Apply one drop of *McLube OneDrop Ball Bearing Conditioner and Lubricant* to the 2 tethered pins on the Davit mount as shown in **Images E27 and E28**



Image E27

Stainless Steel push pin with detent. Two pins are tethered on the bracket for Flush Mount Davits



Push in the detent ball, and put a drop of oil into the hole, at least once every 3 months

Image E28

3. Every 6 months:

- Complete Monthly and 3 Month inspections above
- Inspect the Tension line, Lift line, and lift line snap hook
- Inspect worm and spindle gears, handle, davit boom bolts, sheave, and davit mount and cover

4. Annually:

- Complete Monthly, 3, and 6 months inspections above
- Inspect overall condition, and log
- Lubricate boom sheave and worm gear with **McLube One Drop (Image E27)**
- Winch needs lubrication, see [HARKEN® PAGE](#)
- Lift Line Brake needs to be lubricated with **WD-40®** silicone spray.
- Check all the lines for fraying
- Check that all bolts, tension line adjustment, tension buttons, and tension eye strap bolts to make sure they are still tight
- Use Harken® White Winch Grease for the Winch, Worm and Spindle gears (**Image E29**)

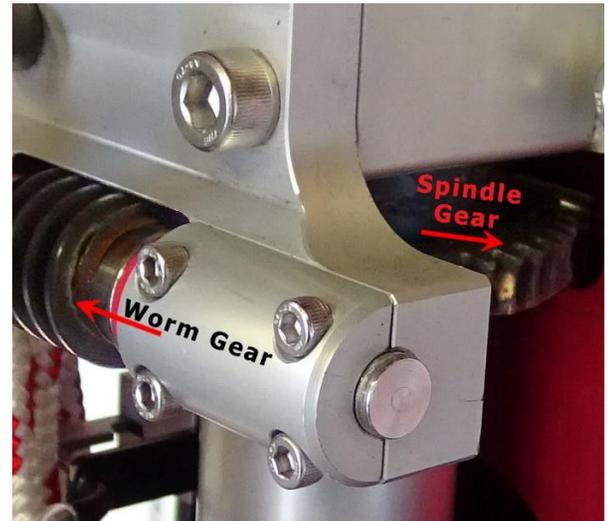


Image E29

Worm and Spindle gears, operated by the small handle to move the boom to the left and right

IN 162 - Flat Mount Rescue Davit - Inspection and Storage

Continued

Storage:

1. **Best practice:** To leave the winch handle in the winch using the thumb lock, and keep everything ready, unless you are using the optional C-HERO® cover, when you will stow the winch handle in the cover.
2. Do not hang the unit horizontally, with it hanging on the davit gate.
3. Store out of the sun if possible.



IN 162 - Flat Mount Rescue Davit Man Overboard Drills

Man Overboard Drills:

The United States Coast Guard requires Man Overboard drills to be performed as if it is an emergency, and your company safety program will specify frequency. We always recommend using a rescue dummy for drills, you should not have a crew member get in the water.

1. Someone immediately advises the wheelhouse that there is a rescue dummy in the water.
2. The wheelhouse sounds the general alarm, and 3 prolonged blasts on the ships whistle. Manually push the MOB icon on the chart plotter. Use the loud hailer to let the crew know there is a man overboard.
 - a. Stop the boat.
 - b. If applicable let traffic know your intentions on Ch. 13.
3. The deckhand goes on deck with PPE, a handheld VHF to a prearranged Ch., and directs the Captain to the rescue dummy, and gets the boat close.
4. While the boat is headed back to the rescue dummy, and you are keeping an eye on the rescue dummy is the time to ready the pole and lifting source.
5. While the boat is maneuvering back to the rescue dummy, put the Rescue Davit in the mount, pin the davit with the two tethered pins, deploy the davit and swing outboard.
6. Deploy a life ring and use it to get the rescue dummy alongside if the boat can't get closer. Tie off the line near the davit mount.
7. Connect the lift line snap hook to the Rescue Pole triangle, then put the lift line into the V-cleat.
8. Deploy the Rescue Pole and put it over the rescue dummy and under the arms, as close to the armpits as possible.
9. When in place, hold the lift line firmly, and push the pole towards the dummy. Always stay inside the bulwarks, for safety.
10. Remove the pole from the rescue dummy, then pull the slack out at the Rescue Davit winch. Make sure the line brake is closed, then winch up the rescue dummy.
11. Use the side handle to swing the rescue dummy to the side of the boat and bring back aboard.
12. Discuss company protocol for shock, injuries, or hypothermia of a recovered person as if this were a real emergency with a PIW.



Safety Warnings

General for all C-Hero® Equipment:

- **Always use your legs when lifting, not your back.**
- Make sure everyone has completed eTraining
- Only use for its intended use, MOB Water Rescue
- In bad weather try to expedite recoveries, sometimes you only get one shot at it
- Do not use any unauthorized lines or parts
- Always be safe on deck when rescuing someone, wearing your PPE
- This equipment is for a designated boat, C-Hero® needs to know if moved to another boat
- Only use original parts for the unit, available through C-Hero®
- Be aware of the length of the davit when carrying to the bitt or mount, as to not damage anything.
- Always use a rescue dummy for drills, and not a crewman

Rescue Poles:

- Do not attach the lifting strap around the neck or abdomen for the lift, to avoid injury or death!
- When using The Rescue Pole, be careful to not hit the PIW's head with hoop
- Practice with the pole to ensure, that the crew can get the strap under the arms
- Always tether the pole (Not included)

Rescue Davits:

- **Never open the line brake with load on the line without wraps on the winch.**
- Ensure that the Bitt Mount Davit has a good solid fit on the bitts, fits evenly, and is secure before use
- Ensure that the Flat Mount Davit is securely in the mount, with the tethered pins inserted
- Tie off unit near the bitt or mount with the tether before putting it on, so as to not lose it overboard
- Do not lift past the lift line stopper ball, unless next to the boat
- Contact C-HERO® if any damage has occurred to Rescue Davits
- When using Flat Mount Davit against a bulkhead, watch pinch point on fingers

Winch (See [Harken®](#) page):

- Read the Maintenance of winch and line brake, and only use appropriate lubricants
- Make sure the line brake is closed before use. Do not use if lines are frayed

Hands:

- Always keep hands away from the worm and spindle gears, and the vertical spindle
- Keep hands and fingers clear of the davit gate, pinch point
- Keep hands and fingers out of the way when tightening latch clamps

Inspections:

- When using tension line buttons, be sure that the wraps are seated, with a half hitch
- Inspect all lines, equipment, nuts, and bolts periodically to ensure safe use

WARRANTY WARNING: IMPROPER OPERATION

The C-Hero® warranty does not cover the improper use, nor the use without completing eTraining, of any C-Hero® products. This includes but is not limited to faulty maintenance, disassembling, and/or opening. Some items such as lines, web straps, and rubber holding blocks are not warranted for normal wear and tear, nor for excessive sun and exposure damage, and will need to be replaced periodically based upon storage methods used.

Rescue Poles:

1. Pulled on the lift line and the strap didn't tighten, it just pulled out of the hoop.
The lift line is not to be pulled, but just held firmly, and then push the pole.
2. The V-cleat is in the wrong position to work with the lift line.
The second pole that has the V-cleat on it needs to be turned so the V-cleat is in the same position as the slide buckle holder. Pull the pin and rotate.
3. The slide buckle falls out of the holder.
From time to time the Slide Buckle holder will need adjusting. Use a 7/16" wrench on the nuts on the side nuts of the holder, check that it's not too tight.
4. After putting the lift strap on, couldn't get the pole out so it came up with the PIW.
The pole was used upside down, and in that case you can only take off over the feet or bring up the PIW with the pole.
5. Dropped the pole, and it got lost in the current.
The end of the pole has a hole for a small tether line to prevent this. The line can be tethered to the vessel or the person.
6. The bow is high, and it makes it hard to see the PIW for recovery.
Most tractor tugs have a high bow, walk back aft and use the pole where it's easier. A longer line is available if needed.
7. What if the lifting strap continues to tighten?
The lifting strap cannot tighten itself it's a closed loop, the pole is just pushing a one-way slide buckle, to tighten the strap.
8. The lifting strap comes out of the rubber blocks too easily.
The lift strap must be put all the way in the rubber blocks, and under the lip on all 4 blocks.
9. When using the Rescue Pole with Recovery Strap, the small web strap, was slack and in the way.
The Recovery Strap small strap with the handles, must be loaded around the Slide Buckle holder.
10. The Lifting Strap is hard or sunbaked, and it doesn't work very well.
***The hoop at least should be stowed out of the weather and sun. A UV cover is available to lengthen the life span of the parts.
Monthly inspections and a freshwater rinse will help also.***

Rescue Davits:

1. The bitt mount won't fit my boat.
The base of the mount is fully adjustable and should fit all boats. The back feet move up and down, and the top strap can be moved down. The straps can be tightened, with the over center clamps.
2. The bitts on my boat are angled, and the boom won't reach past the tires.
The angled bitt only affects the boom angle, if the red tension line is all the way extended and it still doesn't work, a longer tension line is needed.
3. The davit boom is too low.
The Rescue Davit comes with one size tension line. The boom will need to be lifted and adjusted by the red tension line.
4. The davit doesn't fit tight against the bitt.
The top of the bitt probably has a flange and needs to be trimmed where the davit fits.
5. The top strap was moved to the lower spot, and the davit rocks on the bitt.
The top back feet need to be moved, so they make contact with the bitt. Use a 5/32" Allen wrench, to move them.
6. The top strap is too tall to connect with the bitt.
Bitts over 23" tall needs to have the top strap moved to the lower position. Use a 5/16" Allen and 3/4" box wrench, for the strap. The clamp is moved with a 5/32" Allen wrench.
7. The forward bitt is best for the wheelhouse to see, but too hard to use the pole.
The deck crew should be using a VHF radio on deck and walk aft while keeping the wheelhouse posted, then the PIW lifted up at the forward bitts.
8. After the PIW is at the side of the boat, they are too low to get back aboard.
The PIW should be lifted to the green stopper ball, then moved to the side of the boat. Once at the side of the boat, top the boom with the winch handle.
9. The line brake won't hold the line from going out.
The line should be in the tailing jaws on the winch, and the line brake is a secondary. The line brake handle needs to be snapped down.
10. The lift line on the winch requires extra help to keep the line out of the way.
The line should be wrapped over the tailing arm and into the jaws, so that it will self-tail.
11. The winch doesn't work, or it's just too hard to move while under a load.
The winch needs to be wrapped 4 times, so it doesn't slip. a 35:1 winch is available with a longer 10" handle.
12. The worm gear has some rust on it, but still works.
The worm gear is mild steel and needs to be kept lubricated. Stainless gears would not work smoothly. Covers are available to keep everything out of the weather.



Life Jacket Primer & MOB Survival

Think of your life jacket as a good shipmate, that looks after you.

Companies require a life jacket to be worn when on the deck or around the water but should be viewed as **your survival** tool. When the question comes up, "What's the best lifejacket?" The one you **WEAR** is always the right answer. Thinking carefully about your life jacket usage before getting onboard can be a lifesaver.

This can also be part of a safety meeting or an MOB drill, which includes talking about and inspecting each other's lifejackets.

The only real chance for survival, is to be wearing your lifejacket, but here are some important considerations:

1. Do not make the mistake of wearing it just because the company says you must.
2. You are going to spend many hours with your life jacket on, so pack it right and be comfortable.
3. Companies usually supply a standard lifejacket with a strobe light. Some companies have rules about not using the auto inflate collars, even though they can be easier to wear and less bulky, so keep your company's policies in mind if you want to buy a particular jacket.
4. Lifejackets that have pockets are easier to store signaling devices.
5. Secure each item such as a signal device, flashlight, pocket flares, or a whistle etc. with web straps or light line sewn onto the life jacket.
6. The strobe light should be a water activated type, because it will signal even if you are knocked unconscious.
7. Rescue beacons are very helpful, and if you have a MOB alarm all the better.
8. An MOB alarm like an ALERT is water activated and will go off immediately upon hitting the water. This will signal the wheelhouse that someone is in the water.
9. Choose your lifejacket or pack the one that was issued to you with the things that can help you. This is something that should be taken seriously, and it's worth getting "right."
10. Make sure to check all batteries (MOB alarm, and strobe light), and, inspect the lifejacket annually. Practicing with your lifejacket in a pool may sound funny, but it's worth getting acquainted with it and making sure it all works for you. The time and effort you put into this will be worth it, because your life could depend on it.

MOB Survival Tips:

The first minute in the water your PIW will go through the cold-water effect and start to shiver and adjust to the shock. Don't panic, just keep your head above water and control your breathing.

1. Signaling is the best (if at night use a flashlight, or a pencil flare, by day use a mirror).
2. Kicking off your boots will help you to swim, and also help in the recovery process.
3. Hypothermia can take from 10 minutes to 1 hour for it to take full effect, depending on the water temperature; and consciousness is lost.
4. Curl your PIW up into a ball and try to stay warm.

Setup and Maintenance

1. Set-up:

- a. Take the line from the lift line brake, which it just ahead of winch
- b. Take four wraps clockwise
- c. Lead the line over the tailing arm, and place the line into jaws at the top of the winch
- d. Look carefully to make sure they're stacked neatly and not crossed
- e. Pull on the line to tighten them up until there's resistance, leaving 1 foot to the bitter end
- f. Make SURE the Harken® winch handle is seated and locked
- g. 20ST winch handle rotates counter-clockwise
- h. Optional 2-speed 35ST winch handle rotates both directions
 - 35:1 counter-clockwise, and 19:1 clock-wise

2. Maintenance:

a. Washing:

1. Winches must be washed frequently with fresh water, and in any case, at least after each use.
2. Do not allow teak cleaning products (or other cleaners containing caustic solutions) to come into contact with winches and especially anodized, chrome plated or plastic parts.
3. Do not use solvents, polishes or abrasive pastes on the logos or stickers on the winches. Do not use polishes or abrasive pastes on anodized, chrome plated or plastics surfaces.
4. Make sure that the holes and drainage channels in the base of the winch are not obstructed so that water does not collect.



3. Maintenance schedule:

Winches must be visually inspected at the at least twice per year. In addition, they must be completely overhauled, and cleaned. Use Harken® White Winch Grease at least every 12 months. After an inspection, replace worn or damaged components. [Harken® Manual Online](#). Do not replace or modify any part of the winch with a part that is not original.

4. **WARNING!**

Periodic maintenance must be carried out regularly. Lack of adequate maintenance shortens the life of the winch, can cause serious injury and invalidate the winch warranty. Installation and maintenance of winches must be carried out exclusively by specialized personnel.

In the case of doubt contact Harken® Tech Service at techservice@harken.it

Operation of the XAS Line PowerClutch (Lift Line Brake):

1. Lift lever to release the brake
2. Insert lift line coming from the davit sheave into the line hole
3. Feed line through the PowerClutch and then pull out enough to load winch properly
4. Press down the brake lever, when ready for use
5. To lower someone, or if more slack is needed. make sure enough wraps are on the winch, then lift handle

Safety Rules:

Please take care to follow these important safety rules:

1. Control release safely by checking snubbing the line on the winch drum
2. **Never flick open the brake lever when clutch is heavily loaded, sudden and release may cause injury, as well as damage to the line, rig, and clutch**
3. Use braided fiber line only (never use three strand or wire line)
4. Never use the clutch if damaged
5. Never use a clutch with damaged line
6. Never use cleaning or lubricating solvents, polysulphide or polyurethane cased sealants: they degrade the product.
7. Do not modify any part of the clutch
8. Always use hand protection.
9. The maximum load achievable in practice is a function of line diameter and construction: generally bigger and firmer line has better load holding



Maintenance:

This PowerClutch is made from the best quality materials for durability and low maintenance in the harsh marine environment.

1. Flush regularly with fresh water and apply a silicone spray or grease spray solvents type "WD-40" Service
2. Use of the wrong lubricants will degrade and weaken the molded composite components and can cause sudden structural failure. They will also degrade the bearing properties of composite bushes. Assurance To help ensure a long working life for every Spinlock product we supply easily installed parts and performance upgrades through Spinlock stock lists worldwide.

DECATUR MARINE

AUDIT & SURVEY

Type Approval Certificate

Pursuant to good engineering practice, Decatur Marine has assessed the design of the below identified equipment and reviewed the equipment for conformance with Section 2.1

Operational Readiness of IMO Resolution A520(13) ***Code of Practice for the Evaluation, Testing and Acceptance of Prototype Novel Life-Saving Appliances and Arrangements.***

Decatur Marine makes no representations regarding type approval of the product in general or of conformance with any other guidance promulgated by the International Maritime Organization (IMO), provisions of SOLAS or the LSA Code promulgated after the date of this certificate.

Due to a wide variety of specifications, the manufacturer has full responsibility for continued compliance and conformance with any and all standards.

C-Hero

Model: VR-12 Rescue Pole and Rescue Davit

Presented to:

C-Hero
336 Bon Air Center, Suite 115
Greenbrae, CA 94904

Cert No: DM-TA-2018-001

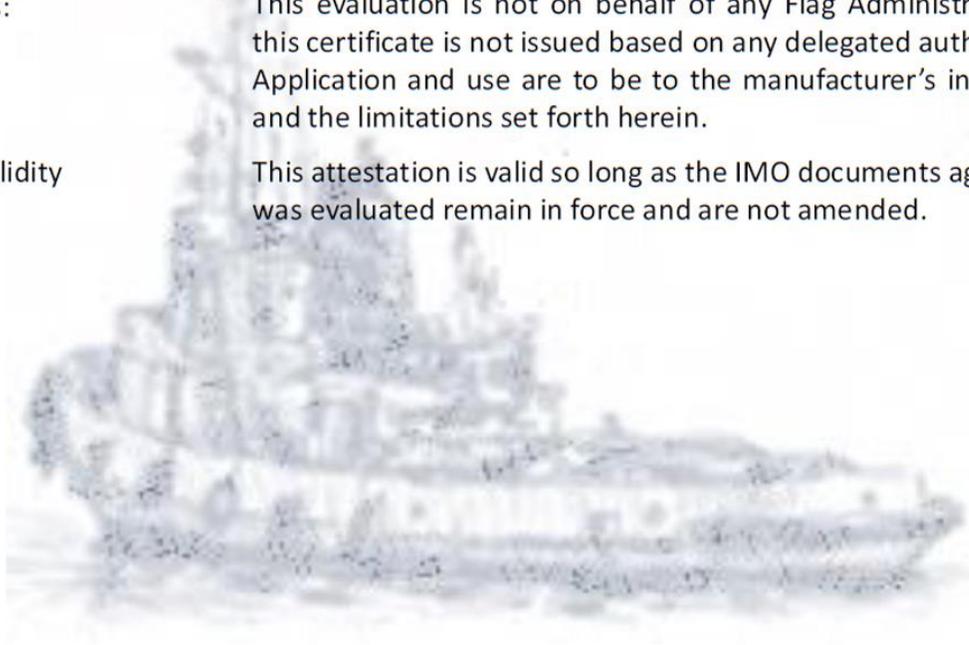
Date: 27 November 2018

Intended Service: General use on vessels with lower freeboards.
This product may not be used as a replacement for any Life Saving Appliances required by the vessel's Flag Administration.

Service Restrictions: General use on vessels with lower freeboards.
This product may not be used as a replacement for any Life Saving Appliances required by the vessel's Flag Administration.

Comments: This evaluation is not on behalf of any Flag Administration and this certificate is not issued based on any delegated authority. Application and use are to be to the manufacturer's instructions and the limitations set forth herein.

Term of Validity This attestation is valid so long as the IMO documents against it was evaluated remain in force and are not amended.



Philip J Carmichael
Technical Director

Decatur Marine has used due diligence in the preparation of this certificate and it represents the information on the product supplied by the manufacturer as of the date and time the certificate was issued. This assessment was completed based on the supplied manufacturer's drawings and manuals. Decatur Marine cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; This assessment does not waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel.