

Safe Harbor Mooring Arms™

Assembly, Installation & Operation Instructions



Safe Harbor Marine, Inc.

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*For Warranty Information, please review warranty card or
contact Safe Harbor Marine, Inc. for a copy.*

Assembly Instructions

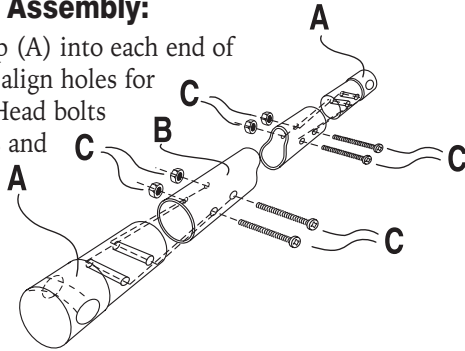
Kit Includes: 2 poles, 4 pole tips with 8 slot head bolts and 8 lock nuts, 2 base plates, 2 U-bolts with 4 thin nuts and 4 cap nuts, 6 each 2-1/2" and 4 each 4" leg bolts, 2 Snap-Lines and 2 cleats.

Mooring Arms are quick and easy to assemble and install, requiring only 15 to 30 minutes.

Suggested tools for installation include measuring tape, box-end wrenches or sockets, drills for leg bolts, and medium-tooth wood saw for shortening pole as in step #5 below.

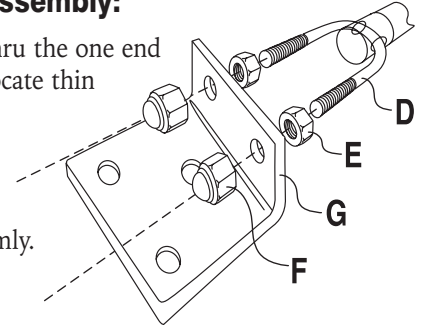
Step 1 - Pole Assembly:

Insert one Pole Tip (A) into each end of each Pole (B) and align holes for bolts. Insert Slot Head bolts (C) thru the holes and tighten nuts until firm against pole.



Step 2 - U-Bolt Assembly:

Slide one U-Bolt (D) thru the one end of each pole tip (A). Locate thin shoulder nuts (E) and thread onto both legs of each U-Bolt. Run nuts to the end of the threads and tighten firmly.



Step 3 - Base Plate Assembly:

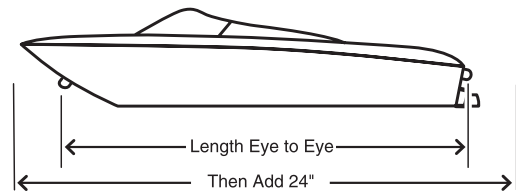
Insert each U-Bolt (D) into each Base Plate (G) and thread cap nuts (F) onto each leg. Tighten firmly.

Your Mooring Arm system is now ready for final installation.

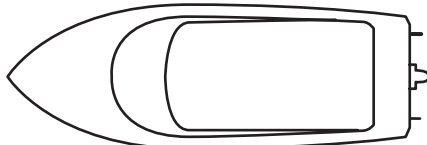
Installation Instructions

Step 1

Measure the distance from the bow eye of your craft to the stern eye and add 24 inches to this length. This total length is the distance of separation between the two Mooring Arm bases.

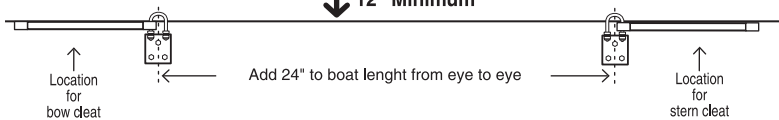


Step 2



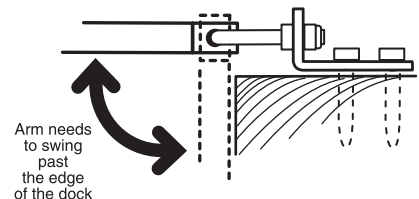
↑ 12" Minimum

Mark on the dock the mounting location for the bow arm base.



Step 3

Place the bow base on the edge of dock with the arm extending outward from the dock. Be sure to place the base close enough to the edge of the dock so that the arm freely pivots downward without striking the dock. Mark and drill pilot holes for leg bolts and securely bolt the bow base to the dock.



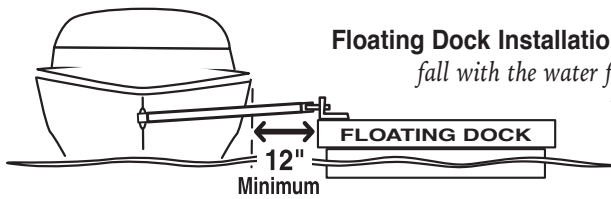
Step 4

Lay the bow arm on the dock parallel to the edge of the dock. Install the bow cleat 1/2 of the full length of the arm forward of the bow base. (see Step 2)

Step 5

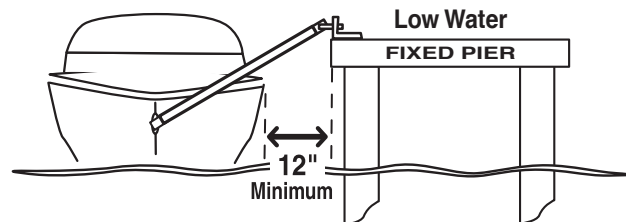
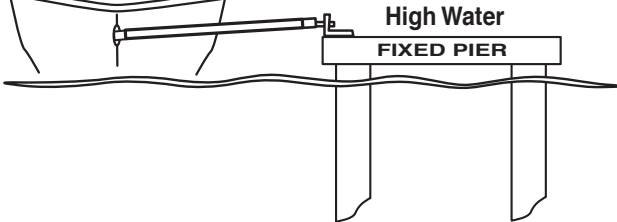
Measure from the center of the bow arm base down the dock toward the stern to locate the center of the stern arm base. Install the stern arm base and cleat following the same instructions for the bow base and cleat installation (*repeating steps 3 and 4*).

Note: When installing and using our mooring arms, the minimum distance between the edge of the dock and the side of your craft at rest must not be less than 12\"/>



Floating Dock Installation: When properly installed on a floating dock (*dock and craft rise and fall with the water fluctuation*), the minimum distance between the edge of the float and the side of your craft must not be less than 12 inches.

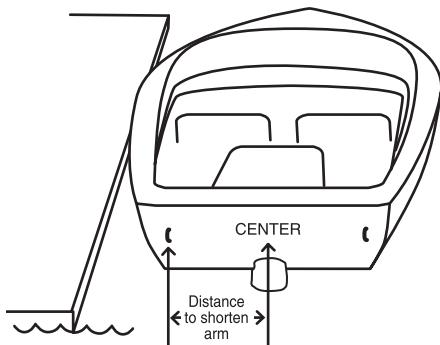
Fixed Pier Installation: When properly installed on a fixed pier (*pier does not rise or fall with the water level*) you must determine that the water level fluctuation does not exceed the scope of the mooring arms. The minimum distance between the edge of the pier and the side of your craft at extreme low water and at extreme high water must not be less than 12 inches.



Note: For PWC's and other small beam craft, you may want to shorten both mooring arms in order to have your craft closer to the dock. Follow the Optional instructions below to shorten both mooring arms. Note that the minimum distance between the edge of the float and the side of your craft must not be less than 12 inches.

Optional: It is desirable to keep your moored craft parallel to the dock. Therefore, if the stern eye on your craft is not located on the center line of the stern, you may choose to shorten the stern arm bringing the stern closer and the craft parallel to the dock. To shorten the stern arm:

1) Measure the distance from the center of the stern to the stern eye. This is the distance to shorten the stern arm.

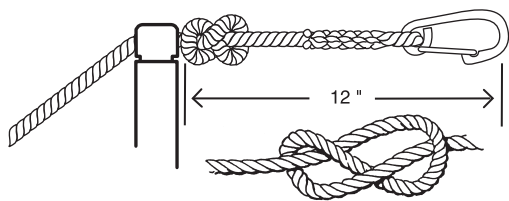
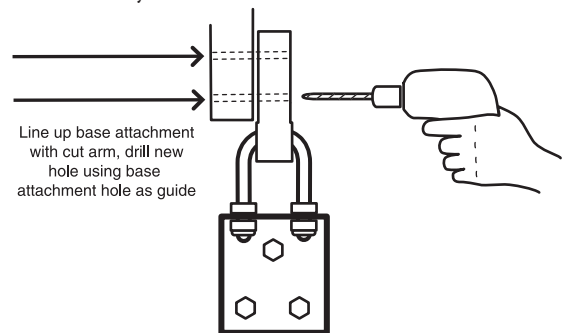


NOTE: If you have shortened the stern arm, remount the stern arm cleat using 1/2 of the length of the shortened stern arm. (*see step 2*)

2) Remove the stern arm by removing the attachment bolts going through the arm at the base. Using the length found above, cut off the end of the stern arm with a medium-tooth wood saw.

3) Using the base attachment as a template, drill two new holes in the end of the arm for the attachment bolts.

NOTE: Drill the new holes on the horizontal axis (*parallel with the water surface*). See the bow arm if unsure of the correct position. Reinstall the arm and tighten the attachment bolt securely.

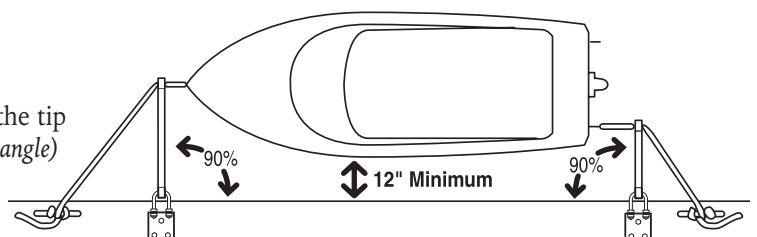


Step 6

Thread the end of the SnapLine through the tip at the end of the bow arm so that the snap is towards the craft. Tie a Figure 8 knot in the line so that the distance between the knot and the end of the snap is 12 inches.

Step 7

Snap the line to the bow eye and swing the arm out until the tip stops at the figure 8 knot and the arm is 90 degrees (*right angle*) from the dock. Cleat the bow SnapLine in this position.



Step 8

Repeat Step 7 for the stern SnapLine and cleat off the line as you have done in Step 8. You may need to adjust the figure 8 knots in the Snap Lines so that each arm extends 90 degrees (*right angle*) from the dock.

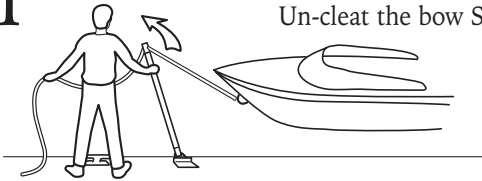
Operation Instructions

Mooring Arms are quick and easy to operate, requiring less than 1 minute.

Casting Off

To cast off, you only need to un-cleat one SnapLine. The other SnapLine will then have enough slack so you can unsnap the line and fold the arm onto the dock without un-cleating it.

Step 1

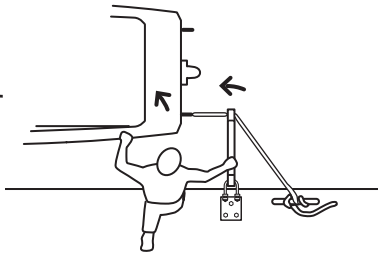


Un-cleat the bow SnapLine from the dock. Lift the bow arm up and forward allowing the line to feed through the tip of the arm. This action will also pull the bow of your craft over to the dock. Unsnap the bow SnapLine and lay the arm onto the dock.

Step 2

Slide your craft aft and the stern in towards the dock. Un-snap the stern SnapLine (*leaving the line cleated*) and lay the arm on the dock for your return. Note: You may need to swing the stern arm back allowing the line to feed through the line hole in order to pull your craft close enough to the dock to reach the stern eye.

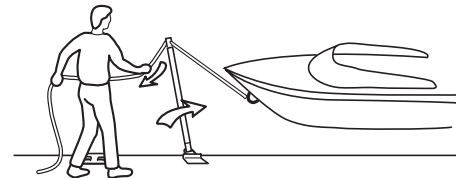
Step 1



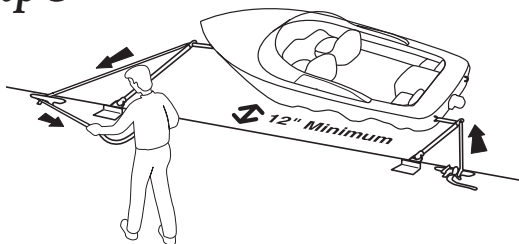
Snap the stern SnapLine to the stern eye and swing the stern arm out until the tip of the arm reaches the figure 8 knot. The arm should now be 90 degrees (*right angle*) to the dock.

Step 2

Snap the bow SnapLine to the bow eye. Standing just forward of the bow arm, pull the slack out of the bow SnapLine. This will automatically slide the bow arm out to the figure 8 knot pulling your craft away from the dock.

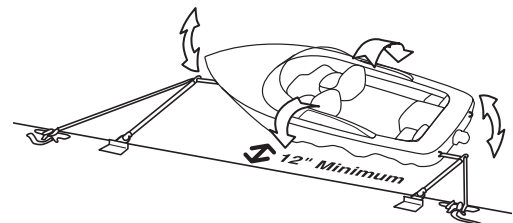


Step 3



Pull all the slack out of the bow SnapLine and cleat off the line. Be sure that both arms are fully extended and the arm tips are up against the figure 8 knot. Both arms should now be at 90 degrees (*right angles*) to the dock and **all the slack out of the lines.**

Your craft is now securely moored where it can freely ride out wind, wave, wake and tidal action.



Safe Harbor Marine, Inc. is pleased to help you with any Mooring Arm installation and operation questions. Please call 1-360-647-7611.