

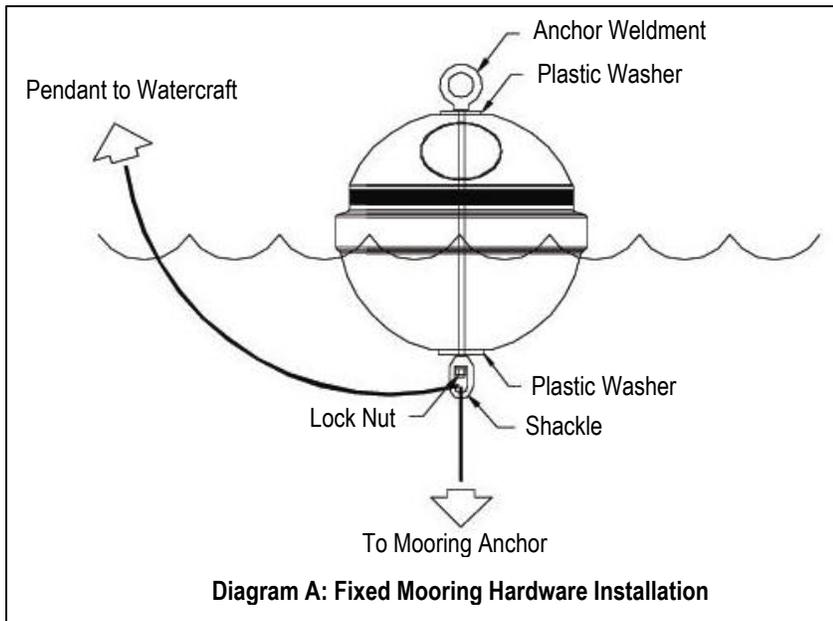
# 12", 18", and 24" Mooring Buoy Installation Instructions

## General Information

The following installation instructions are intended to be a general guide for installing ACE Mooring Buoy systems. The specific method of installation you utilize should be confirmed with local conditions (tidal variations, water depth, prevailing wind effects, bottom soil type, etc.) and / or regulatory agencies. The purpose of the buoy system is to provide sufficient buoyancy to support the line to which the watercraft will be anchored.

## Buoy Size and Selection

The proper size buoy should be selected according to the buoyancy required to support the anchor line and allow the upper half of the buoy, including the reflective tape, to be above the water line. Select the buoy that will provide approximately twice the flotation required to support the anchor line weight. 12" Buoy buoyancy = 28 lbs. 18" Buoy buoyancy = 102 lbs. 24" Buoy buoyancy = 245 lbs.



### Buoy Hardware Styles

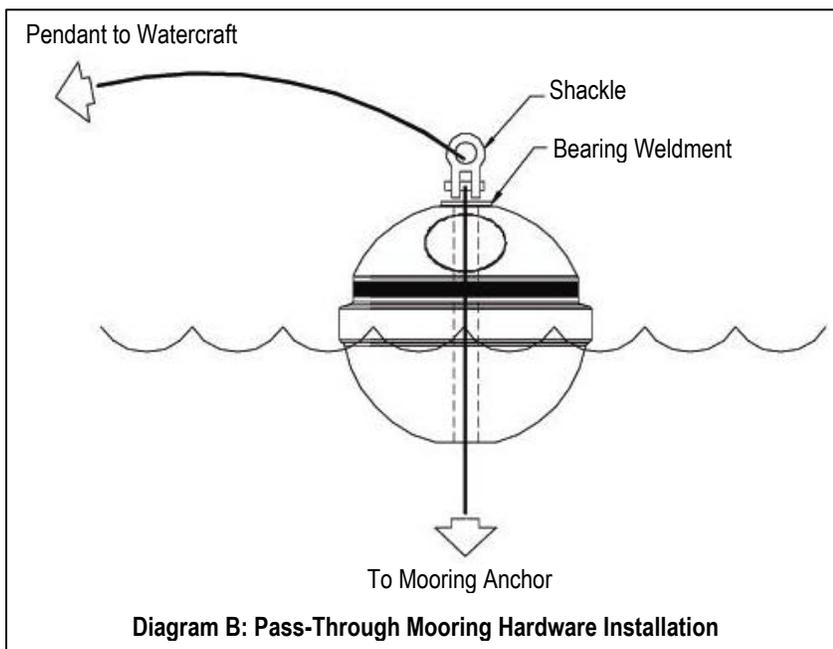
Two styles of buoy hardware are available for installation.

**1**

#### Fixed Mooring Hardware Kit (Reference Diagram A)

This hardware kit captures the buoy on both ends and provides a swivel at the bottom for attachment of the anchor line. A loop is provided at the top for handling the buoy and storage of the watercraft pendant line on the buoy. Never anchor the watercraft directly to this loop. Watercraft must be anchored below the buoy and directly to the anchor line.

Buoy Size	Kit Number
12"	FFMB-12F
18"	FFMB-18F
24"	FFMB-24F



**2**

#### Pass-Through Mooring Hardware Kit (Reference Diagram B)

This hardware kit passes through the buoy center tube. The anchor line is attached directly to the line shackle. A bearing plate under the shackle prevents the shackle from passing through the buoy tube. The pendant line to the watercraft is fastened directly to the shackle.

Buoy Size	Kit Number
12"	FFMB-P
18"	FFMB-P
24"	FFMB-P

## Anchor Line

Selection of the proper anchor line or chain should be based upon the tensile strength rating of the line or chain required to hold the moored watercraft to the anchor. Avoid an oversized line or chain as this will result in an oversized buoy. Most watercraft will specify the required anchor line size for mooring anchors. The length of the anchor chain will depend upon the mooring location and proximity to other watercraft. Generally, the following guidelines will usually apply:

Inland Lakes – length required will be 1-1/4 times the nominal water depth.

Inland Rivers – length required will be 2 times the nominal water depth.

Coastal or tidal waters – length required will be 2-1/2 times the nominal water depth.

## Inspection and Maintenance

It is important that the mooring system installed be thoroughly inspected on a regular basis and according to local regulations. Failure to do so may result in the failure of the mooring system and loss of the watercraft.

## Buoy Identification Options

Graphics and logo options are available through Ace Dock Accessories. Contact 888-223-6260 for more information.

## Warranty

**CAUTION:** This product is not warranted against unusual weather conditions such as severe wind, severe tides or hurricanes.

Den Hartog Industries, Inc., hereafter referred to as Manufacturer, does hereby declare this to constitute an express **WARRANTY** for mooring buoy products. Said products shall be free from defects in workmanship and material under normal use, service and maintenance installation, for a period of 36 months following the date of manufacture. Manufacturer's liability upon proof of a defect in workmanship or materials within the **WARRANTY PERIOD** shall be limited to the replacement or the repair of the product(s) or any part thereof or, at Manufacturer's option, the refunding to Buyer the purchase price value of the product(s) upon the return of the defective product(s) to Manufacturer. No other express warranty is given and no agent, employee or any representative of Manufacturer is authorized to bind Manufacturer for any other warranty.

This **WARRANTY** shall not apply to or cover component parts or accessories manufactured by someone other than the Manufacturer. The manufacturer of such items may provide warranties with its products; however, Den Hartog Industries, Inc. shall not be liable under those warranties.

This **WARRANTY** shall not apply with respect to any defect that in Manufacturer's sole judgment has arisen from the alteration or repair by anyone other than the Manufacturer or from damage in an accident, during shipment, or caused by negligence or misuse. This **WARRANTY** shall not be applicable if Buyer failed to follow any of the instructions for installation, maintenance and use provided by Manufacturer.

The amount of the Manufacturer's liability under this **WARRANTY**, irrespective of whether such defects are discoverable or latent, shall not exceed the purchased price of the product(s) in which the defect occurred or, at the option of the Manufacturer, the replacement or the repair of the damaged or defective product(s). Manufacturer shall not be liable for any incidental or consequential damages, including those that may arise as the result of a claim of negligence on the part of the Manufacturer or any other party. Manufacturer shall not be liable for any commercial losses or costs of any kind resulting therefrom.

This **WARRANTY** shall constitute an express **WARRANTY** and shall be the sole and exclusive remedy of any Buyer, there being no implied **WARRANTY** of merchantable quality or that the product is fit for any particular purpose.

Notice of any claim under this **WARRANTY** shall be given by registered mail sent to Manufacturer at Den Hartog Industries, Inc.; 4010 Hwy 60 Blvd; Hospers, IA 51238. Such notice must be given within thirty (30) days after the claim first arises or the defect is first discovered. Instead of and in lieu of the notice provided, the defective product(s) may be returned to the Manufacturer at the same location freight pre-paid. If notice by mail or return of the defective product(s) are not completed within thirty (30) days after the defect arises or is discovered, this **WARRANTY** shall be deemed waived and unenforceable, and Manufacturer shall not be liable under the terms of this **WARRANTY**.

### Ace Dock Accessories, A Division of Den Hartog Industries, Inc.

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