

# IMM QUALITY

## — BOAT LIFTS —

Installation Manual

For

PWC 1500

Boat Lifts

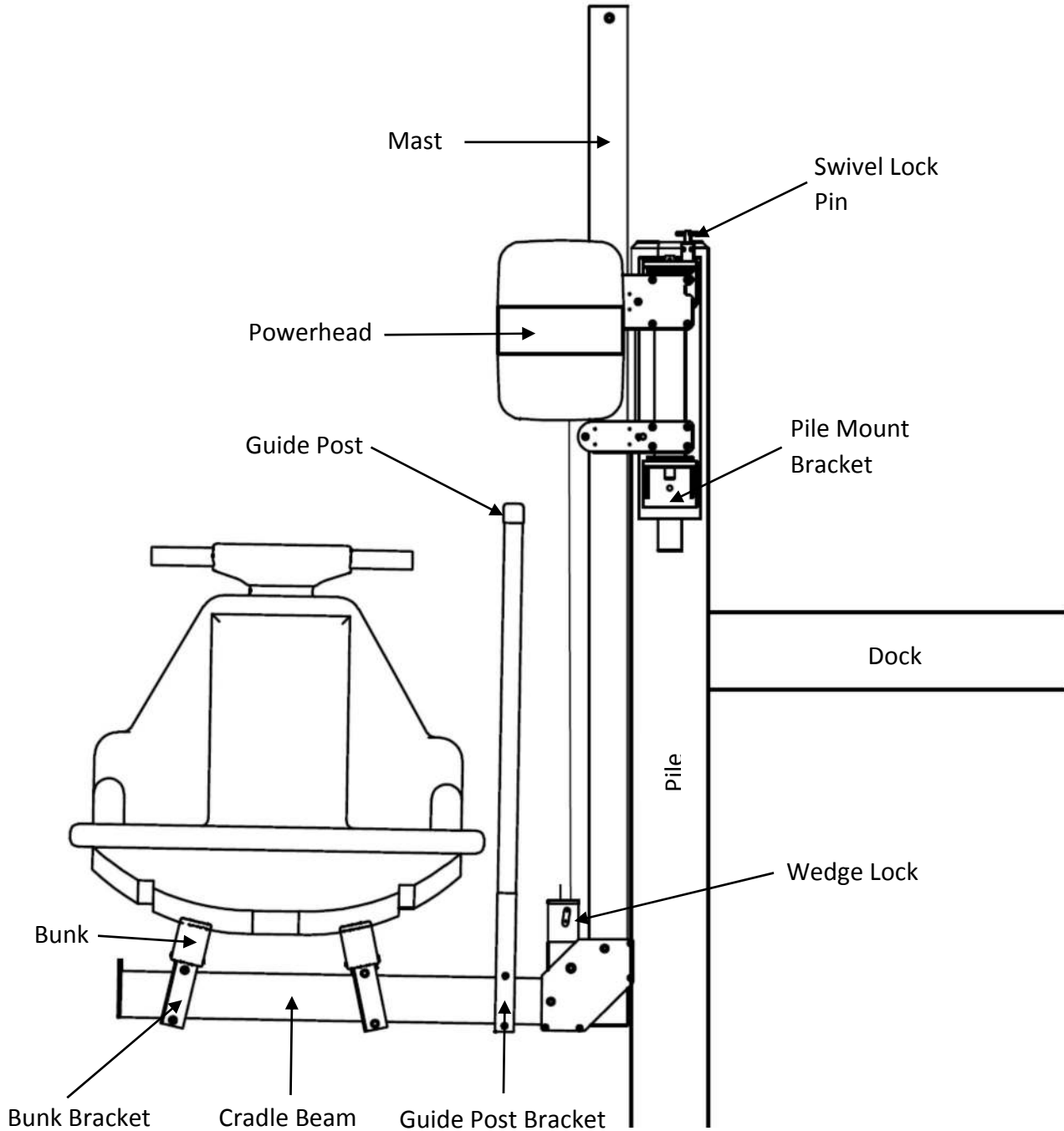


# Safety Precautions



1. Your boat lift is a heavy duty piece of equipment. It is important that all persons that may operate this unit have read and understood the owner's manual. Given the inherent dangers of heavy machinery, your boat lift deserves respect, and good judgment is required in its operation. Before allowing others to operate the unit be certain that they understand the proper operating procedures. Do not allow children to operate the lift.
2. This product is for lifting unoccupied boats. Do not ride in your boat or on the lift during operation. Always attend the controls when operating the lift, and watch carefully to have others stand clear. Keep hands, feet, and clothing away from all moving parts.
3. Your lift is operated by electricity, therefore, additional care must be taken. It must be wired by a licensed electrician, and it must be installed with an approved ground fault interruption device. If you observe severed or damaged wiring, it must be repaired immediately by an electrician. When properly installed and maintained, electrical devices such as this lift are completely safe. However, any electrical device used in and around a water environment must be treated with great respect to prevent accidental electrocution. All electrical maintenance and service to this lift must be done by a licensed electrician.
4. While operating your lift, routinely look at all cables for fraying, damaged ends, or loose strands. A damaged cable must be replaced immediately. Make sure that all pulleys are turning properly. Routinely look over cables to make sure that they are winding properly. Look for signs of extreme wear and unusual corrosion, as well as, exposed or damaged electrical wires. If you find any of the above, have the problem repaired immediately.
5. Do not work on your boat or lift while the boat is hoisted. When working on your lift, keep your hands, feet, and clothing away from all moving parts. Exercise great care if chains or gearing are exposed. Never work underneath a raised lift, and do not walk or stand on a raised lift. Always disconnect electrical power when working on any part of the lift.
6. Be careful not to exceed the rated capacity of the lift. To determine the total weight of your equipment to be lifted, study the boat manufacturer's literature to determine its weight. Be sure to add enough extra weight to compensate for your added accessories, including water and fuel. Gasoline weighs about 6 lbs. per gallon and water weighs about 8 lbs. per gallon.
7. If you plan to leave your lifted boat unattended for several weeks, it is important that you remove the drain plug in the boat to prevent it from filling with rain water. Accumulated rain, snow or other water in your boat can rapidly become heavy enough to exceed the capacity of a lift, causing personal injury or damage to the boat and lift.

## Components:



Welcome, and congratulations on your purchase of an **Imm Quality Boat Lift!** At Imm Quality Boat Lifts, we take pride in making the most advanced, most durable, easy to use and low maintenance boat lifts on the market today. The installation of this lift is simplified by its' lightweight aluminum construction and by extensive factory assembly. Only Imm Quality takes the extra time to pre-wind the cable on the winders, attach the drives, motors and covers, and pre-assemble the mounting brackets, bunk brackets and guide post assembly. We do all this as an added service to make life easier for our valuable customers. In the following pages, we will take you step-by-step through the entire installation process. We urge you to read this manual before attempting installation. If you have any questions, please contact us at 1-800-545-5603 and ask for technical support.

## Required Tools for Installation

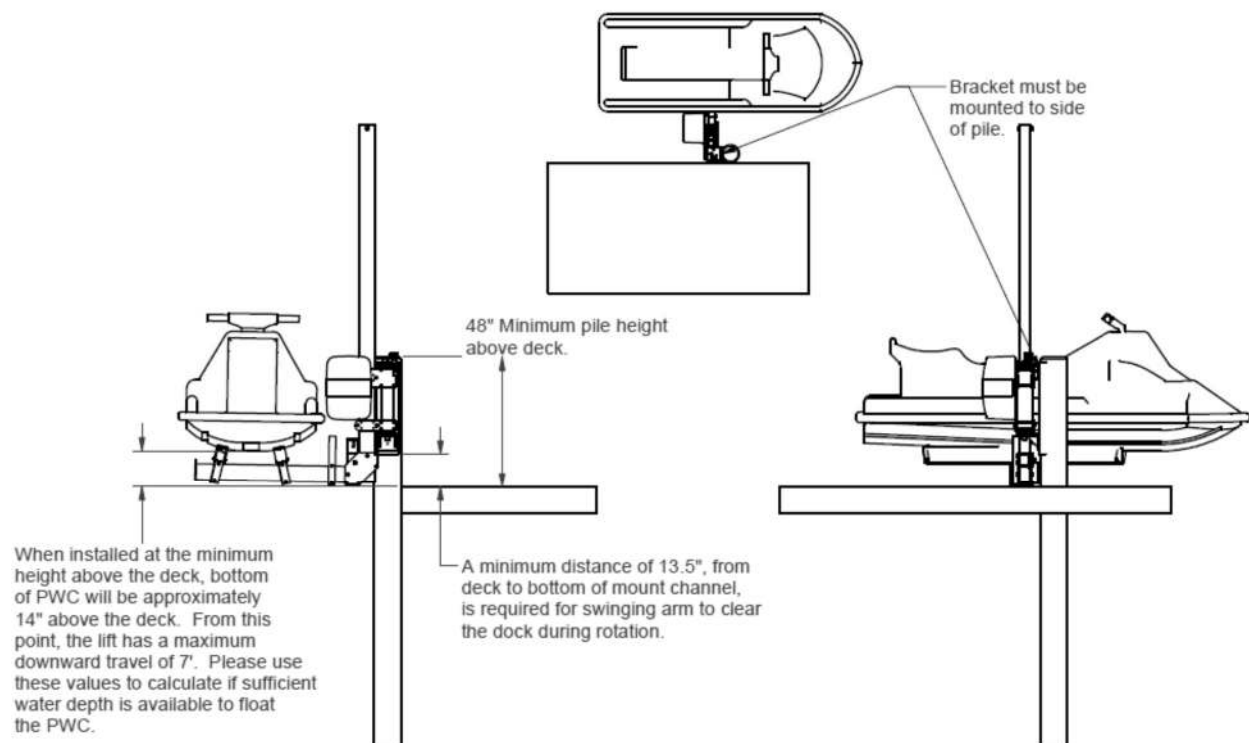
- Chain Saw
- 10 " Level
- 2' Level
- 9/16" and 1/2" Open End Box Wrenches (2 each)
- 7/16" and 3/4" Open End Box Wrenches
- Phillips screwdriver
- Flat head screwdriver
- 1/2" Drive Ratchet
- 9/16", 1/2" and 3/4" Deep Well Sockets
- PVC Pipe Cutter
- Electricians Pliers
- Claw Hammer
- Cable Cutter
- 3/8" Battery Operated Drill
- 3/16" and 1/2" Drill Bits
- Water Level

## Before you begin...

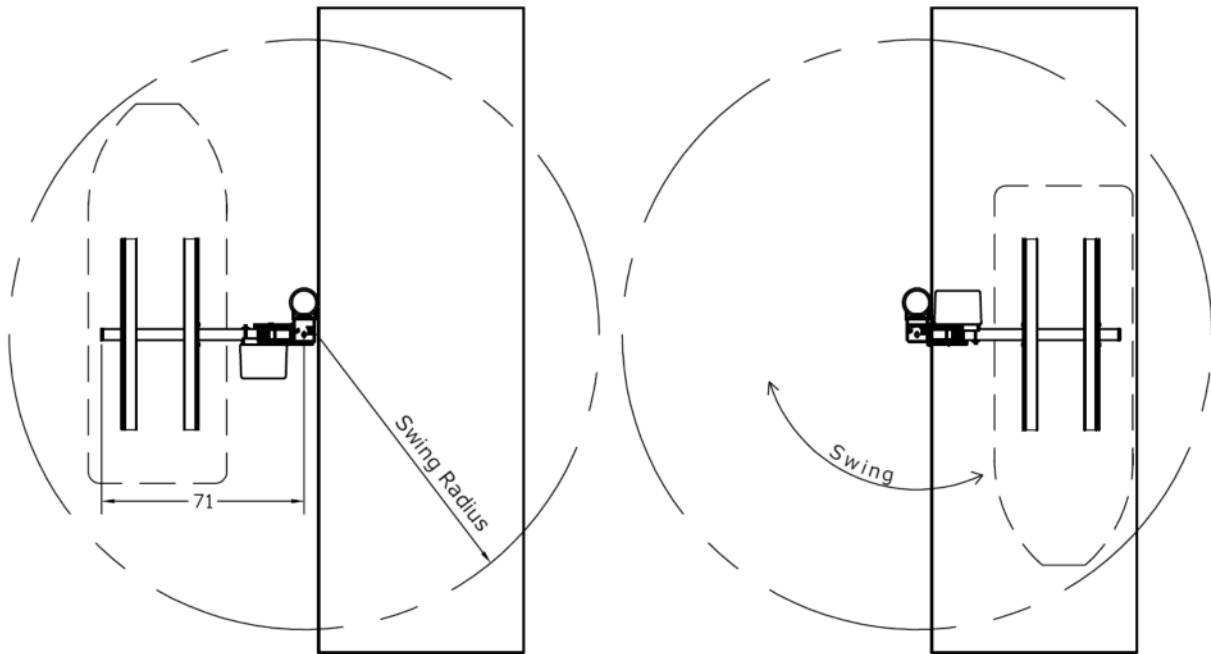
The pilings are the foundation of the boat lift and must be able to carry the combined load of the lift and the fully loaded watercraft. Local and National building code and common practice varies from area to area. Consult with our technical service department or your local marine contractor for appropriate guidelines.

In order to lift the watercraft high enough so that it may swing freely over the dock or seawall, the piling height should be at least 48" above the dock and the bottom of the mounting bracket should be at least 13.5" above the dock. Please refer to the figures below to determine the proper location of the mounting bracket. Although the bracket must be mounted to the side of the pile, either side is acceptable. Also refer to the figures to determine whether the lift will have enough travel to reach the low water line and be able to float the watercraft off the lift.

### PWC 1500 Installation Dimensions



## Do you have enough space?

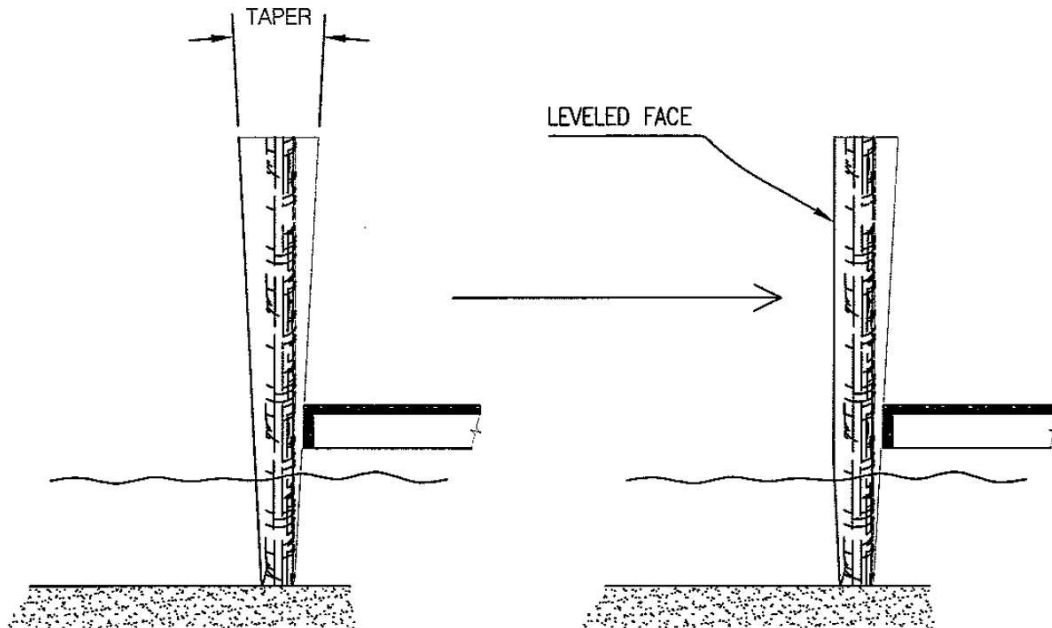


One of the great features of our PWC 1500 is that the mast can rotate 180° from one lock point to the other. This allows the user to store the PWC over the dock and then swing the lift to an over the water position to launch the PWC.

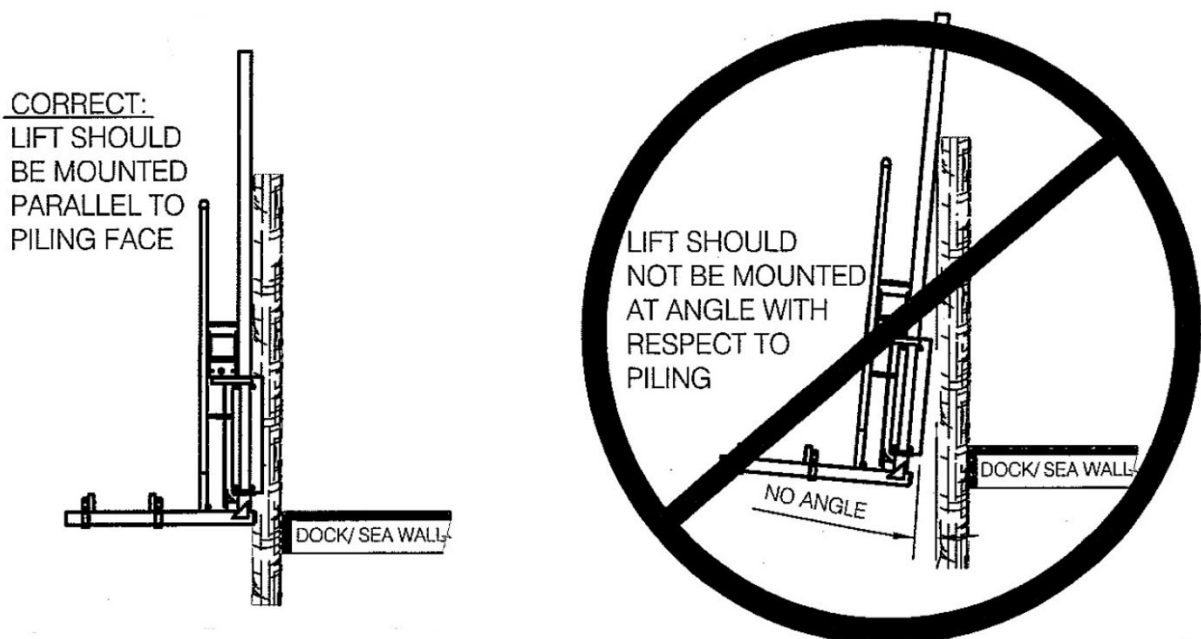
When installing the PWC 1500, it is important to know the swing radius of the lift with the PWC in place. You need to make sure that the lift, and more importantly the PWC, will not hit anything. There should not be any other pilings, benches, fencing, railings, dock boxes, tables, lights or any other equipment installed on the dock within the lift swing radius. If you do not make sure that the swing radius is clear of objects, the PWC 1500's ability to rotate safely may be severely limited.

## Preparing the Pile for Installation

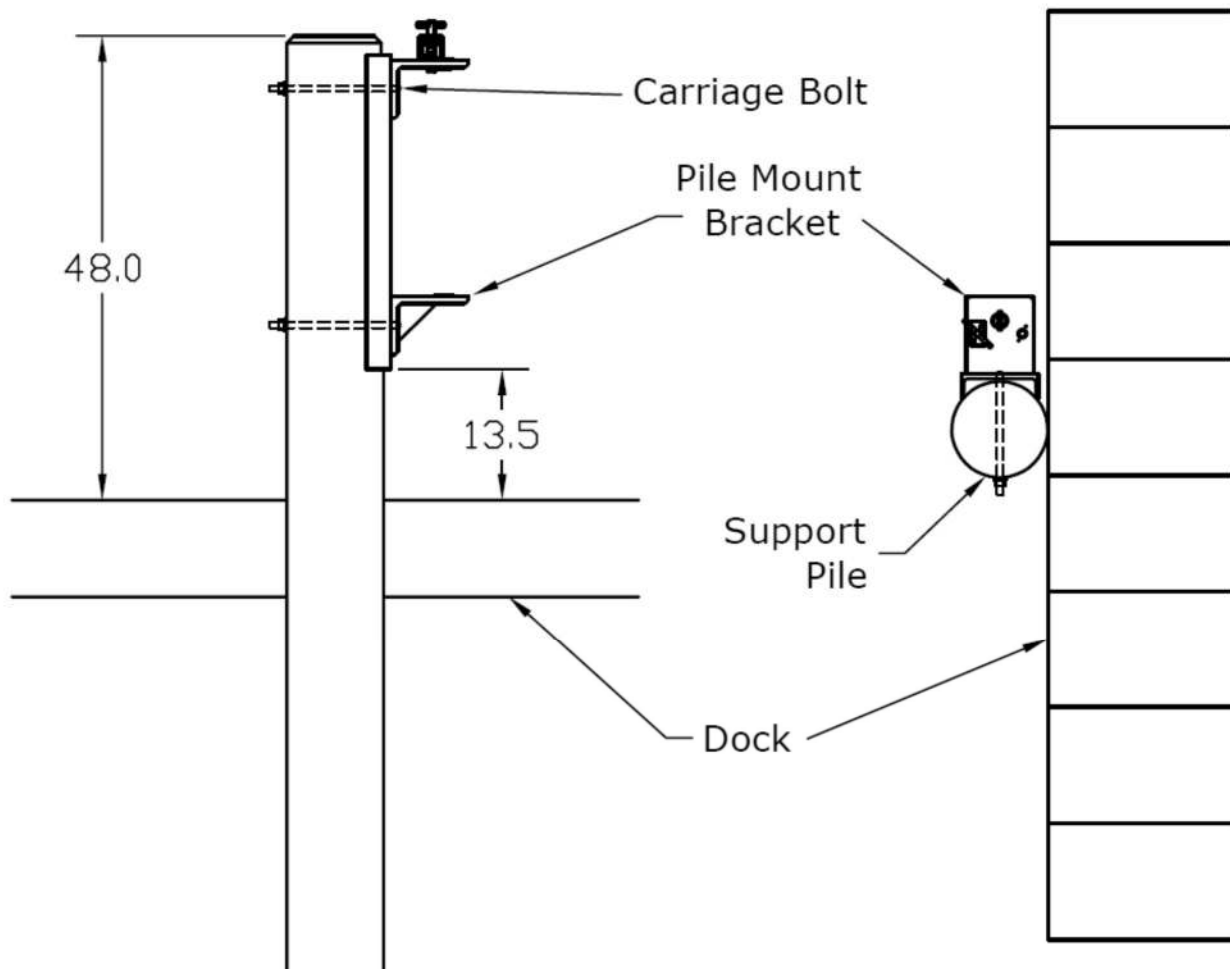
The PWC 1500 should be mounted on as straight and vertical a pile as possible. Piles with excessive taper should be leveled as shown below.



The PWC 1500, mounted properly, should be parallel with the piling and should not be mounted at an angle. See figures below.



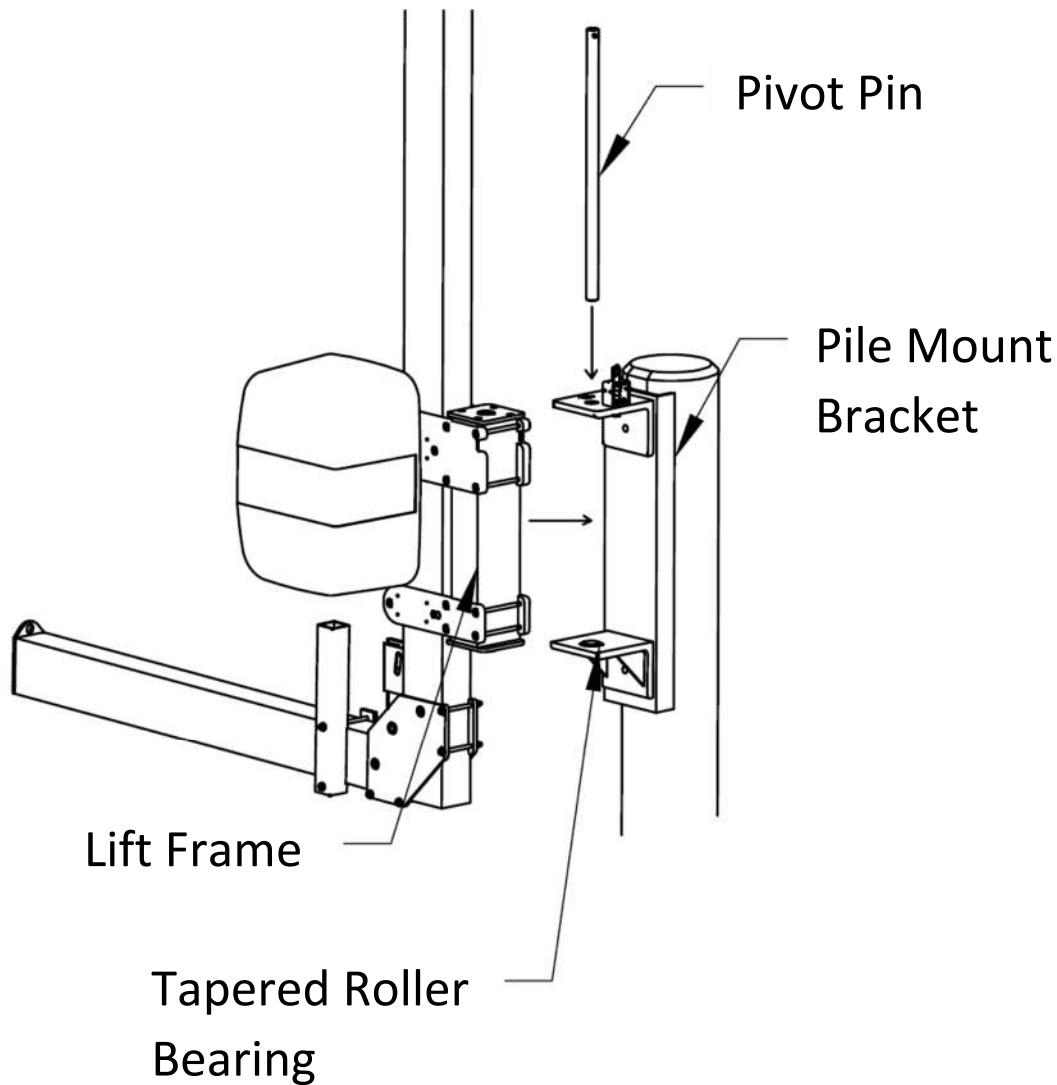
## Pile Mount Bracket Installation



- Thru-bolt the pile mount bracket to the pile using carriage bolts. The pile should be 10-12" in diameter and at least 48" above the deck. The carriage bolts should be 5/8" in diameter and are not supplied with the lift. **Do NOT use lag bolts.** The bottom of the pile mount bracket should be at least 13.5 inches above the surface of the dock or seawall.
- The pile mount bracket should be mounted perpendicular to the dock (90 degrees to the long axis of the dock) as shown in the top view above. Either side of the pile is acceptable. This will allow the lift to have the full range of rotation.
- Shims may be necessary to provide a tight fit between the legs of the pile mount bracket channel and the pile.
- Secure the carriage bolts with curved washers and lock nuts. Once bolted, the pile mount bracket should be secure and not able to move or shift.

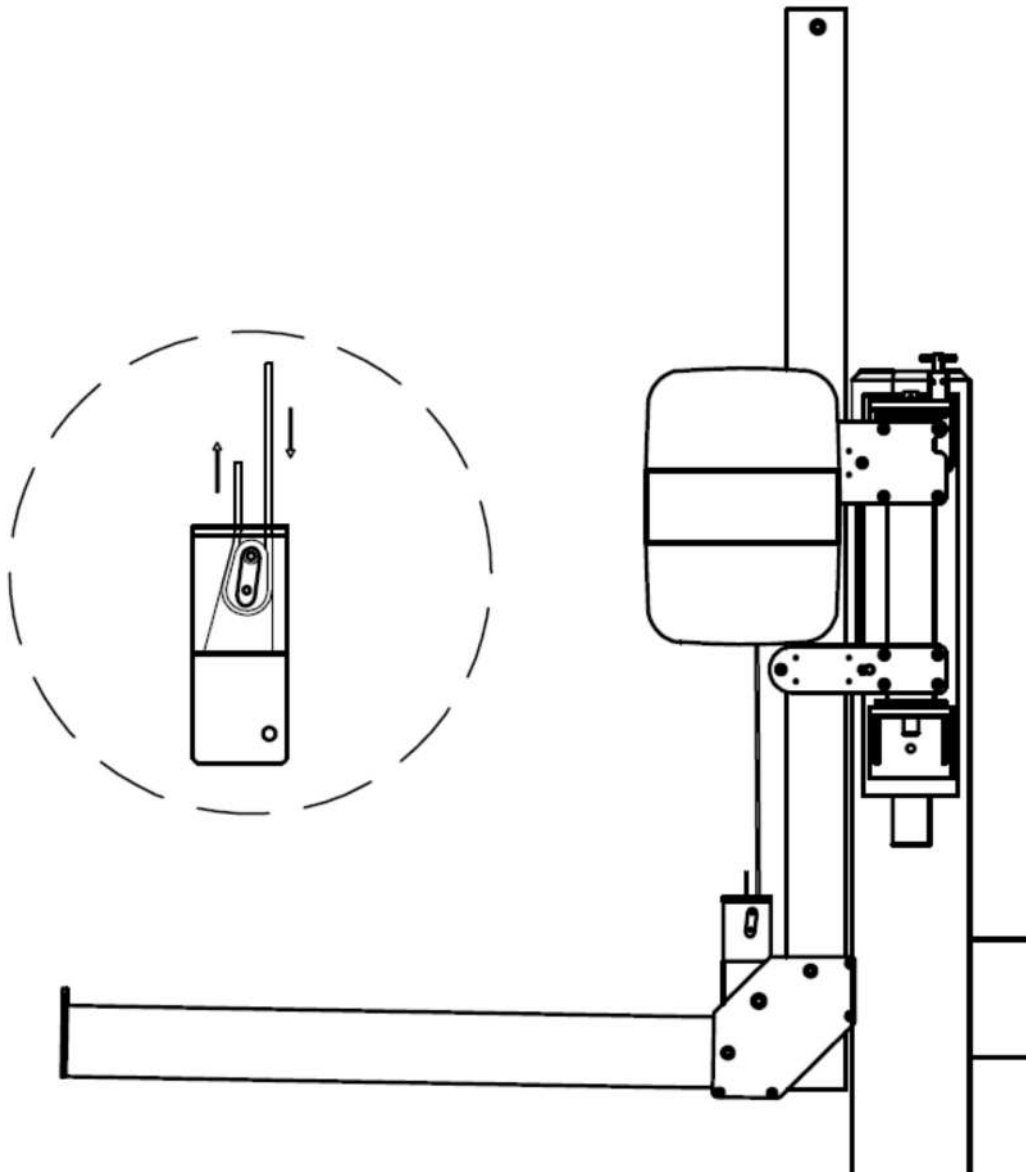


## Winch Head Attachment



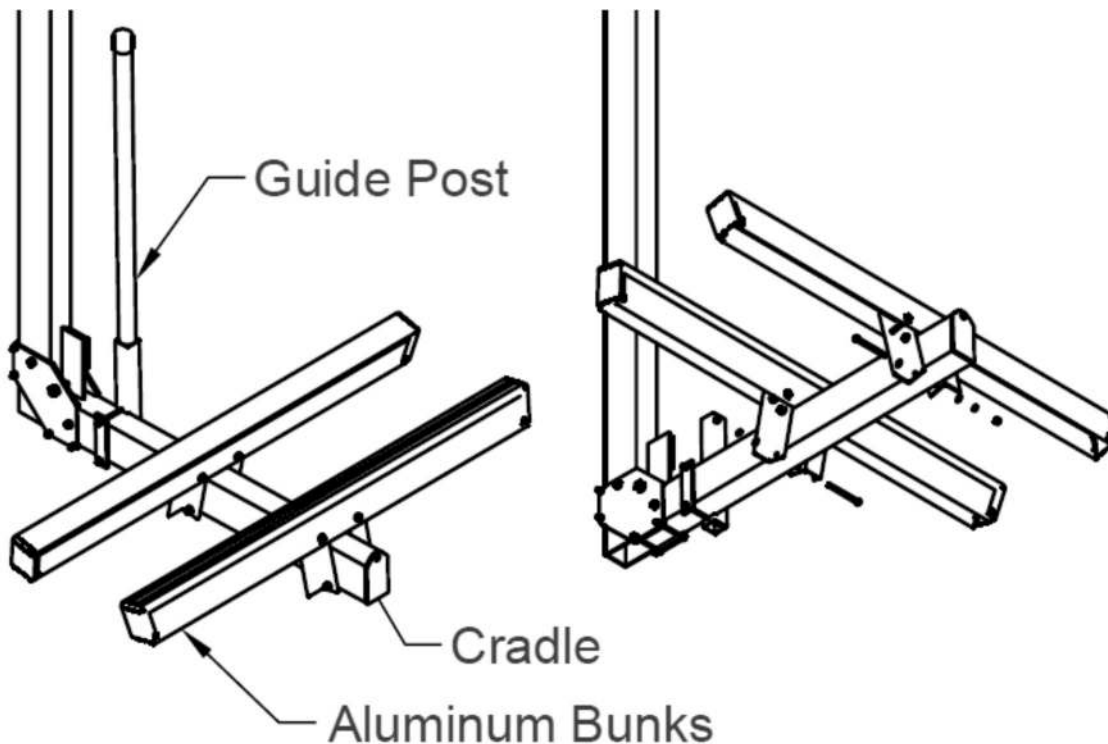
- The winch head and mast assembly are pre-assembled at the factory.
- Make sure the tapered roller bearing is seated properly on the bottom angle of the pile mount bracket.
- Attach the winch head to the pile mount bracket using the stainless steel pivot pin.
- This pin will feed down from the top and pass through the bushings in the pile mount bracket and lift frame all the way through the tapered roller bearing.
- Installation of the pin may require light tapping with a plastic mallet.

## Cable Attachment



Make sure the swivel lock pin is down and engaged to prevent the lift from rotating. Feed the cable down into the wedge lock, around the wedge and back up out of the wedge lock as depicted above. The PWC 1500 comes installed with a cable retention roller to lessen the possibility of the cable unspooling. Nonetheless, be sure to keep tension in the cable during installation to prevent it from unspooling off the winder.

## Aluminum Bunk and Guide Post Installation



### BUNK BOARD MOUNTING ASSEMBLY

- The aluminum bunks come pre-assembled with the brackets centered and attached. Remove the wood spacer from between the brackets and slide over the cradle beam with one ½" by 5 ½" bolt above and one bolt below the cradle beam.
- The spacing between the aluminum bunks should be set to provide a stable platform for the watercraft. Securely tighten the nuts when in place.
- The brackets may be repositioned by loosening the nuts at the bracket and sliding along the cradle beam.

### GUIDE POST ASSEMBLY

- The guide post bracket comes pre-installed on the cradle beams. The brackets may be repositioned by loosening the nuts on the bolts and sliding along the cradle beam.
- Install guide post pipe insert into the brackets and slide PVC protective sleeve over the pipe.
- With the PWC positioned on the lift, make final adjustments to the fit of the guide posts and then tighten bracket hardware.

## PWC 1500 Electrical Requirements

Having the proper electrical service to the boat lift is critical to the performance of the lift. Inadequate electrical service could result in damage to the motor and / or the lift controls. When at all possible, the boat lift should have dedicated electrical service to prevent circuit overloading and to minimize interference by other devices on the circuit. Consult the following chart as minimum guidelines for properly sized circuit breaker and wire size based on horsepower and number of motors.

### Minimum Breaker and 75C Copper Wire Size (AWG) for Single-Phase A.C. Motors

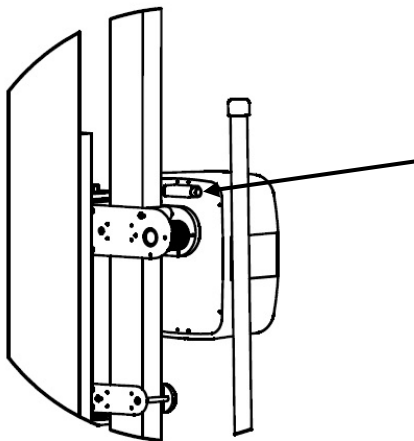
# and Motor H.P.	Amps to run		Breaker Size		50 Feet		100 feet		200 feet		300 feet		400 feet	
	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V
(1) 3/4 H.P.	11	6	15 A	15 A	#12	#14	#8	#14	#6	#12	#4	#10	#3	#8

#### Important Notes:

- Please use current motor label to confirm specifications in above chart.
- For Aluminum wire, increase by 1 wire size, minimum.
- The wiring recommendations and diagrams referred to are not meant to supersede any national or local codes.
- Read all instructions and wiring diagrams before connecting or changing wires.
- The appropriate instructions and wiring diagrams are enclosed in the control box.
- Imm Quality Boat Lifts recommends that all electrical work be performed by a licensed electrical contractor.
- Wiring procedures other than those presented by Imm Quality Boat Lifts will void the product warranty.

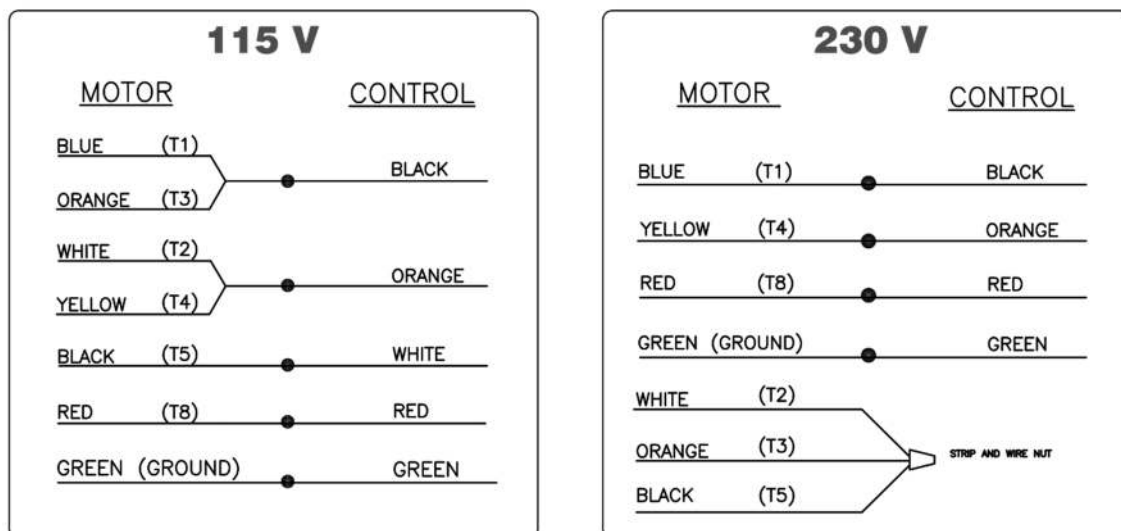
## Electrical: Motor Wiring for PWC 1500

The powerhead cover **does not** need to be removed to wire the motor to a control box. All motor wire leads have been routed to a conduit box located on the back plate of the powerhead enclosure. To connect to the Bonita, Gem or Tigershark control boxes, simply connect the motor wire leads to the appropriate wires in the control box according to the diagrams below.



All motor wires are located inside this conduit box.

**Note:** Because the PWC 1500 lift swivels, flexible conduit is necessary to accommodate the movement.

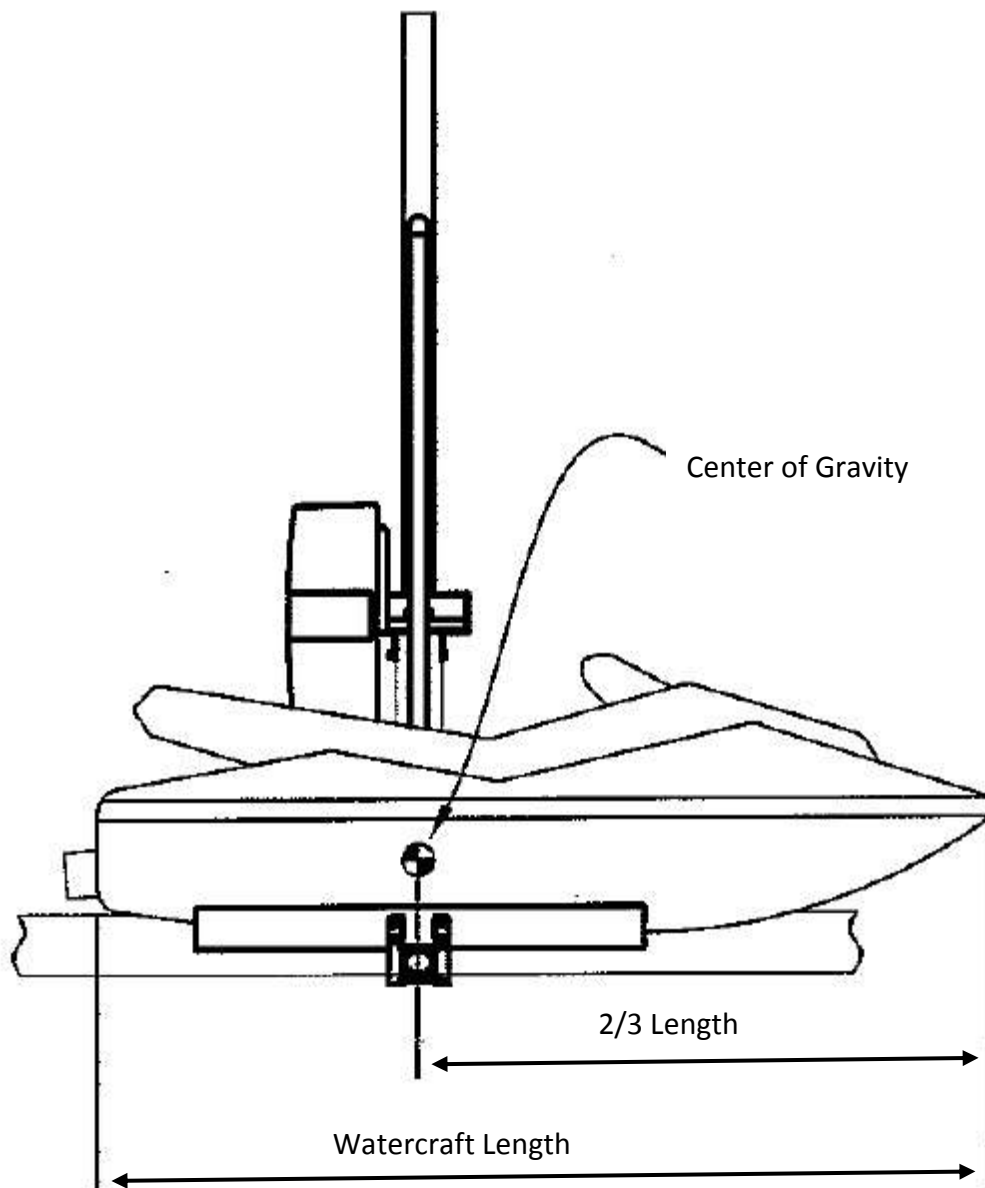


\* TO REVERSE MOTOR DIRECTION FOR EITHER VOLTAGE INTERCHANGE BLACK (T5) AND RED (T8)

**Note:** Imm Quality Boat Lifts recommends that the electrical hookup be performed by a licensed electrician and conforms to all national and local electrical code. The appropriate wiring diagram and further instructions are enclosed by the OEM in the control box. Please read all instructions and wiring diagrams before connecting or changing any wires.

## Watercraft Positioning

The watercraft must be properly balanced on the lift before attempting to operate the PWC 1500. Generally, watercraft are heavier towards the rear section. The watercraft must be positioned so that the center of gravity of the watercraft is directly over the cradle beam. The figure below shows the watercraft positioned correctly with a typical PWC. Please consult with the manufacturer to determine the location of the center of gravity for your particular watercraft.



## Notes: