

IMM QUALITY

— BOAT LIFTS —

Installation Manual

For

PWC 3000

Boat Lifts

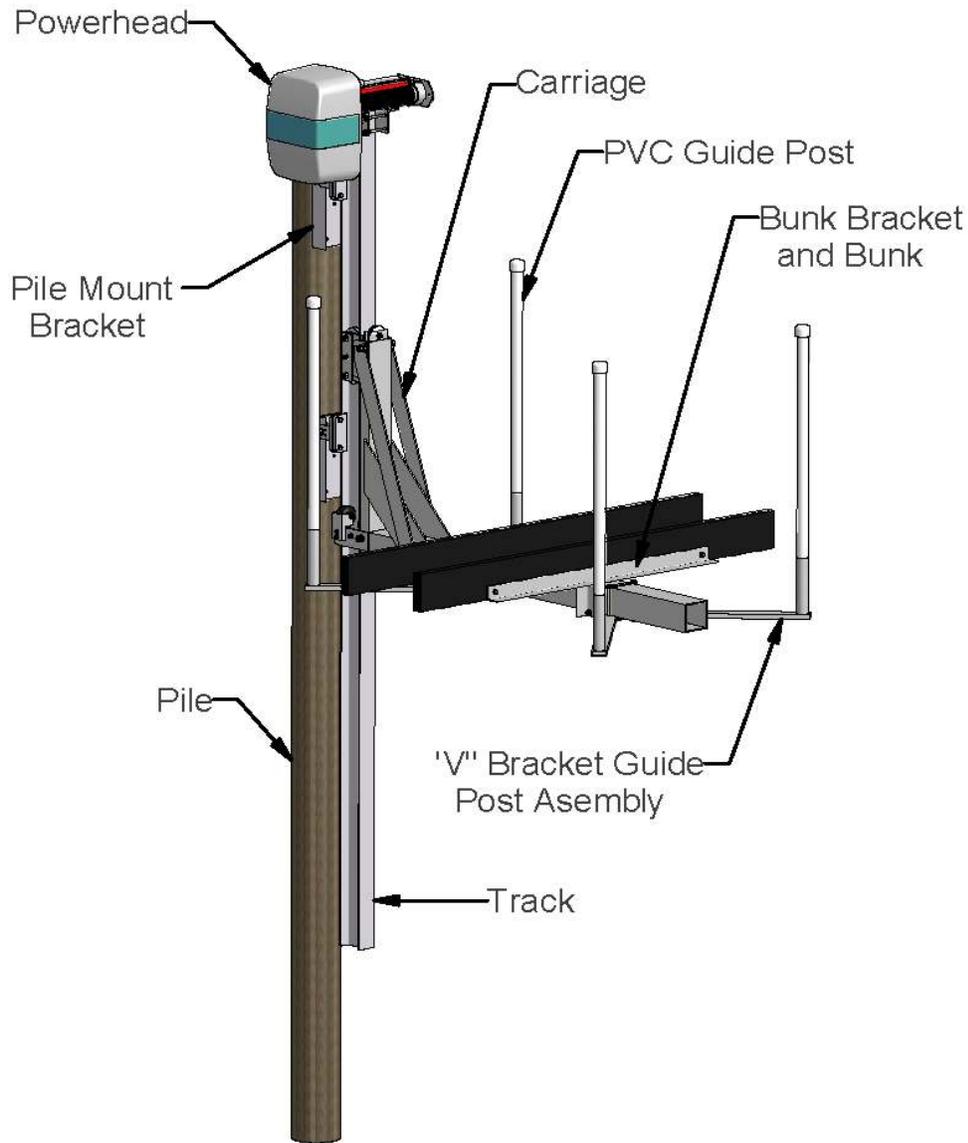


Safety Precautions



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



NOTE: Please review all installation instructions and drawings prior to beginning the installation of your lift.

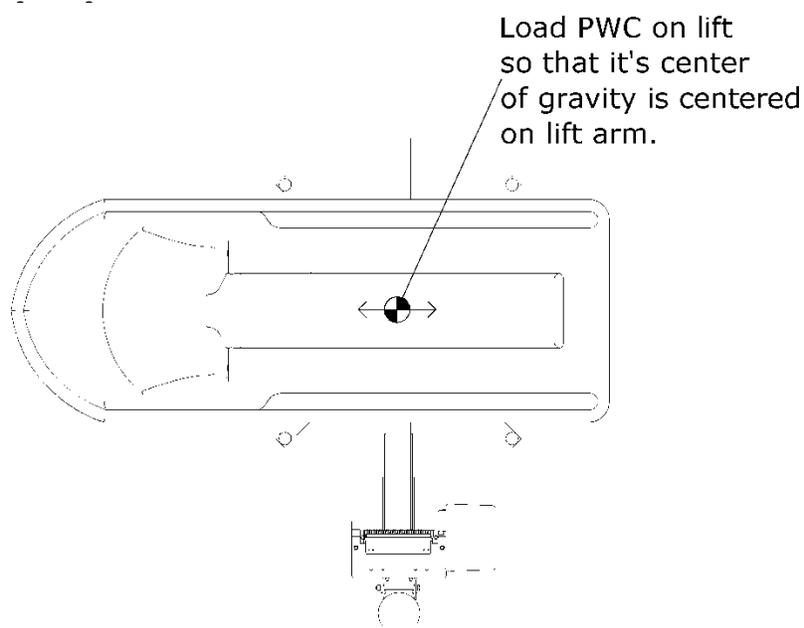
Introduction

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, pre-assemble the drives, motors, covers and powerhead components, and pre-assemble the carriage including 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.

Before you begin...

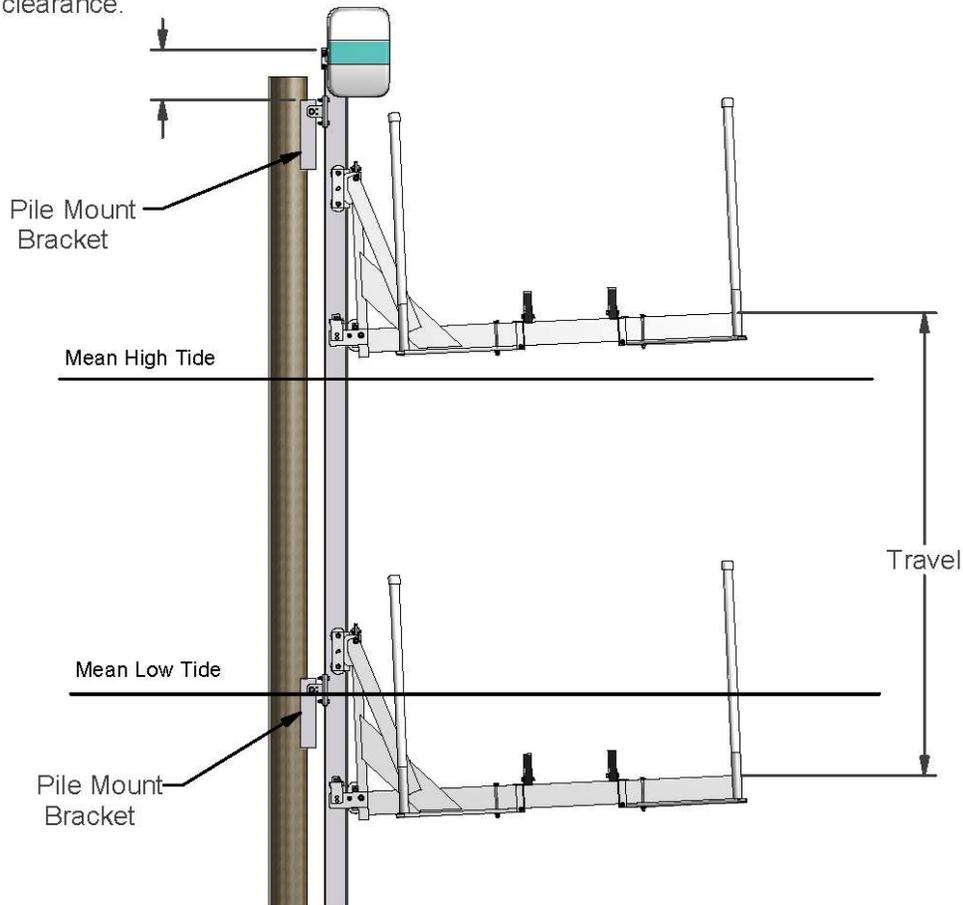
Our PWC 3000 lifts can be mounted to wood pilings, concrete pilings, concrete docks or seawalls. The pilings, docks or seawalls are the foundation of the boat lift and must be able to carry the combined load of the lift and the fully loaded watercraft. Local and national building code and common practice varies from area to area. Consult with our technical service department or your local marine contractor for appropriate guidelines. It is the contractor's / installer's responsibility to determine and construct suitable support structure and bracing for our lifts.

Boat Positioning



Track Install Considerations

Top of track must be at least 8" above pile mount bracket for powerhead mount clearance.



Carriage Height:
51"

Powerhead Requires:
8" of track for mounting

Piling Mount:
Top of upper pile mount bracket must be 6" below top of pile. Lower pile mount bracket should be mounted at or slightly above the mean low tide.

Note:

To get the keel to align with the deck height, the pile must be installed at least 64" above the deck.

Lift Specifications

Max Beam of Boat: 96" (8')

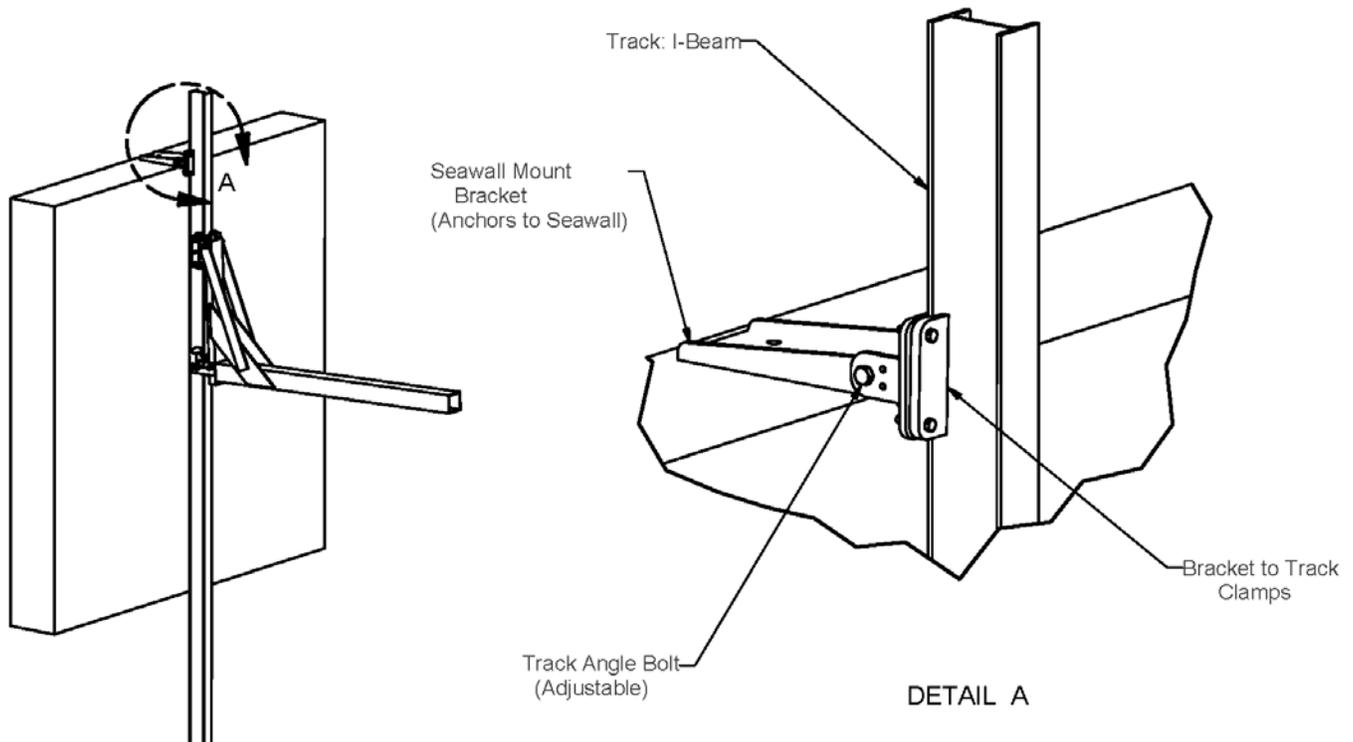
Standard Lift Travel: 20'

Max Raised Position: 12" from top of the track (to allow for powerhead and mount)

Track Angle: vertical

Standard Track Length: 15'

Seawall Mount Installation



- 1) The positioning of the seawall mount bracket on the seawall cap is ultimately up to the installer / contractor. Vertical track installations require the edge of the seawall mount bracket to protrude at least 1" into the slip area to accommodate the track clamp bolts. Make sure the track will clear the seawall cap before anchoring the mounting bracket. When the track is driven to refusal, make sure there is at least 8" of I-Beam track above the seawall mount bracket to accommodate mounting the power head.
- 2) The seawall mount bracket has three holes for anchoring to the seawall cap. The holes are 7/8" diameter. The type of anchoring hardware and their suitability is left up to the installer / contractor to determine and supply.

Pile Mount Installation

**** Please refer to figures on page 8 for installing the piling mount assemblies. ****

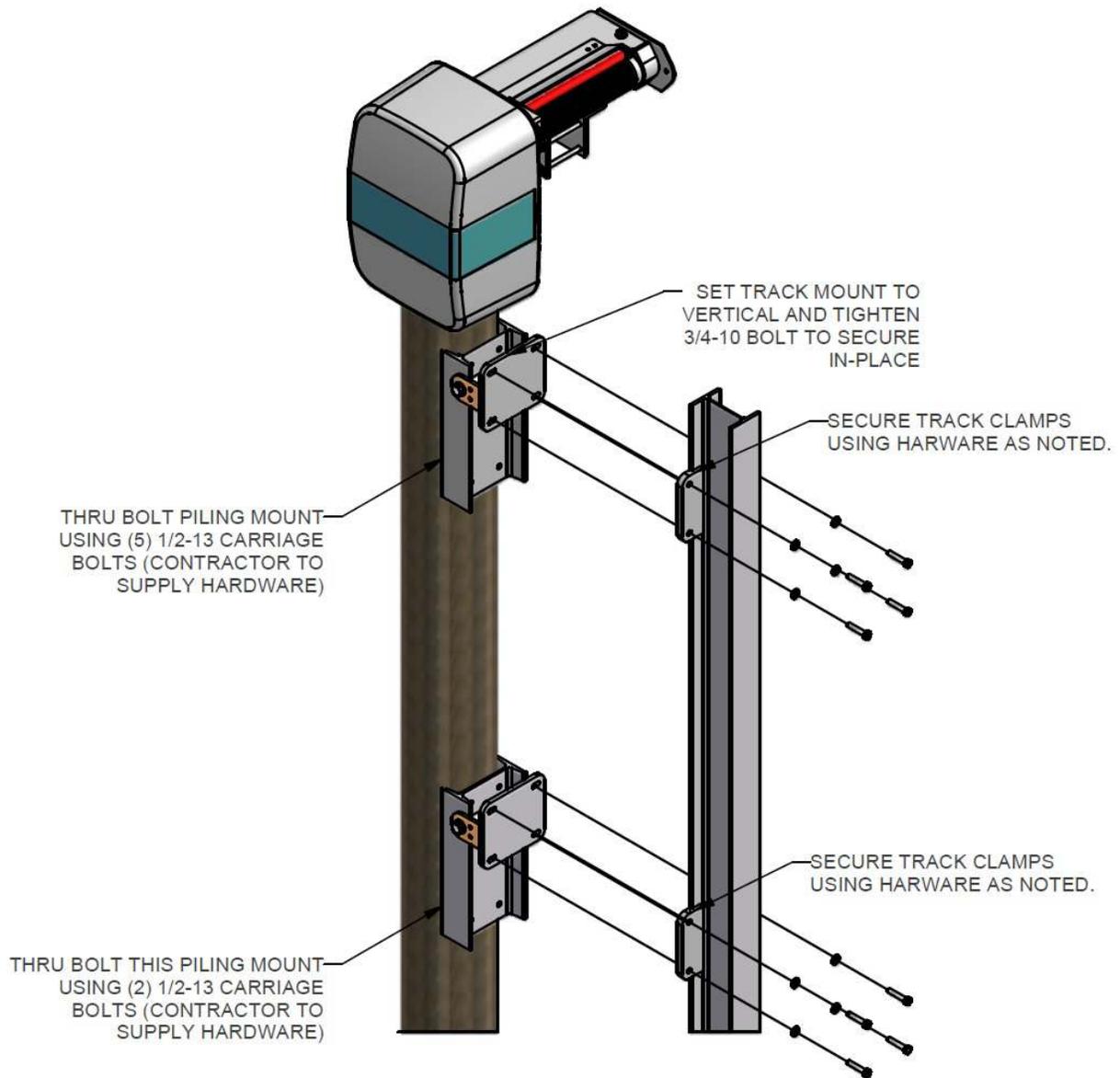
- The top of the upper pile mount bracket should be 6" below the top of the piling. The pile mount bracket must be level and plumb.
- The distance between the upper piling mount and lower piling mount should be at least 30". The lower piling mount should be mounted at or slightly above the mean low tide level.
- The pile mount brackets should be attached to the pile using five ½" diameter carriage bolts or threaded rod (Contractor Supplied). The use of lag screws will void the warranty. Install bolts thru piling and secure using curved backing washers and lock nuts (Contractor Supplied).
- Using a level and an angle finder, set the track mount bracket to vertical and tighten the ¾" bolt.

Track Installation

**** Please refer to figures on page 8 for installing the tracks. ****

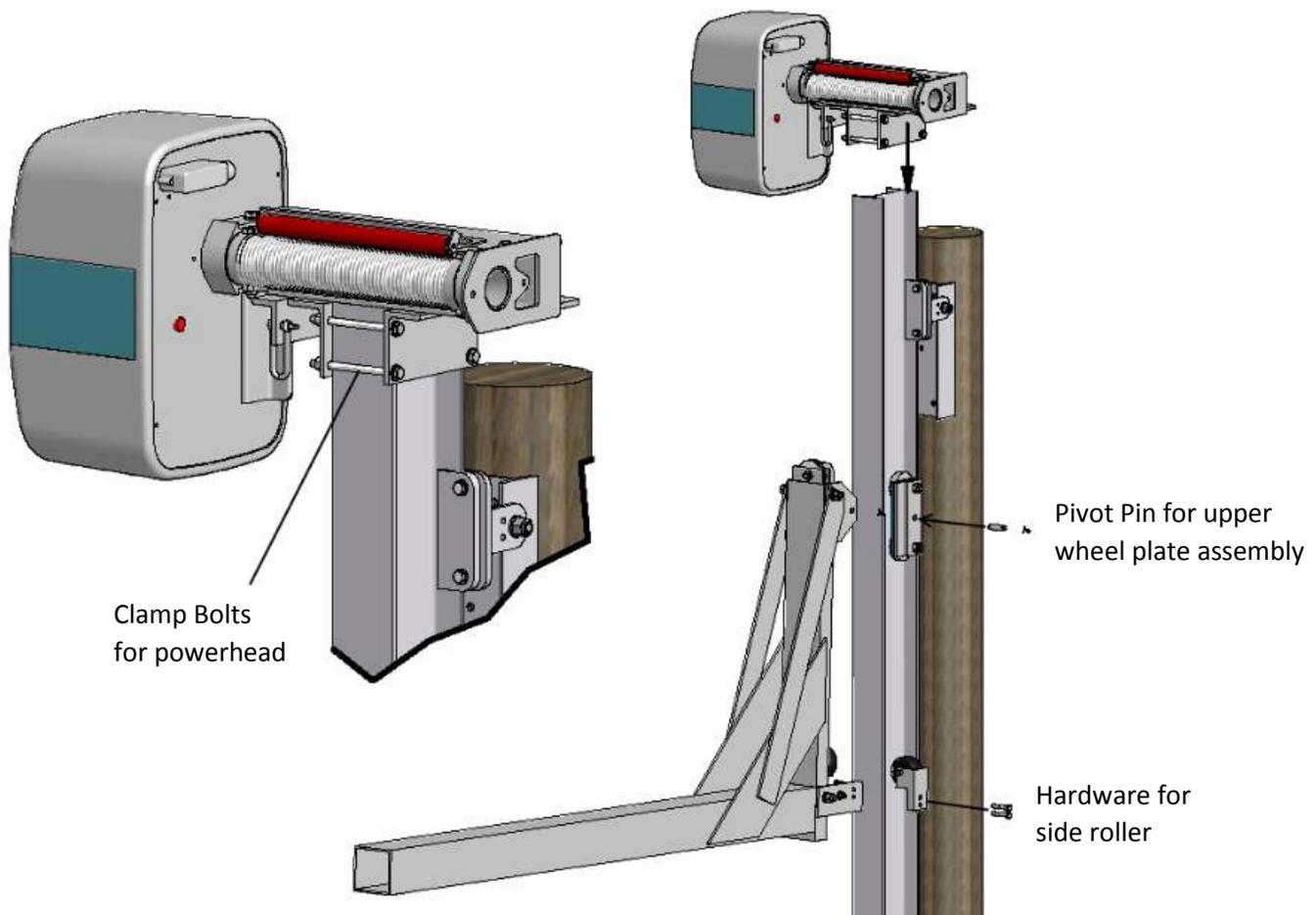
- Using the track mount clamps with ½" x 2 ½" bolts and hardware, loosely bolt track to piling or seawall mount. Verify correct alignment of track and drive track to refusal (the point at which 10 impacts of a track driver does not move the track farther than ¼"). The bracket face may be used as a guide while driving the track, but the contractor must frequently verify the alignment during the installation process.
- Once track is set in place, check for correct alignment one more time. Tighten all bolts on the clamps to secure the track.
- Remember to wrap the wire of the zinc around the mounting bolts between the washer and track clamp on the lower track mount clamps.

Pile Mount and Track Installation



Installing Carriage Arms and Power Head

- Remove the upper wheel plate assembly and side roller from one side of the carriage.
- Position carriage so that lower wheel rides on the flange face of the I-beam track that is closest to the slip area and so that the side roller rides on the inner web of the I-beam.
- Position the carriage arm so that the wheels of the upper assembly engage and ride on the opposite flange face (inside) of the I-beam track than the lower wheel.
- Re-install the upper wheel plate assembly by inserting the pivot pin and secure with the two cotter pins. Re-install the side roller and tighten all hardware.
- Alternatively, the entire carriage arm may be lifted up and slid down the I-beam track without any disassembly. The use of a crane would greatly assist this method.
- To install the Power Head, simply slide the mount base over the top of the I-beam track and lower until it bottoms out. Tighten the four clamp bolts to secure.



PWC 3000 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

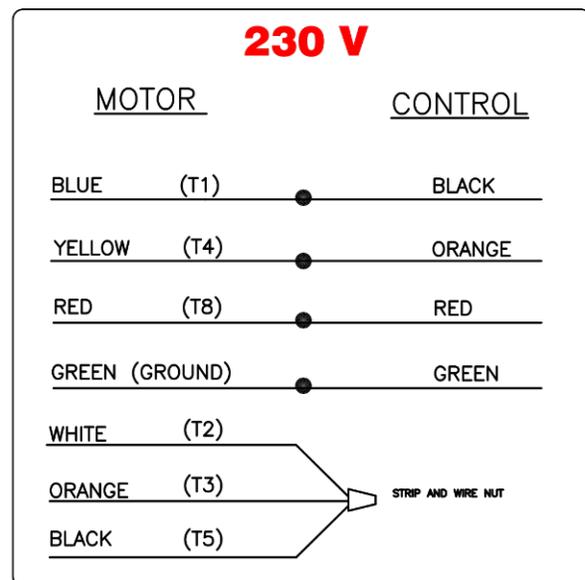
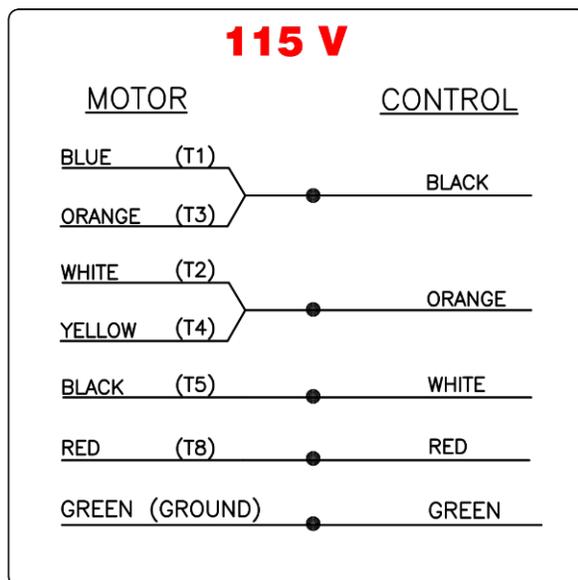
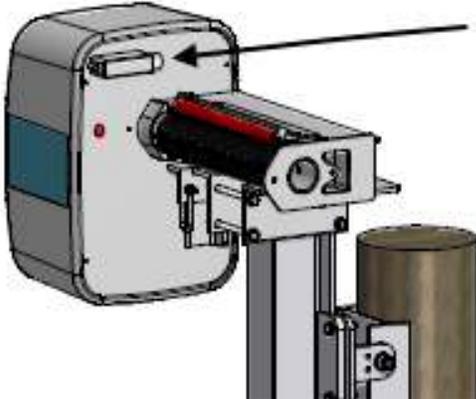
Important Notes:

- Please use current motor label to confirm specifications in above chart.
- For aluminum wire, increase by 1 wire size, minimum.
- The appropriate instructions and wiring diagrams are enclosed in the control box.
- 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.
- 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.
- **A FOUR POLE DISCONNECT OR EQUIVALENT CONTROL BOX MUST BE INSTALLED.** An electrochemical reaction known as electrolysis can cause premature degradation of metal components including but not limited to I-beam tracks and carriage. The lifts electrical supply (including ground and neutral legs) should be mechanically disconnected from the power source when not in use.
- **WIRED ZINCS MUST BE CONNECTED TO THE LIFT AND ALWAYS BE SUSPENDED UNDERWATER.** We recommend wrapping the wire of the zinc around a mounting bolt (between washer and mounting surface) on the lower pile mount bracket. One zinc is provided with the lift. The zinc anode must be checked periodically and replaced as necessary.

Electrical: Motor Wiring for PWC 3000

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.

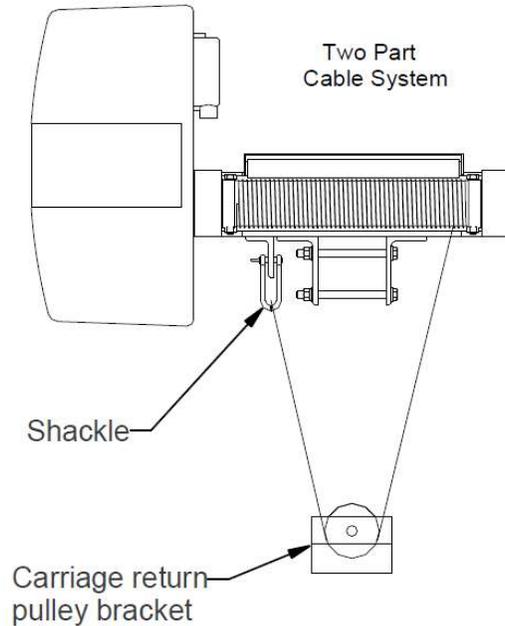
All motor wires are located inside this conduit box.



* 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.

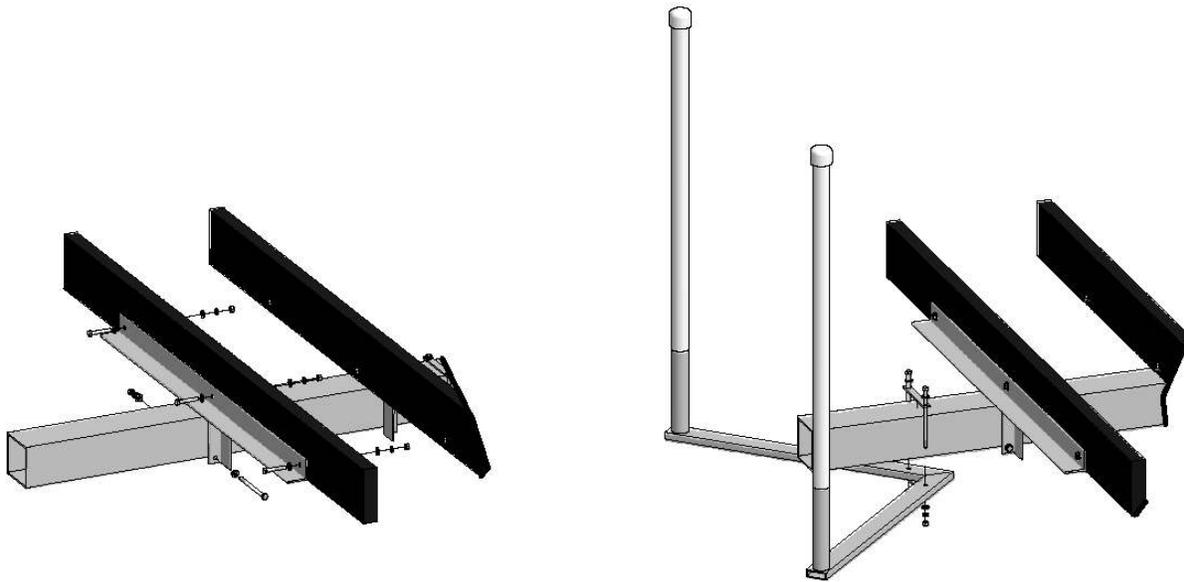
Installing Cable



The PWC 3000 lift has a two part cable system. To facilitate installation, the cable comes pre-wound on the winder. Route the cables as shown in the figure above.

- 1) Remove the $\frac{3}{4}$ " bolt (s) that functions as the axle (s) for the pulleys.
- 2) Route the cables and re-install the pulleys with the bolts.
- 3) Make sure there are no loops, kinks or twists in the cable.
- 4) Attach the thimble end of the cable to the shackle.
- 5) Securely tighten the shackle pin.

Bunk Board and Guide Post Installation



WOODEN BUNKS

1. To install the bunk bracket, slide over the square tube of the carriage arm and move to desired position. Secure the bracket with the provided stainless steel hardware (1/2" x 7 1/2" bolt, (2) flat washers, lock washer and nut). Repeat with the second bunk bracket.
2. Center the bunk boards on the carriage arm.
3. Make sure the bunk boards are flush to the carriage arm and the bunk brackets.
4. Mark, then drill (6) 1/2" diameter holes for mounting the bunk boards to the bunk brackets.
5. Attach the bunk boards with the supplied stainless steel hardware (per hole: 1/2" x 3 1/2" bolt, (2) flat washers, lock washer and nut).

GUIDE POST ASSEMBLY

1. To install the guide post bracket, place the bracket below the square tube of the carriage arm and the clamp bar above the square tube of the carriage arm.
2. Align the holes in the clamp bar with those in the bracket and secure with the supplied stainless steel hardware (per hole: 1/2" x 8 1/2" bolt, (2) flat washers, lock washer and nut).
3. Install guide post pipe insert into the brackets and slide PVC protective sleeve over the pipe.
4. Repeat steps 1-3 for the second guide post assembly.
5. With boat positioned on the lift, make final adjustments to the fit of the guide posts and then tighten bracket hardware.

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