

# IMM QUALITY

## — BOAT LIFTS —

Installation Manual

For

Beamless

Boat Lifts



# Safety Precautions

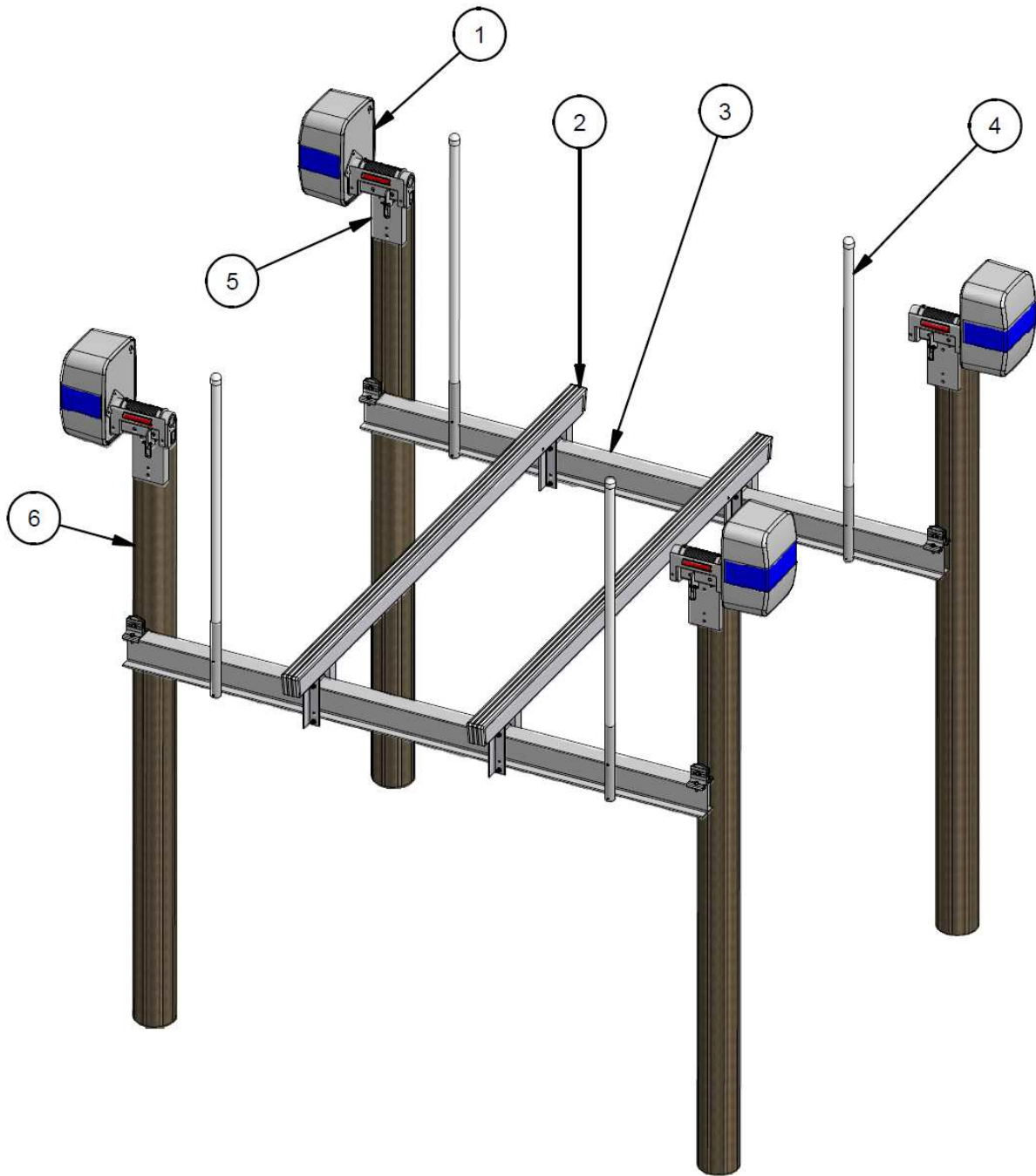


1. Your boat lift is a heavy duty piece of equipment. It is important that all persons that may operate this unit have read and understood the owner's manual. Given the inherent dangers of heavy machinery, your boat lift deserves respect, and good judgment is required in its operation. Before allowing 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.

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
- 36' Industrial Extension Ladder in two 18' Sections
- 2"x8"x16' Scaffold Boards (2) and 1"x6"x16' Scaffold Boards (4)
- Water Level



**Parts List**

- |                               |                            |
|-------------------------------|----------------------------|
| 1. Powerhead                  | 2. Bunk and Cover Assembly |
| 3. Aluminum Cradle            | 4. Guide Post Assembly     |
| 5. Powerhead Mounting Channel | 6. Piling                  |

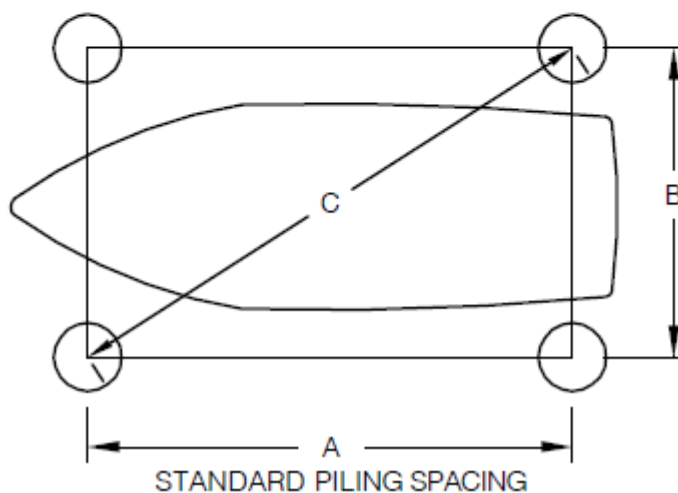
## Before you begin...

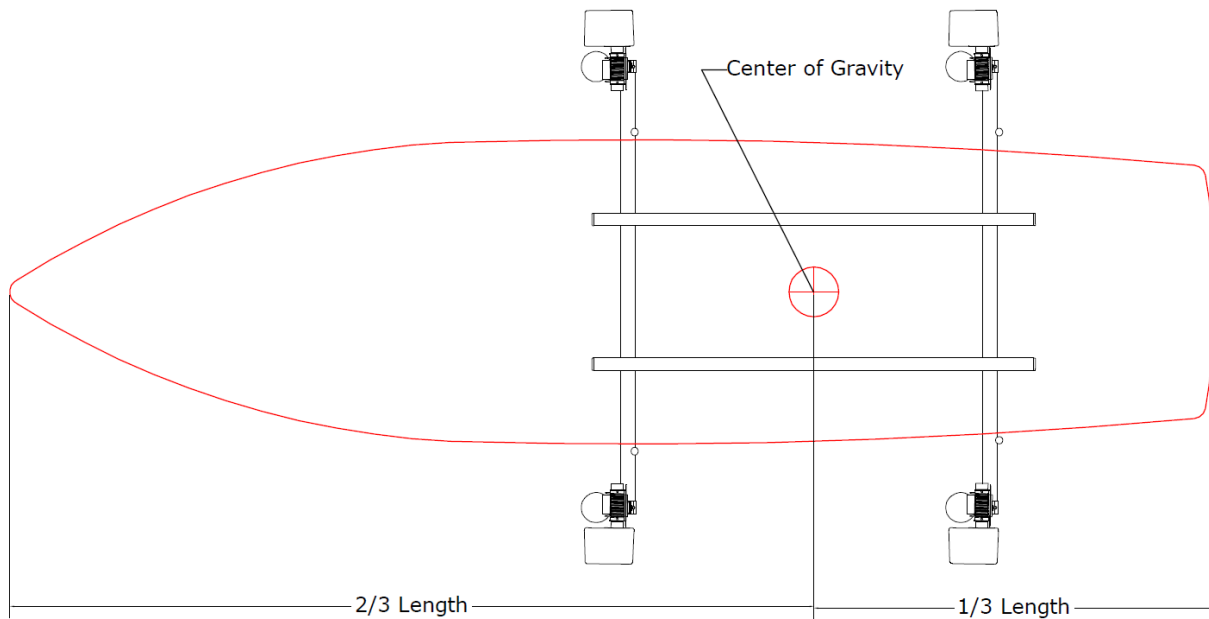
The pilings are the foundation of the boat lift and must be able to carry the combined load of the lift and the fully loaded boat. Local and National building code and common practice varies from area to area. Consult with our technical service department or your local marine contractor for appropriate guidelines. Please note, the beamless powerheads put side loads on the pile. It is the contractor's / installer's responsibility to determine and construct suitable support structure and bracing for our beamless lifts. We have included charts of typical pile spacing for your convenience.

### 4 Pile Lifts

ALL SPACING TO CENTER OF PILING

LIFT CAPACITY	A	B	C	RECOMMENDED Min. PILE SIZE
7,000 LB	120"	144"	187"	10" DIA.
10,000 LB	120"	150"	192"	10" DIA.
13,000 LB	120"	150"	192"	10" DIA.
16,000 LB	120"	168"	206"	10" DIA.
20,000 LB	144"	192"	240"	10" DIA.
24,000 LB	144"	192"	240"	10" DIA.



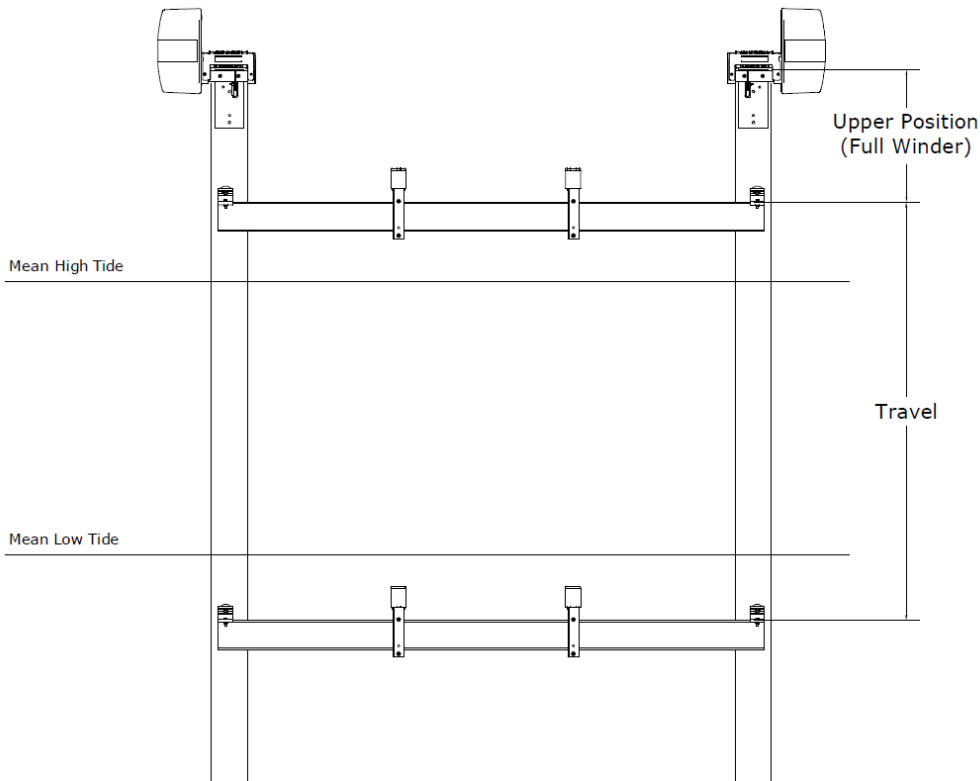


## Boat Positioning

Position the boat so that its' center of gravity is centered on the cradle and bunks. Because the motors are generally located in the stern of the boat, the approximate location of the center of gravity is 1/3 the total length of the boat forward from the stern. Please consult with your boat manufacturer to determine the precise location of the center of gravity.

Boats that are improperly positioned on the lift can overload one cradle beam or even a single corner. Overloading the lift in this way may result in damage to the lift, catastrophic failure of the lift and / or damage to the boat. Failures of the lift due to improper boat positioning are not covered by the warranty.

## Travel Specifications



LIFT CAPACITY lbs.	LIFT TRAVEL ft.	UPPER POSITION WITH FULL WINDER ft.	STANDARD CABLE LENGTH ft.
7,000	22	2	25
10,000	11	6	38
13,000	11	6	38
16,000	11	6	38
20,000	10	6	60
24,000	10	6	60

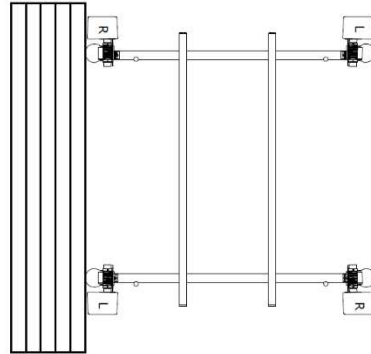
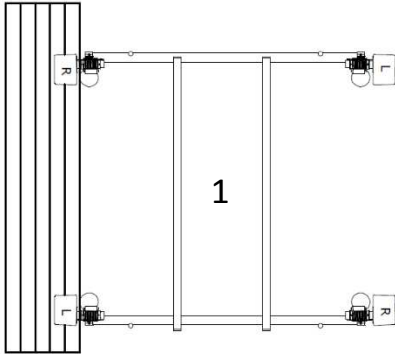
The **Upper Position** is the distance between the bottom of the winder and the cradle beam with a full winder and the remaining cable routed through all pulleys and the wedge lock. This distance can easily be lessened by pulling more cable through the wedge lock. Note, do not make this distance less than two feet with your cable adjustments.

The lift **Travel** is determined by the size of the winder and represents the length of cable in a full wrapped winder. The relative vertical position of this fixed travel can be adjusted by changing the length of the cables. Larger custom winders can be ordered when increased Travel is required.

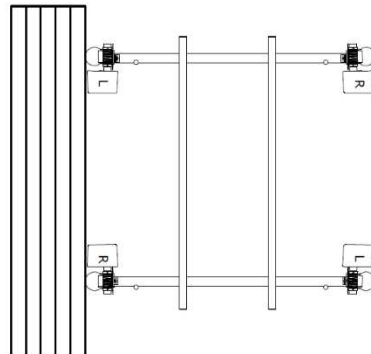
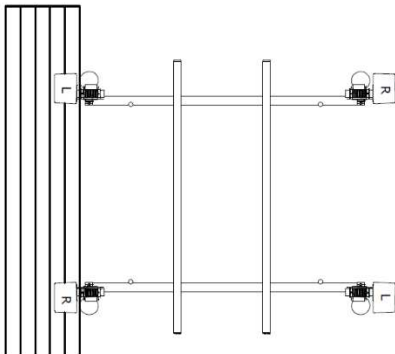
When determining the Travel requirements for your lift, you need to consider the height of the piles, mean high tide, mean low tide and the draft of the boat. At high tide, the upper position needs to be such that the cradles are out of the water. At low tide, the Travel needs to be large enough that the cradles can lower below the boat's draft allowing the boat to float off the lift. To get the keel of the boat to align with the deck height, the bottom of the winder must be at least 2 feet above the deck.

## Orientation of the Four Powerheads

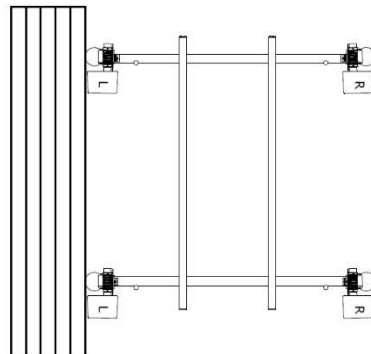
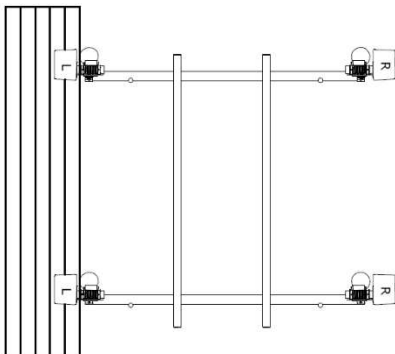
The four powerheads can be mounted in numerous orientations to accommodate your needs. Generally, the winders are mounted in parallel with either the cradles or bunks.



When the winders are mounted in parallel with the cradle beams, the powerhead covers can intrude upon your dock space.

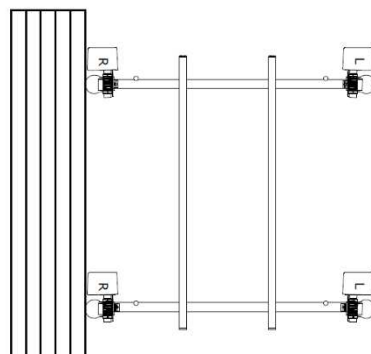
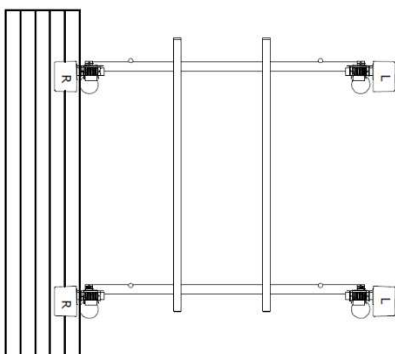


When the winders are mounted in parallel with the bunks, the powerhead covers can intrude upon the slip space.



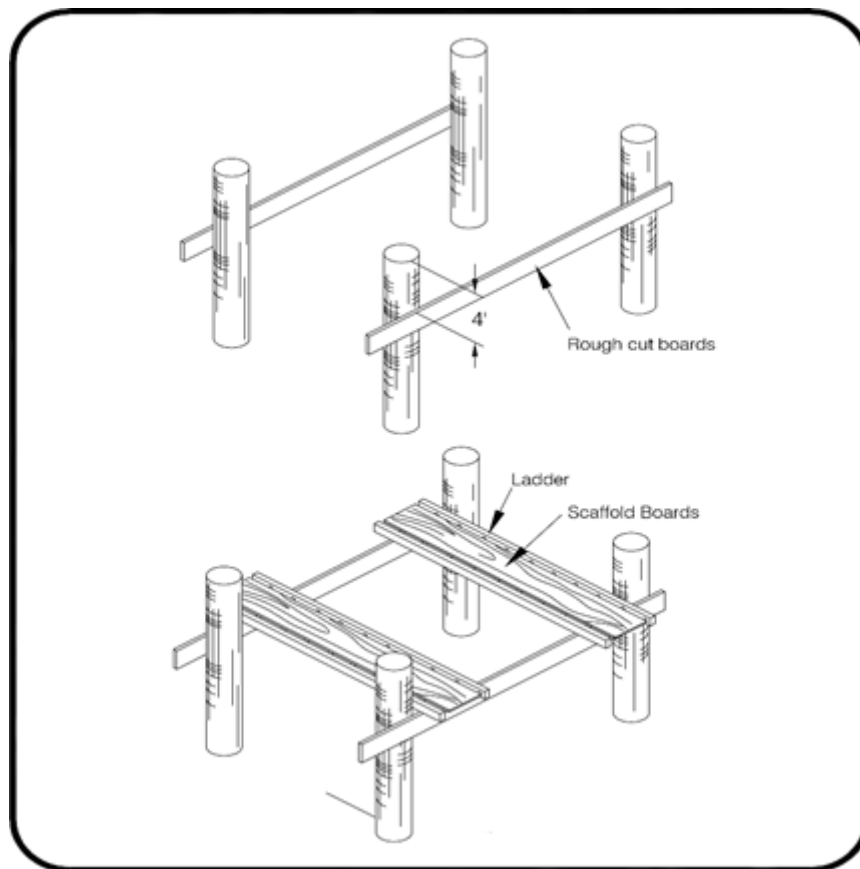
**Note:** Many of the configurations shown here require changes to the cradle beam length and / or bunk length from those listed in the Beamless Specification sheet.

When the winders are mounted in parallel with the bunks, the cradle beam length must be shortened and roller wheels are placed at the ends of the cradle beam to prevent them from catching on the pilings. In configuration #1, either the pilings must be moved closer together or the bunks must be lengthened.



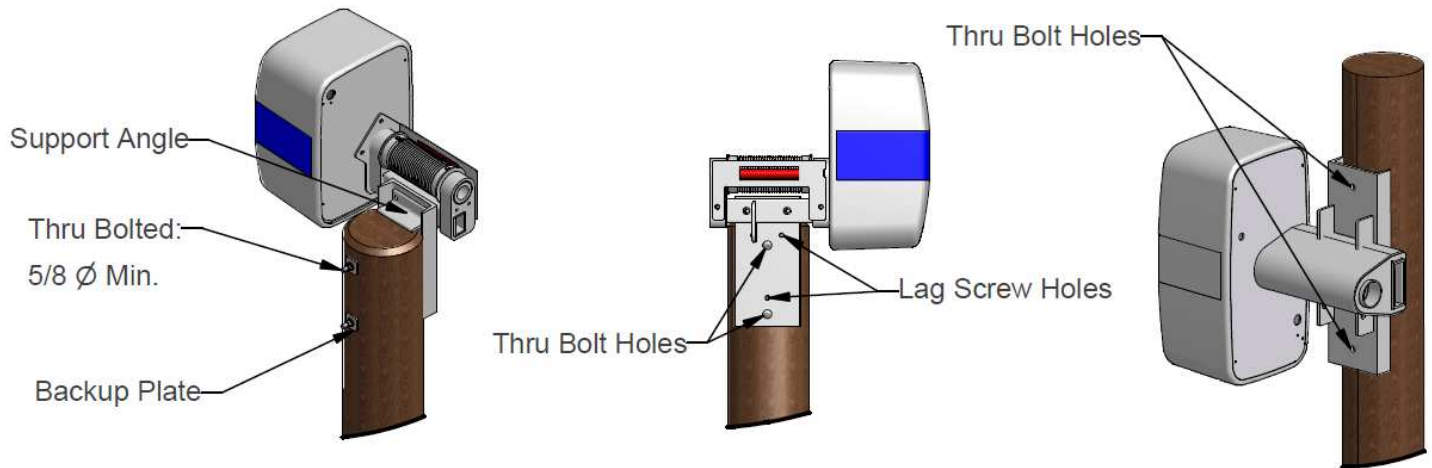


## Preparing Piles for Installation



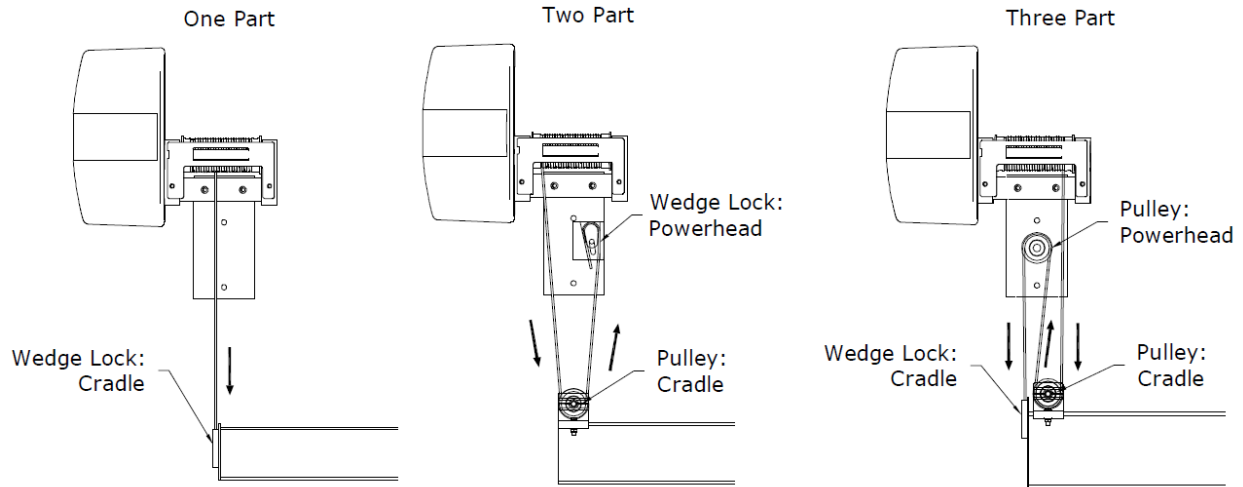
- To scaffold the pilings, nail a 2"x8"x16' board across 2 piles, approximately four feet below the top of the piles. Repeat for remaining two piles.
- Place the two 18' sections of extension ladder across the boards with (2) 1"x6"x16' scaffold boards on top of each ladder section as shown above.
- Measure the desired height of the pilings above the surface of the water and mark all (4) pilings at the same height. Note: mark all (4) pilings at desired height and confirm the shortest piling is at or above this height before cutting.
- Cut all pilings to the measured mark.
- Level all piling tops to assure solid seating of the powerheads.

## Mounting Powerheads to the Piling



- The universal powerhead mounting channels are pre-assembled on all our lifts. Beamless lifts with capacities of 7,000 – 16,000 lbs. have two thru bolt holes located below the winder, whereas the mounting channel for the 20,000 and 24,000 lb lifts has one thru bolt hole below the winder and another above the winder.
- The powerhead mounting channel comes with a support angle bolted on. You may rest this support angle on top of the pile to make installation easier (As shown in figure on left). If you intend to mount the powerhead in the middle of the pile, you may simply remove the support angle (As shown in figure on the right).
- It may be necessary to notch, flatten or groove the pile to allow for a snug fit of the powerhead mounting channel. An angle grinder can easily accomplish this. Make sure to use pile wrap between the pile and powerhead mounting channel.
- The powerhead mounting channel also has lag screw holes that may be used to temporarily hold the powerhead during installation.
- With the powerhead mounting channel flush to the pile, mark the location for the thru bolts. Drill two pilot holes at each pile that correspond to the holes in the mounting plate.
- Secure with the 5/8" or larger stainless steel thru bolts and locking hardware. Make sure to use a backup plate to prevent the pile from splitting when the hardware is tightened. Tighten all hardware on universal piling mount.

# Cable Installation



## 1 PART SYSTEM

- Feed loose end of cable from winder down the center of the wedge lock.
- Loop around wedge (inside lock) and return up through lock.
- Leave about 12" of free cable tail

## 2 PART SYSTEM

- Thread cable through pulley on cradle and return to powerhead.
- Feed cable up and through the lock, loop around the wedge and pull cable down through the lock.
- Leave about 12" of free cable tail.

## 3 PART SYSTEM

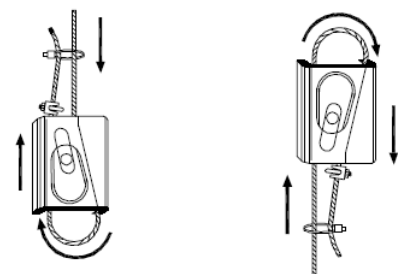
- Thread cable through pulley at cradle beam.
- Draw cable up and around pulley in the powerhead.
- Thread cable down to wedge lock on end of the cradle beam.
- Feed cable down the center of the lock, loop around the wedge and return up through the lock.
- Leave about 12" of free cable tail.

NOTE: Do not let cables overlay each other.

## ADJUST and LEVEL with WEDGELOCKS

- Level cradle beams by adjusting cable length using wedge lock.
- Adjustments are made by loosening wedge and pushing the cable through.
- Fasten clamp to cable tail. **DO NOT** clamp tail and cable together.
- Wire tie the free cable tail to load cable. Trim excess cable leaving a minimum 6" of free cable.

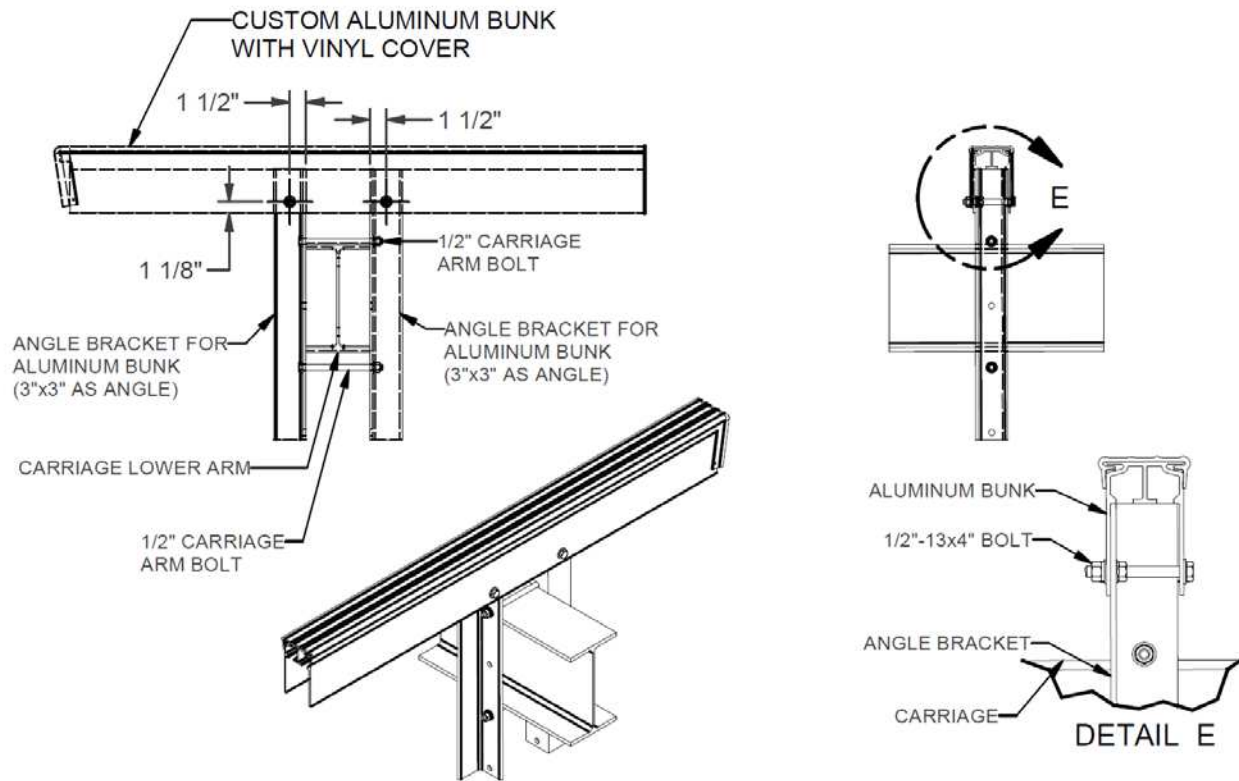
WEDGE-LOCK  
CABLE FASTENING SYSTEM



One & Three  
Part Systems

Two Part  
System

## Bunk Board and Guide Post Installation

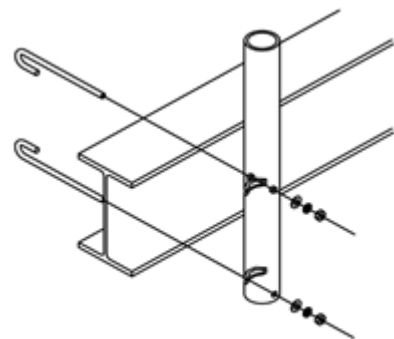


### ALUMINUM BUNKS

- The bunk angle brackets are pre-installed on the cradle beams.
- To attach aluminum bunks, first slide them over the top of the brackets.
- Refer to drawing above for location of holes and drill holes through bunks to match existing holes in the angle brackets.
- Attach with ½"-13 x 4" bolts with hex nut inside and flanged nut on the outside

### GUIDE POST ASSEMBLY

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



Guide Post Assembly

## Boat Lift 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**

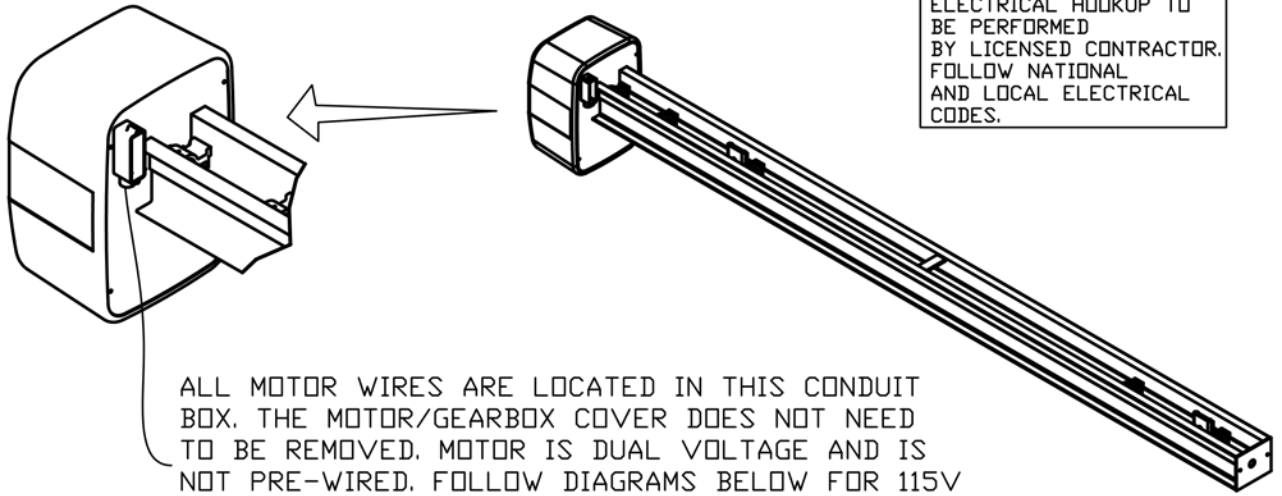
# and Motor H.P.	Amps to run		Breaker Size		50 Feet		100 feet		200 feet		300 feet		400 feet	
	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V
(4) 3/4 H.P.	44	22	55 A	30 A	#4	#10	#3	#8	#1	#6	#0	#4	#000	#3
(4) 1 H.P.	----	28	----	35 A	----	#8	----	#8	----	#4	----	#4	----	#3
(4) 1 1/2 H.P.	----	36	----	45 A	----	#6	----	#6	----	#4	----	#3	----	#2

### 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.

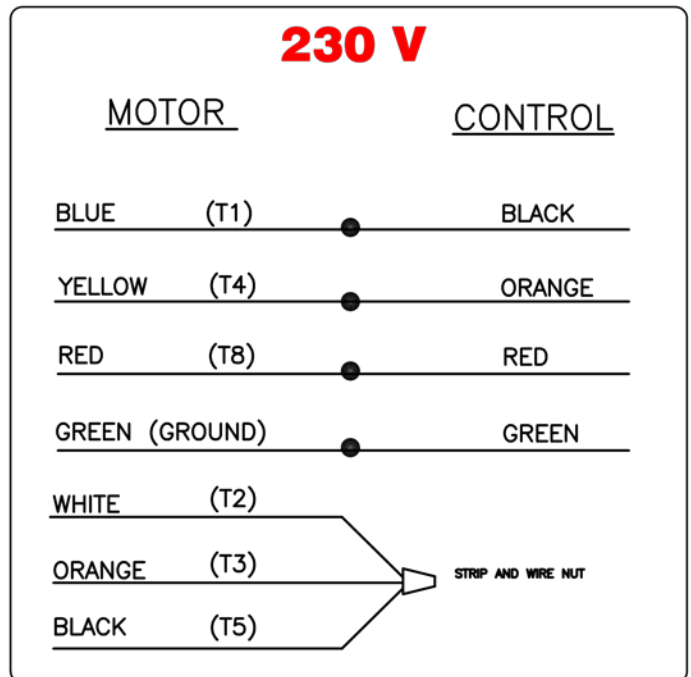
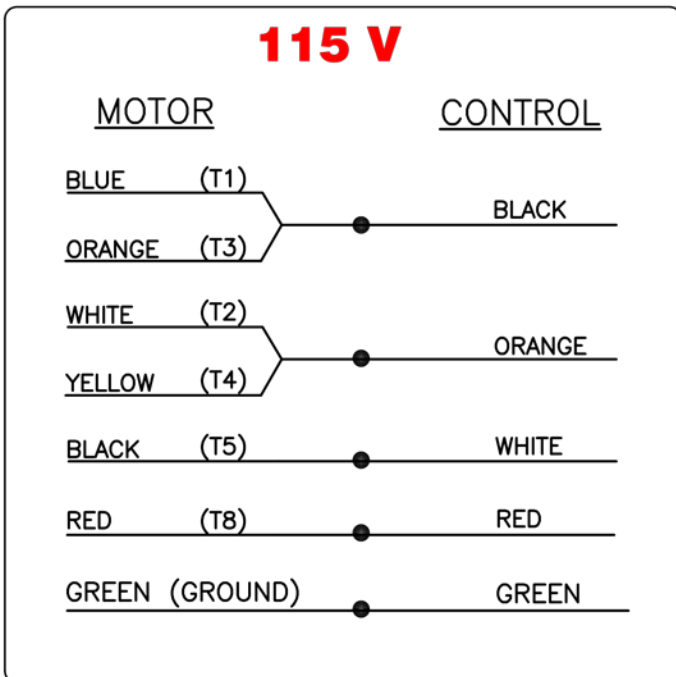
# ELECTRICAL: MOTOR WIRING

BONITA, GEM, AND TIGERSHARK CONTROLS



ALL MOTOR WIRES ARE LOCATED IN THIS CONDUIT BOX. THE MOTOR/GEARBOX COVER DOES NOT NEED TO BE REMOVED. MOTOR IS DUAL VOLTAGE AND IS NOT PRE-WIRED. FOLLOW DIAGRAMS BELOW FOR 115V OR 230V HOOKUP. HIGH SPEED OPTION LIFTS ARE PRE-WIRED FOR 230V.

\* CONSULT MANUAL WITH THE SUPPLIED CONTROL BOX FOR SPECIFIC WIRING INSTRUCTIONS



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

## Imm Quality Boat Lifts Contact Information

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