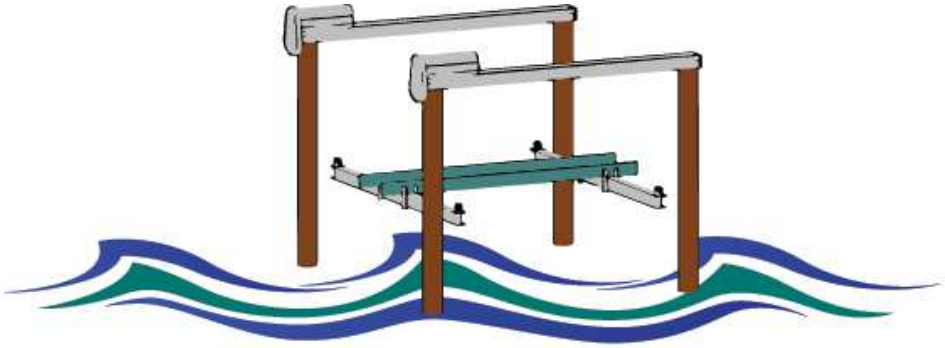


IMM QUALITY

BOAT LIFTS

Installation Manual

For

Trident

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.

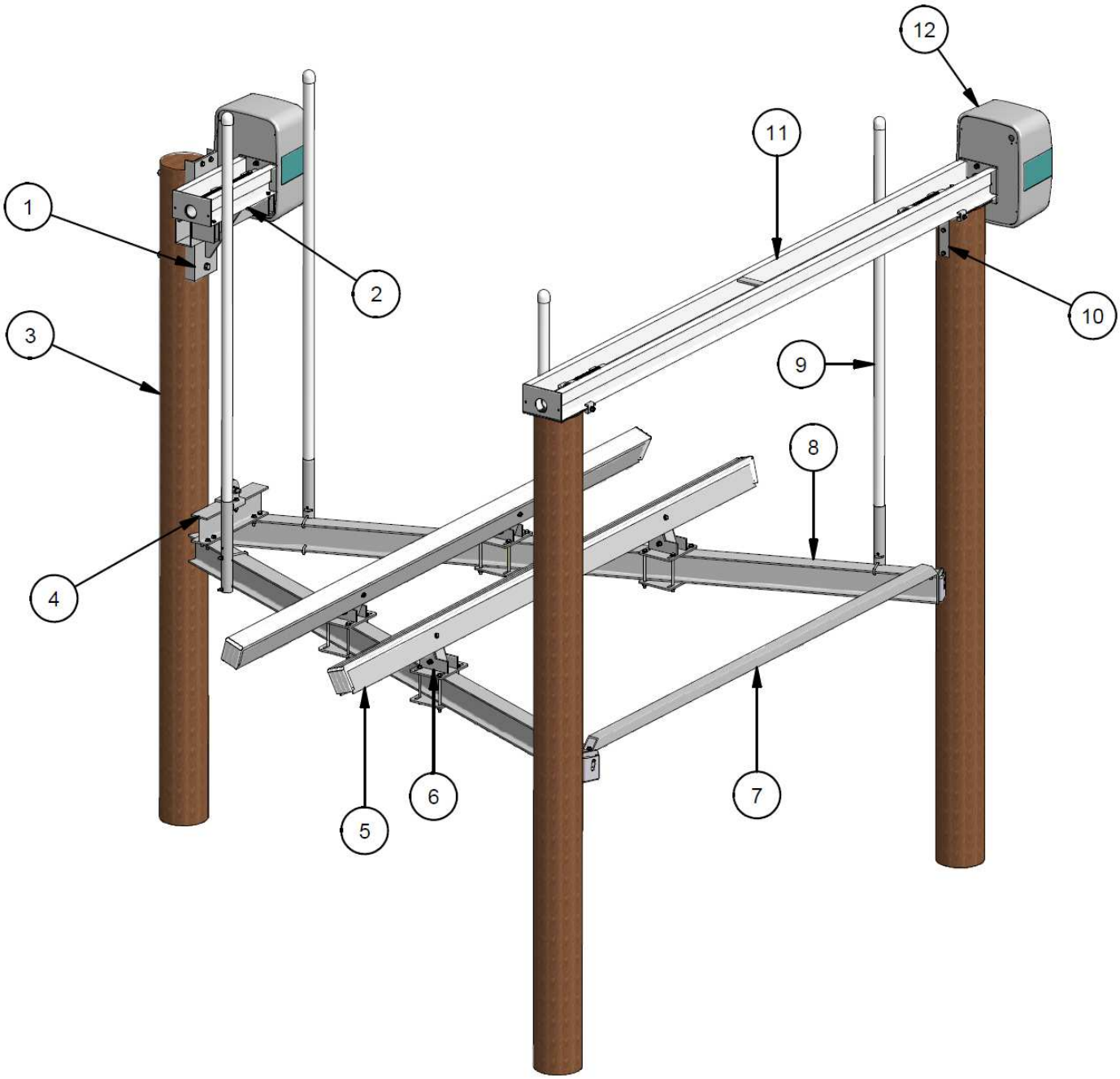
6. Be careful not to exceed the rated capacity of the lift. To determine the total weight of your equipment to be lifted, study the boat manufacturer's literature to determine its weight. Be sure to add enough extra weight to compensate for your added accessories, including water and fuel. Gasoline weighs 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 ½" Open End Box Wrenches (2 each)
- 7/16" and ¾" Open End Box Wrenches
- Phillips screwdriver
- Flat head screwdriver
- ½" Drive Ratchet
- 9/16", ½" and ¾" Deep Well Sockets
- PVC Pipe Cutter
- Electricians Pliers
- Claw Hammer
- Cable Cutter
- 3/8" Battery Operated Drill
- 3/16" and ½" 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. Pile Mount Channel
2. Cable Beam, Short
3. Pile
4. Cradle Beam Connector
5. Bunk & Cover Assembly
6. Slotted Bunk Brackets
7. Cable Spreader Tube
8. Aluminum Cradle Beam
9. Guide Post Assembly
10. Pile Mount Strap
11. Cable Beam, Long
12. Powerhead

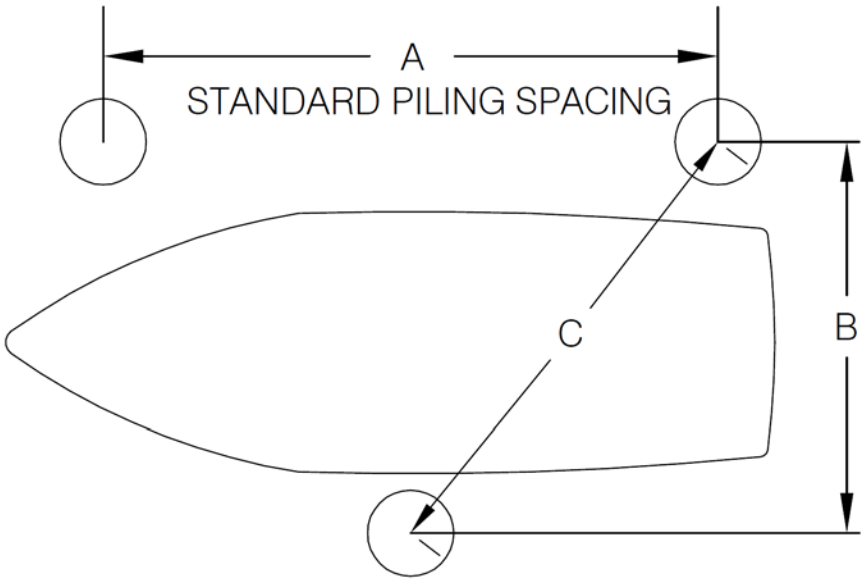
Before you begin…

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 Trident's short cable beam puts side loads on the pile. It is the contractor's / installer's responsibility to determine and construct suitable support structure and bracing for our Trident lifts. We have included charts of typical pile spacing for your convenience.

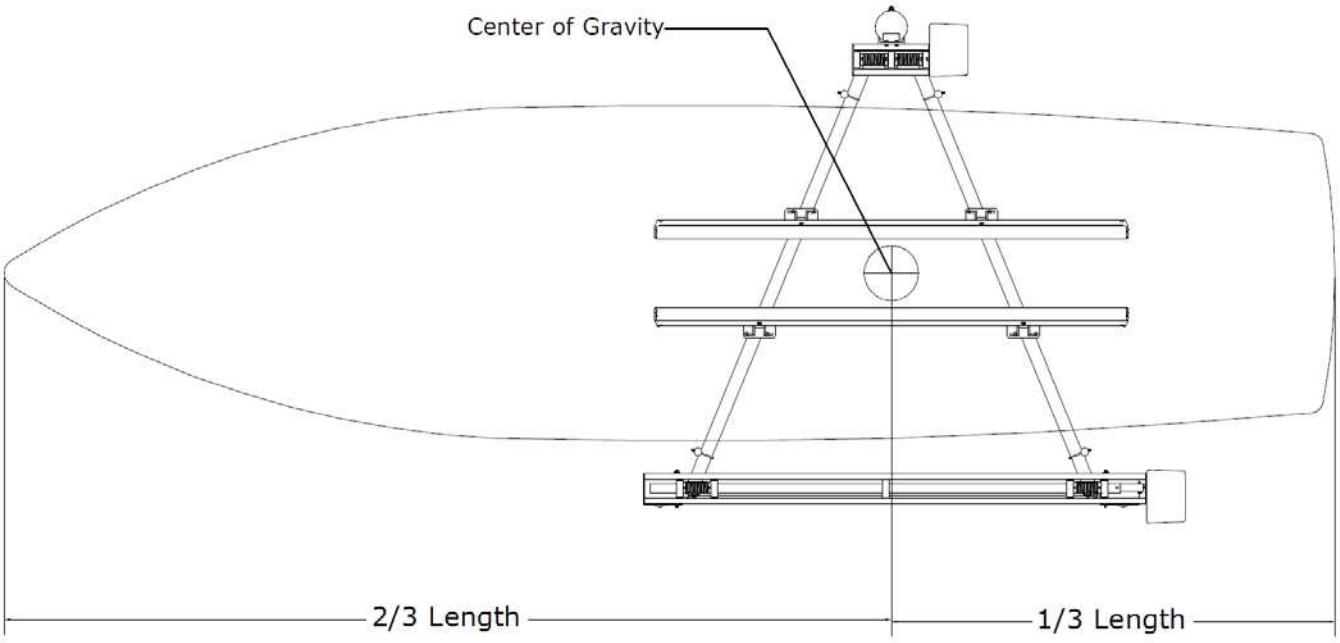
Trident 3 Pile Lifts

ALL SPACING TO CENTER OF PILING

LIFT CAPACITY	A	B	C	RECOMMENDED Min. PILE SIZE
7,000 LB	144"	144"	161"	10" DIA.
10,000 LB	144"	150"	166"	10" DIA.



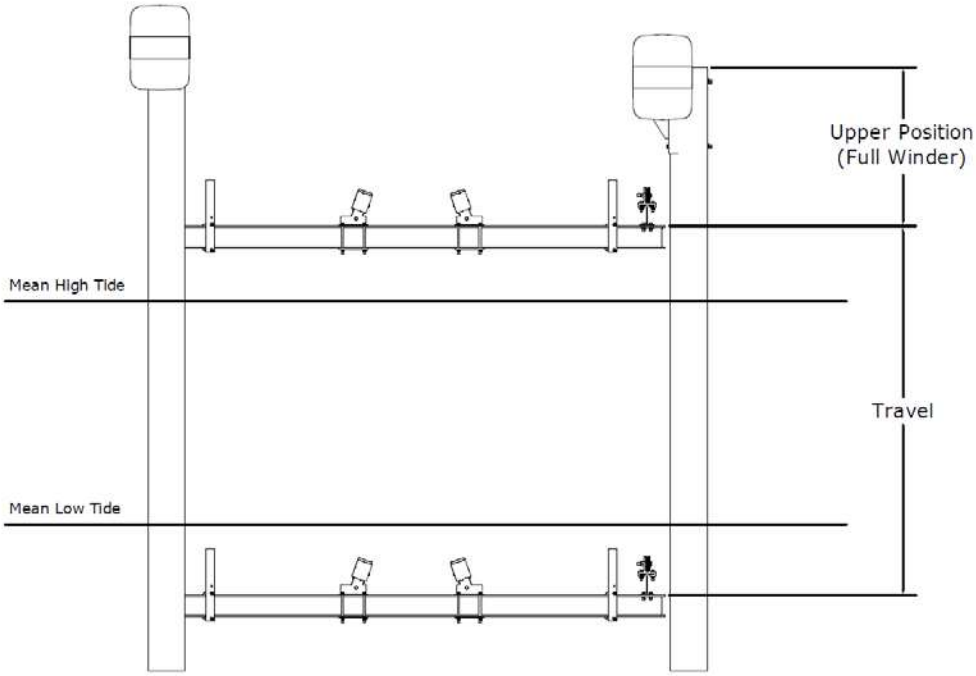
Boat Positioning



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



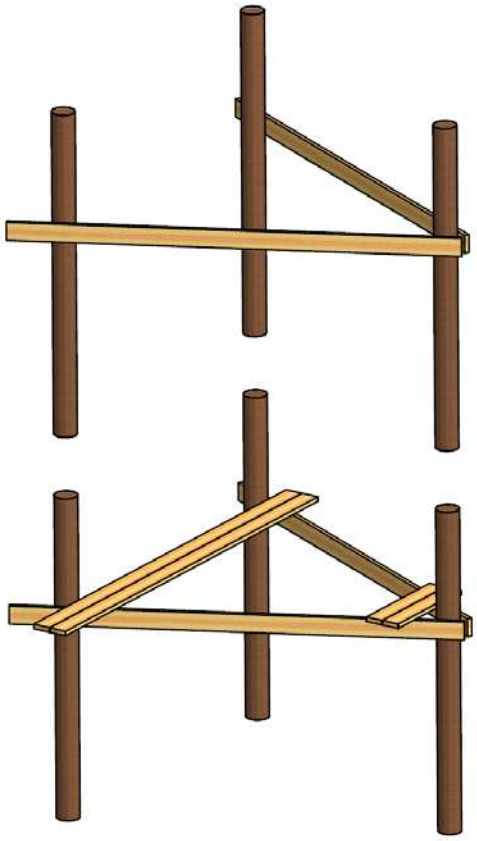
LIFT CAPACITY lbs.	LIFT TRAVEL ft.	UPPER POSITION WITH FULL WINDER ft.	STANDARD CABLE LENGTH ft.
7,000	12	2	18,36
10,000	12	2	32, 64

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.

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 with remaining pile (see figure 1).

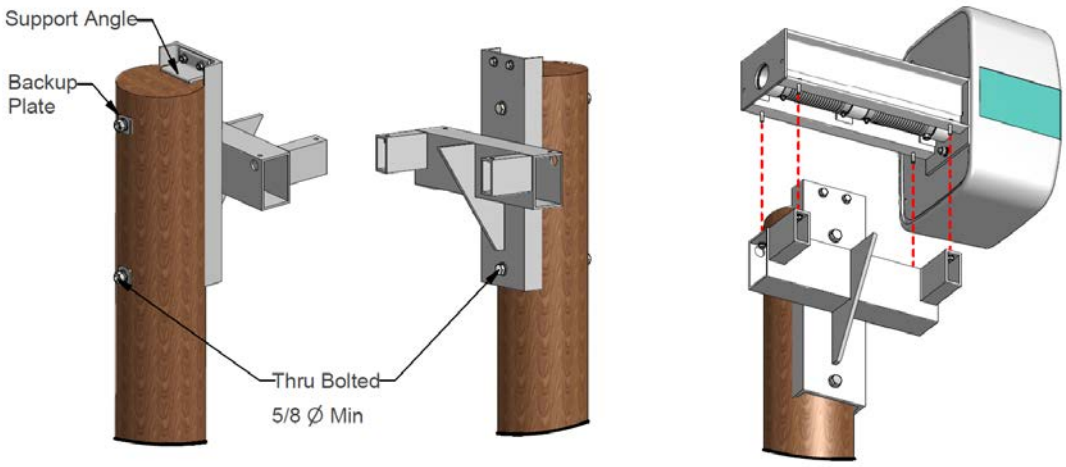
- Place an 18’ section of extension ladder across the boards at the wide (open) side with (2) 1”x6”x16’ scaffold boards on top of the ladder section as shown above. Scaffold boards may be nailed to the cross members at the closed (short) end.

- Measure the desired height of the pilings above the surface of the water and mark all (3) pilings at the same height. Note: if all (3) pilings are cut to the same height, the height of the short cable beam will be lower than the long cable beam due to their different mounting methods.

- Cut all pilings to the measured mark.

- Level all piling tops to assure solid seating of the cable beams.

Mounting the Short Cable Beam to the Pile



- The pile mount channel comes separate from the fully assembled short cable beam.

- The pile mount 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.

- It may be necessary to notch, flatten or groove the pile to allow for a snug fit of the pile mount channel. An angle grinder can easily accomplish this. Make sure to use pile wrap between the pile and pile mount channel.

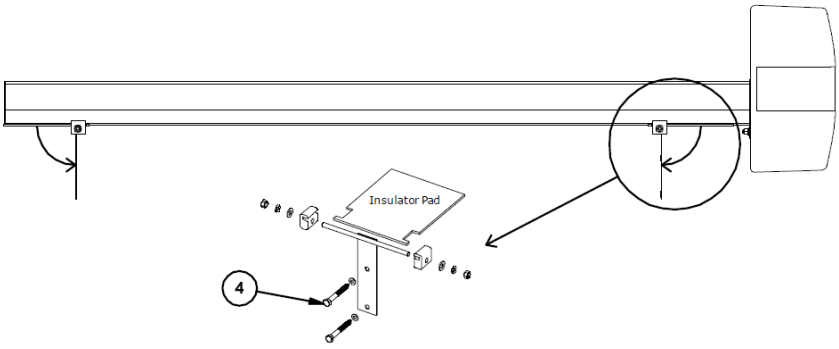
- The pile mount channel should be oriented towards the slip side. With the pile mount channel flush to the pile, mark the location for the thru bolts. Drill two pilot holes that correspond to the holes in the mounting channel.

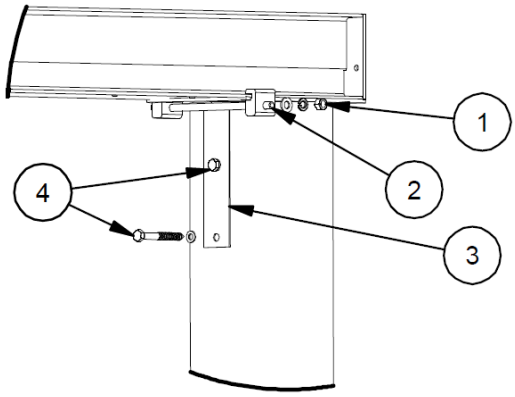
- Secure the pile mount channel with the 5/8” or larger stainless steel thru bolts and locking hardware (contractor supplied). Make sure to use a backup plate to prevent the pile from splitting when the hardware is tightened.

- The cable beams are directional. Make sure to install the short cable beam as shown in the figure above (if facing the pile mount channel, the powerhead will be towards the right).

- Bolt the short cable beam to the pile mount channel using the provided stainless steel bolts and hardware. Make sure all hardware is tight.

Mounting the Long Cable Beam





- The universal piling mounts are pre-assembled on all our lifts.

- The Trident lift powerheads are directional. Please orient the long cable beam so that its powerhead is on the same side as the powerhead on the short cable beam (as shown in the figure on page 4).

- The pile mount straps come folded up, parallel with the cable beam for shipping. Loosen the nuts (1) at the end of the threaded shaft (2), then swing the pile mount straps (3) down so they are perpendicular to the cable beam.

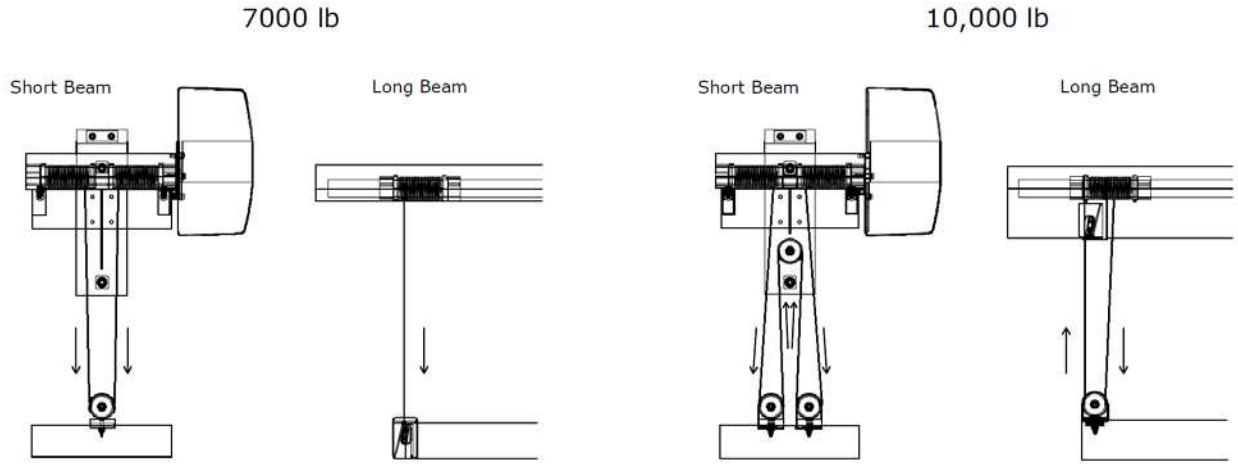
- Position the beam on top of the pilings, making sure the insulator pad is between the cable beam and pile. Aluminum reacts with the chemicals in pressure treated piles and the insulator pad is essential to protecting the cable beam.

- Remove the lag screws (4) and hardware that comes attached to each pile mount strap.

- With the pile mount strap (3) flush to the pile, mark the location for the lag screws. Drill two 3/16” x 4-1/2” deep pilot holes at each pile that correspond to the holes on the pile mount strap.

- Secure with the 3/8” stainless steel lag screws and hardware. Tighten all the hardware on the universal piling mount.

Cable Installation



7,000 lb Trident

- On the short cable beam, the cable is one continuous loop. Loosen the pulley hardware and remove the pulley. Place the cable in the groove of the pulley, then re-install the pulley and tighten the hardware.

- On the long cable beam, thread the cable down to the wedge lock on the end of the cradle beam. Feed the cable down the center of the lock, loop around the wedge and return up through the lock. Leave about 12" of free cable tail. Repeat for the second winder.

10,000 lb Trident

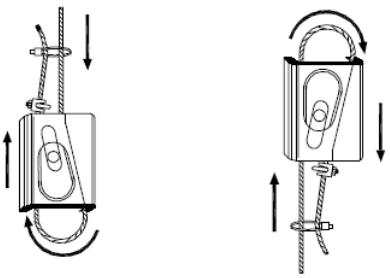
- On the short cable beam, the cable is one continuous loop. Loosen the pulley hardware and remove all three pulleys. Thread the cable and make the loops as shown in figure above. Place the cable in the groove of the pulleys, then re-install the pulleys and tighten the hardware.

- On the long cable beam, thread the loose end of the cable down to the pulley on the end of the cradle beam. Thread the cable through the pulley and then back up towards the cable beam.
- Feed the cable up to the wedge lock located inside the cable beam. Feed the cable up the center of the lock, loop around the wedge and return down through the lock. Leave about 12" of free cable tail. Repeat for the second winder.

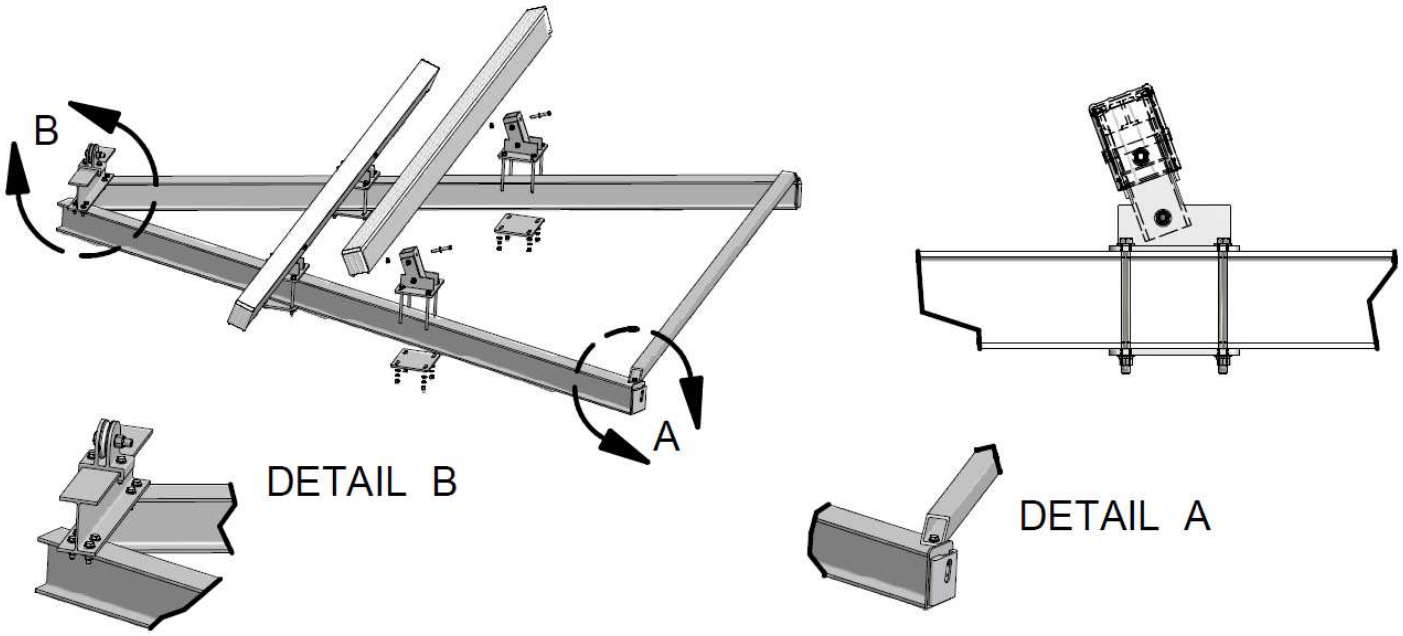
NOTE: Do not let cables overlay each other.

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.



Cradle and Aluminum Bunk Assembly



- The cradle beam connector comes loosely attached to a single cradle beam. Align the pre-drilled holes in the second cradle beam with the available holes on the cradle beam connector. Loosely bolt together the cradle beam and connector with ½" x 1-1/2" bolts and secure with flat washers, lock washers and nuts (as shown in detail B).

- Place the cradle spreader tube on top of the other ends of the cradle beams. Drill ½" diameter holes through the spreader tube and cradle beam flange. Attach the spreader tube to the cradle beams with ½" x 1-1/2" bolts and secure with flat washers, lock washers and nuts (as shown in detail A).

- Place the bunk brackets on top of the cradle beams with the backing plates below the cradle beams, two sets per beam. The slotted holes in the brackets and backing plates allow the assembly to easily slide along the beams. Loosely connect the bracket to the backing plates with ½" x 8-1/2" (7K lift) or ½" x 10-1/2" (10K lift) bolts so that the bolts straddle the beams.

- Place the aluminum bunks over the brackets and position them so that they are parallel, have equal overhangs and are the proper distance apart. Drill through the bunks so that the holes align with the predrilled holes in the brackets. Attach with ½" x 4" bolts, flat washers and whiz nuts.

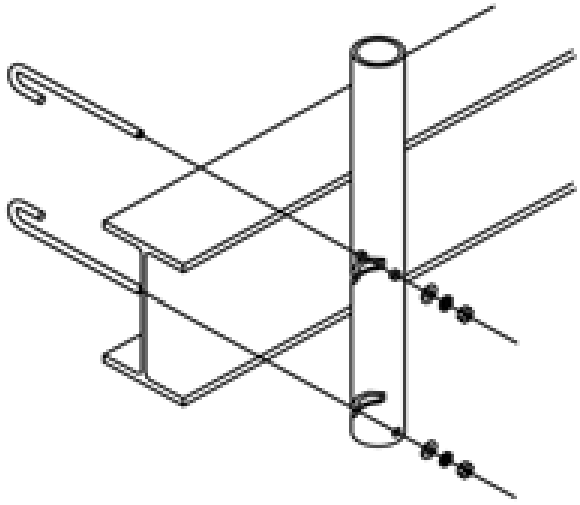
- When the cradles and bunks are positioned properly, tighten all hardware.

GUIDE POST ASSEMBLY

- The guide post brackets come pre-installed on the cradle beams. The brackets may be repositioned by loosening the nuts on the clamps and sliding along the cradle 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

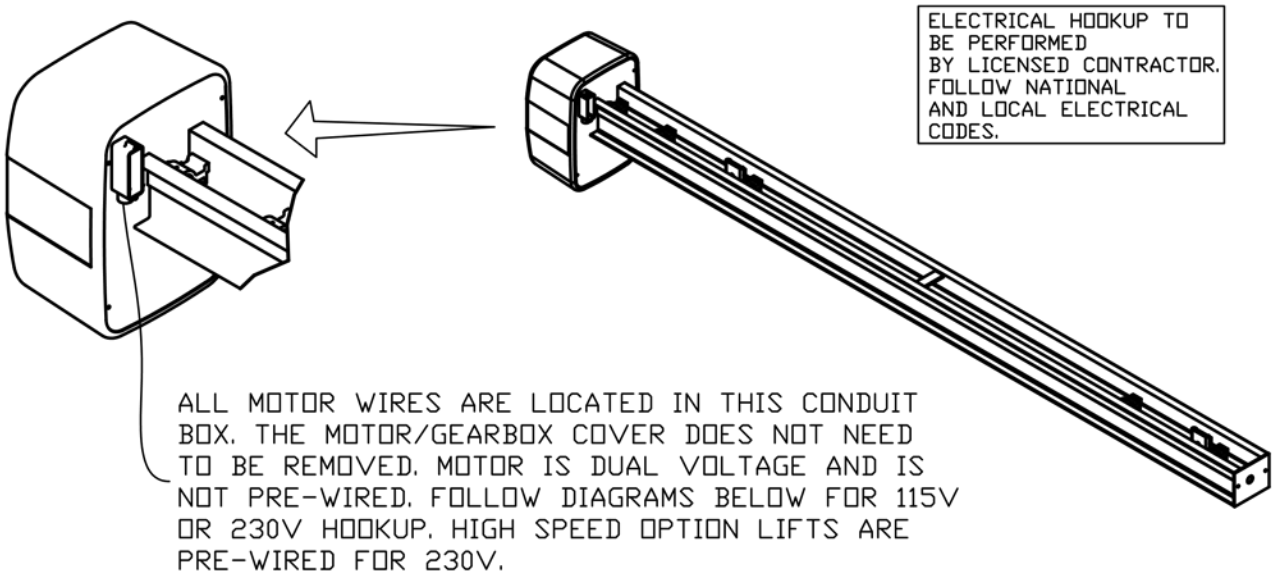
# and Motor H.P.	Amps to run		Breaker Size		50 Feet		100 feet		200 feet		300 feet		400 feet	
	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V
(2) 3/4 H.P.	23	12	30 A	15 A	#8	#14	#6	#12	#3	#8	#2	#6	#1	#6

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.

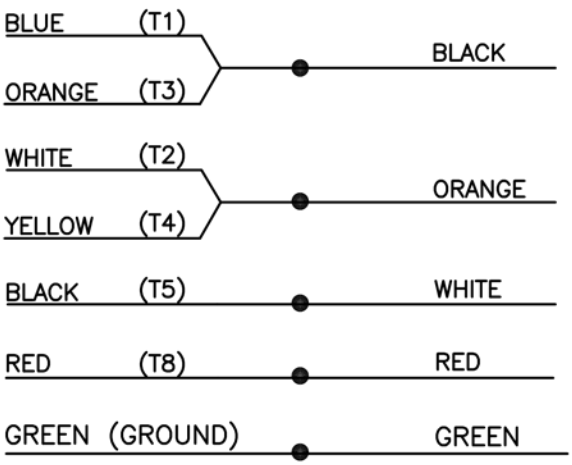
ELECTRICAL: MOTOR WIRING

BONITA, GEM, AND TIGERSHARK CONTROLS

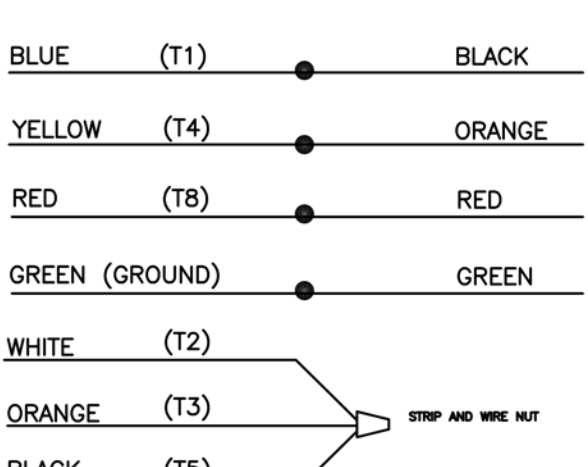


* CONSULT MANUAL WITH THE SUPPLIED CONTROL BOX FOR SPECIFIC WIRING INSTRUCTIONS

115 V



230 V



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

Imm Quality Boat Lifts Contact Information

Phone: (239) 432-9110

Toll Free: 800-545-5603

Fax: (239) 432-0019

Website: iqboatlifts.com

Sales: sales@iqboatlifts.com

General Inquiries: info@iqboatlifts.com