

# IMM QUALITY

## — BOAT LIFTS —

Installation Manual

For

Alumavator / Platinum

8 Post 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
- Industrial Extension Ladder in four 18' Sections
- 2"x8"x16' Scaffold Boards (2) and 1"x6"x16' Scaffold Boards (4)
- 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 boat. Local and National building code and common practice varies from area to area. Consult with your local marine contractor for appropriate guidelines.

**Please Note.** Pile spacing is dictated by the make and model of the boat in combination with the dock layout and site conditions. Please work with our sales and engineering teams to determine the appropriate pile spacing for your home. We have included charts of typical pile spacing for your convenience.

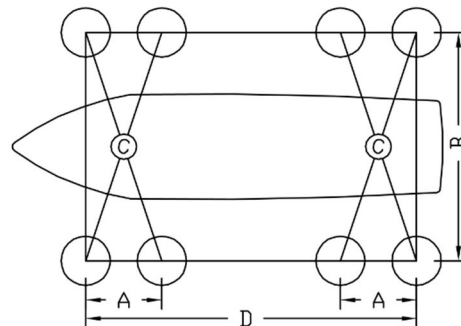
### 8 Pile Lifts

ALL SPACING TO CENTER OF PILING

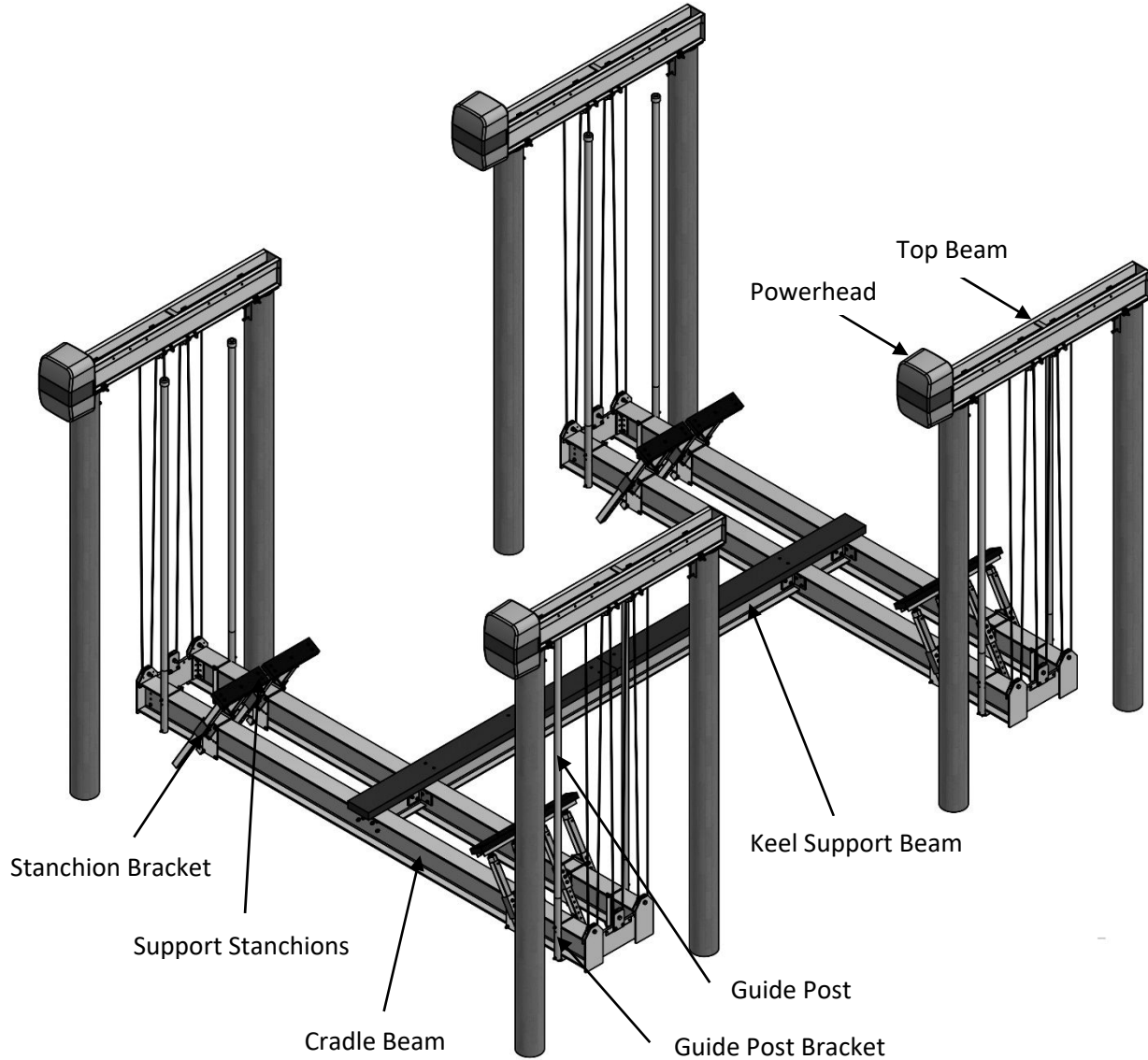
Lift Capacity	A	B	C	D	Rec. min. Pile size
32,000 lb.	84"	216"	231.75"	*	10" dia.
40,000 lb.	84"	216"	231.75"	*	10" dia.
54,000 lb.	84"	240"	254.25"	*	10" dia.

Note: all Dimensions  $\pm 2"$

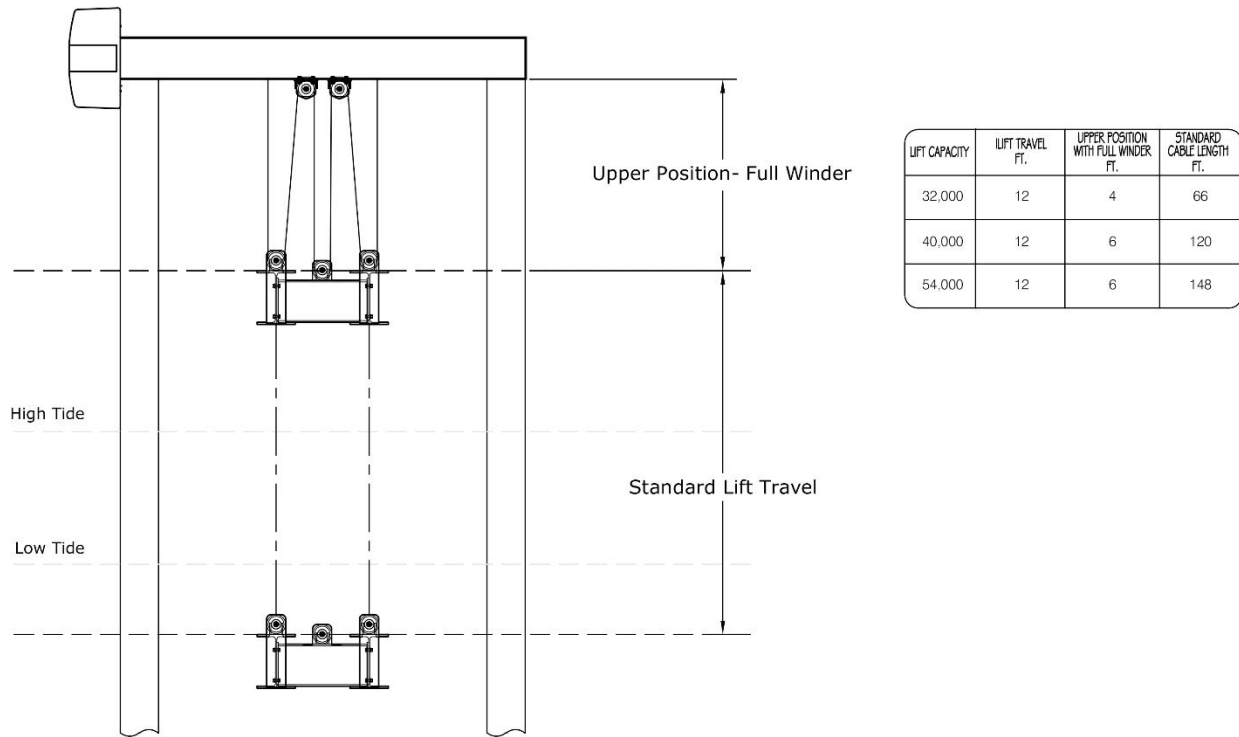
\*Standard spacing for dimension 'D' is 288".  
Dimension 'D' dependent on boat length.



## 8 Post Alumavator / Platinum Vertical Lift



## Travel Specifications

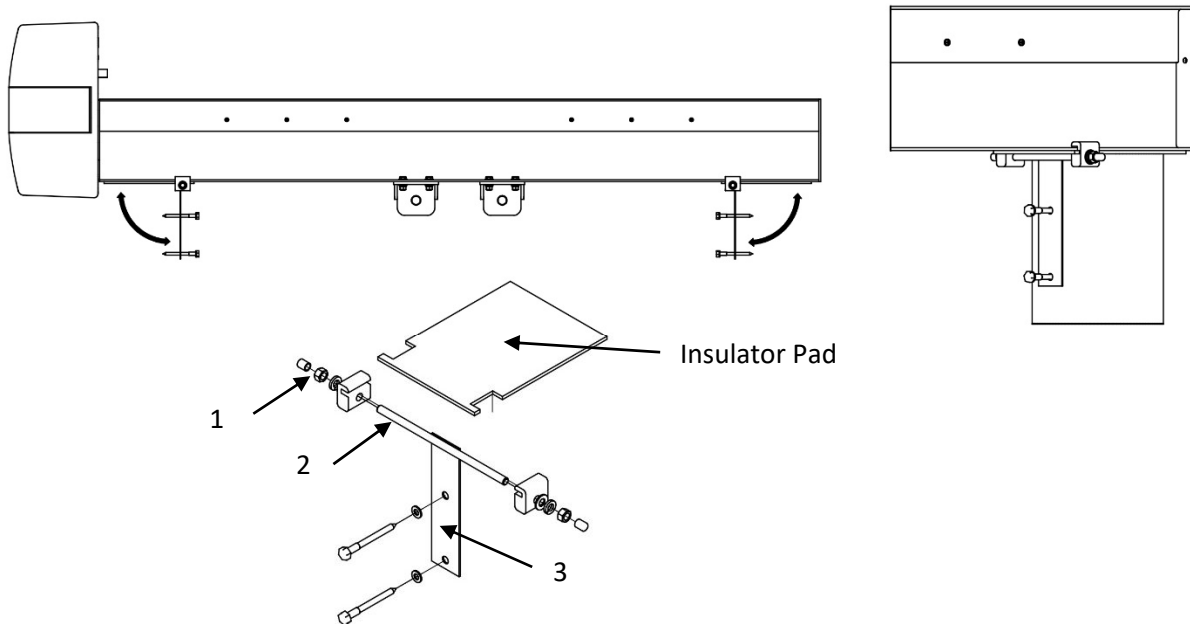


The **Upper Position** is the distance between the top beam and cradle beam with a full winder and the remaining cable routed through all pulleys. This distance can be lessened by shortening the cable length. Note, do not make this distance less than three feet with your cable adjustments.

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 boats draft allowing the boat to float off the lift.

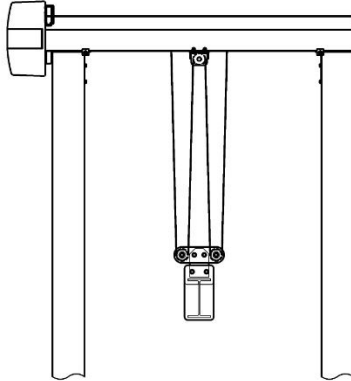
## Mounting Top Beam to the Piling



- Position the beam on top of the pilings making sure the insulator pad is between the top beam and pile. Aluminum reacts with the chemicals in pressure treated piles and the insulator pad is essential to protecting the top beam.
- The universal piling mounts are pre-assembled on all our lifts.
- The pile mounting straps come folded up, parallel with the top beams for shipping. Loosen the nuts (1) at the end of the threaded shaft (2), then swing the pile mounting straps (3) down so they are perpendicular to the top beams.
- Remove the 3/8" x 4 1/2" lag screws and hardware that comes taped to each mounting strap.
- With the pile mounting straps (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 to correspond to the holes in the mounting strap.
- Secure with the 3/8" stainless steel lag screws and hardware. Tighten all hardware on universal piling mount.

## Cable Installation

Platinum/Vator 32,000



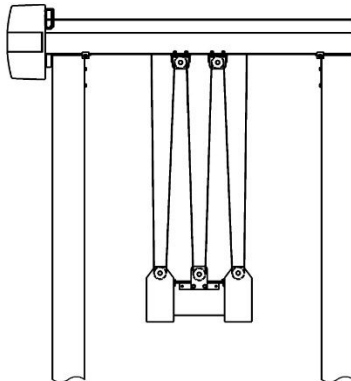
There are two winders in each top beam and the stainless-steel cable is one continuous loop. The cable comes pre-wound on the winders with the remaining cable zip tied in loop(s). While routing the cable during installation, be mindful of not creating any twists or kinks in the cable.

The pulleys are installed with  $\frac{3}{4}$ " bolts, washers and nylock nuts. You will need  $1\frac{1}{16}$ " and  $1\frac{1}{8}$ " wrenches to remove the pulleys from their brackets. While routing the cable, it is best to work in one direction (i.e. from left to right).

### 32,000 Lb. (Double 2 PART SYSTEM)

- Remove the left cradle pulley and pull a loop of cable into the bracket. Reinstall the pulley into the bracket with the cable positioned properly.
- Remove the upper pulley from its bracket and feed the cable into this bracket. Reinstall the pulley.
- Remove the right cradle pulley and pull a loop of cable into the bracket. Reinstall the pulley into the bracket.

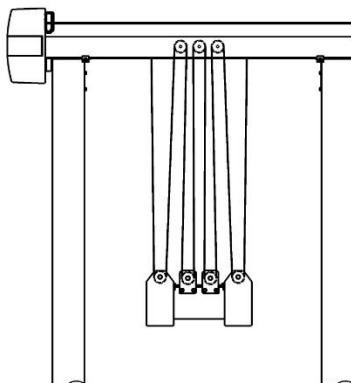
Platinum/Vator 40,000



### 40,000 Lb. (Double 3 PART SYSTEM)

- Working from the left to the right and one at a time, remove a pulley from its bracket, feed the cable into the bracket and reinstall the pulley.
- Repeat this process with the remaining four pulleys, until the cable is routed as shown in the figure to the left.

Platinum/Vator 54,000



### 54,000 Lb. (Double 4 PART SYSTEM)

- The cable was properly routed through the upper top beam pulleys at the factory. The remaining cable was put into four loops.
- Working from the left to the right and one at a time, remove a pulley from its bracket, feed the cable from the appropriate loop into the bracket and reinstall the pulley.
- Repeat this process with the remaining three pulleys, until the cable is routed as shown in the figure to the left

### ADJUST and LEVEL

- The lift comes with a GEM GR4 remote control box which has independent control of the four motors.
- Use these independent controls to level the cradles.



## Keel Support Beam Installation

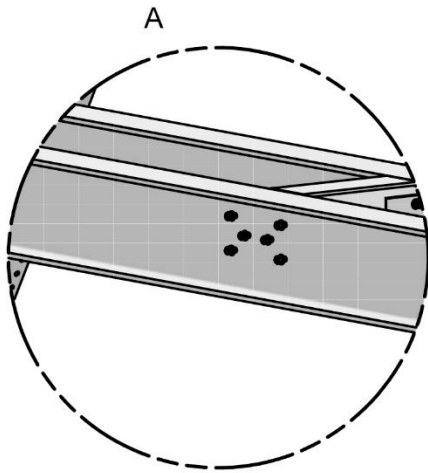


Figure A

- The cradle beams come with the hole pattern for the keel support beam bracket pre-drilled.
- The appropriate size bolts, nuts and washers have already been inserted into the holes.
- Remove the nuts and washers while leaving the bolts in place.

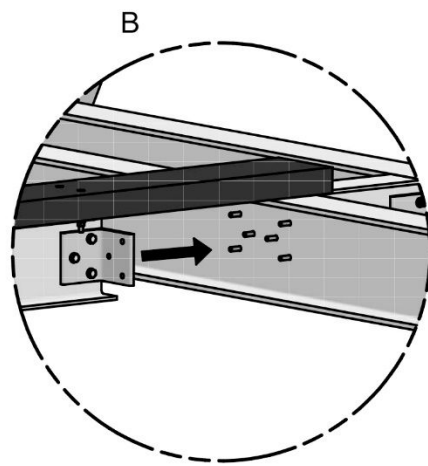


Figure B

- The keel support beam comes with mounting brackets installed.
- At each end of the keel support beam, there are two mounting brackets, one on each side of the I-Beam web.
- Align the bracket holes with the six bolts and slide the keel support beam into place.

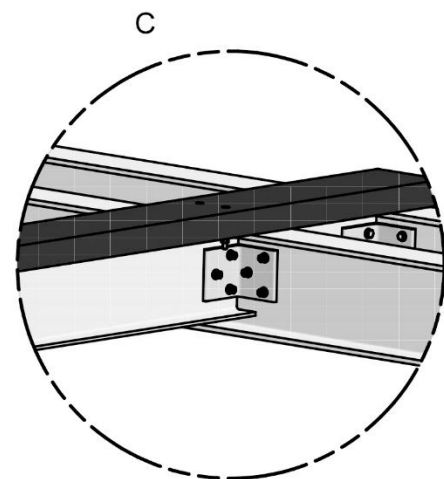
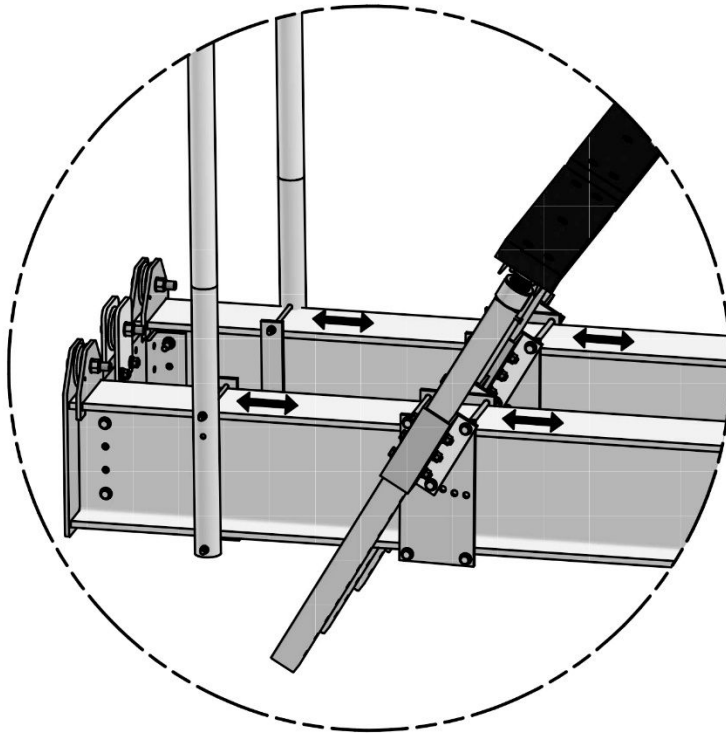


Figure C

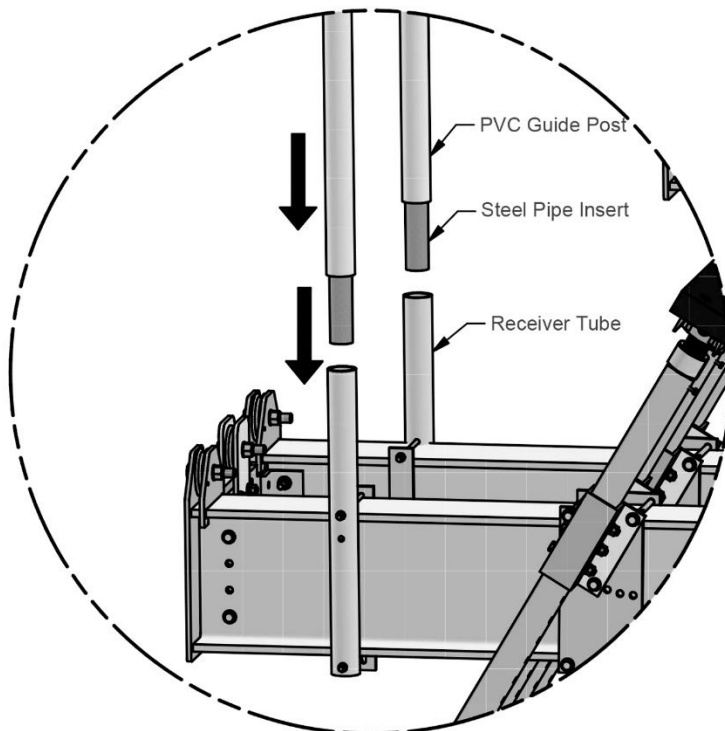
- Make sure that the six bolts from the cradle beam(s) are properly installed through the holes in the keel support beam brackets.
- Secure the keel support beam with the supplied washers and nuts.

Repeat these steps with the other cradle beam and the other side of the keel support beam.

## Guide Post and Stanchion Brackets

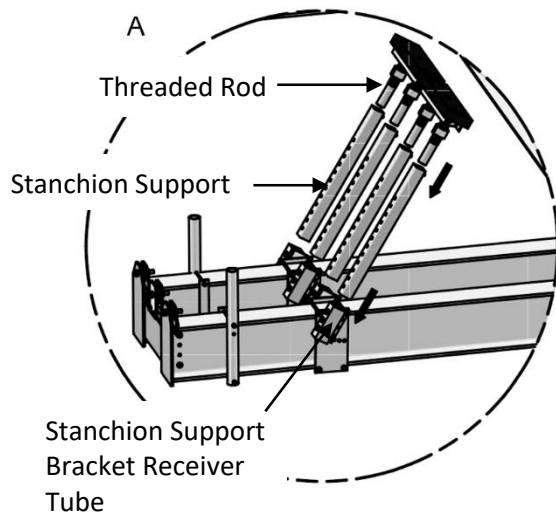


The guide post brackets (without the guide post inserts) come pre-installed on the cradle beams. Similarly, the stanchion brackets (without the stanchion supports) come pre-installed on the cradle beams. To adjust the lateral position of the guide posts or stanchions, you can loosen the bracket attachment bolts and slide the brackets along the cradle beams to the desired position.

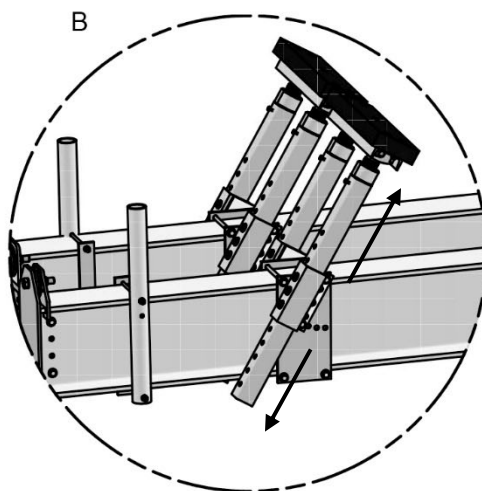


To install the guide posts, insert the steel pipe into the PVC guide post cover. When fully inserted, the steel pipe will extend past the PVC cover. Insert this end into the guide post bracket receiver tube. Final adjustment of the guide post position can be made when the boat is properly bunked.

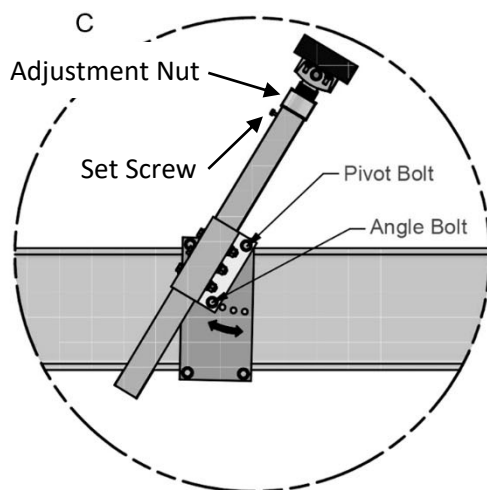
## Support Stanchion Installation



Insert the stanchion supports into the receiver tubes of the stanchion support brackets. The stanchion pads are attached to threaded rod. Insert the threaded rods into the stanchion supports.

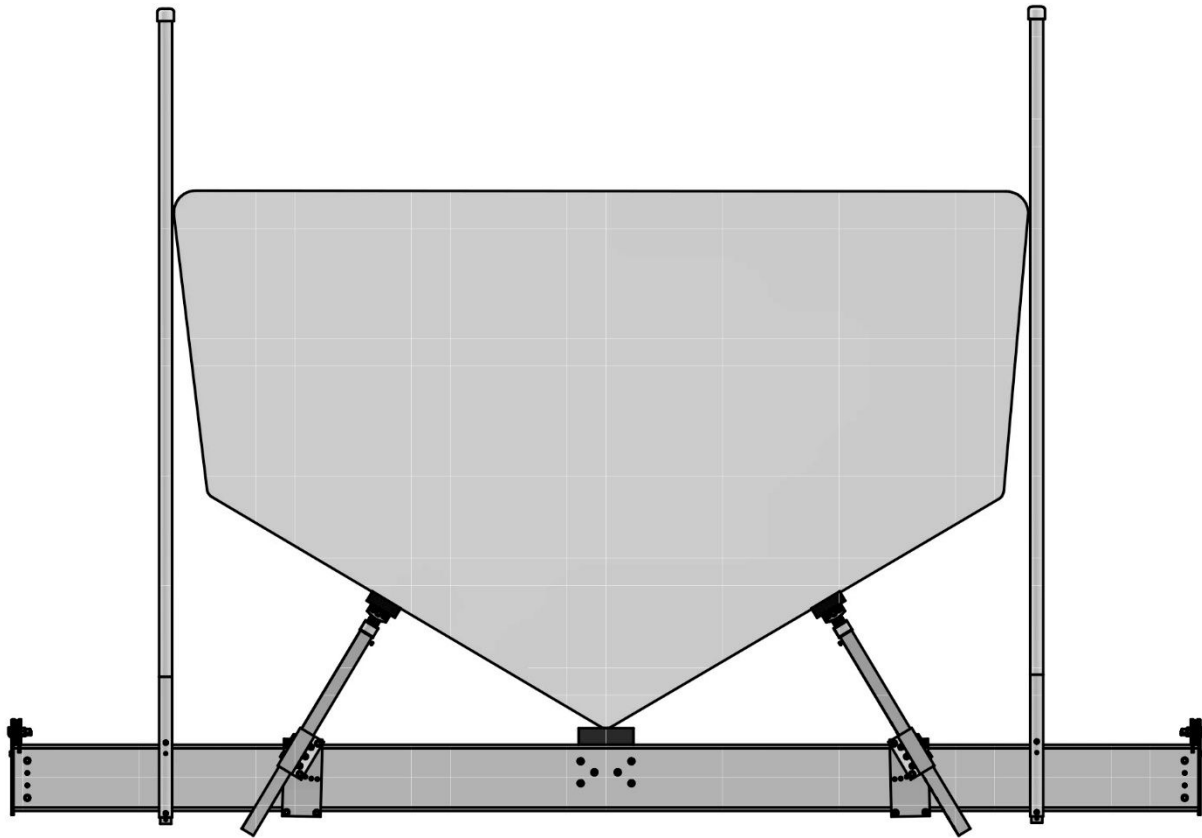


The stanchions supports have been machined with a series of holes. These holes are used to adjust the height of the stanchion pads. The receiver tube on the stanchion support bracket has three holes that will align with the holes in the stanchion support. When you have achieved the desired height for the stanchion support pads, insert three  $\frac{1}{2}$ " x 4" bolts through the holes and secure with flat washers, lock washers and nuts. The threaded rods have an adjustment nut. You may fine tune the height of the stanchion support pads by turning the adjustment nut (see Fig. C). Lock the adjustment nut in place by tightening the set screw.



The angle of the stanchion supports may also be adjusted. You may remove the angle bolt and change the angle of the stanchion support bracket receiver tube. Re-install the angle bolt through one of the machined holes when the receiver tube is at the desired angle.

## Proper Guide Post and Stanchion Adjustment



When properly adjusted, the keel beam support carries the full weight of the boat. The stanchions simply provide lateral stability and are not meant to lift the weight of the boat. The boat's center of gravity must be centered on the lift cradles. Typically, boats are heavier towards the stern. When setting the boat's bow to stern location, you must make sure that the center of gravity is at the midpoint between the two sets of cradle beams.

If you know the beam of your boat, adjust the guide posts to roughly fit the beam. This will help keep the boat straight and centered. Float the boat into the slip and slowly raise the lift cradles until the keel beam support makes contact with the boat's keel. Raise the lift cradles slightly more, so that the keel beam support is bearing the weight of the boat. Adjust the stern stanchions, as described above, so that the stanchion pads are flat against the hull. You will likely need to be in the water to accomplish these steps.

With the stern stanchions set, and the weight of the boat carried on the keel beam support, you will be able to lift the boat out of the water, if you wish. Adjust the bow (and any additional) stanchions so that they are flat against the hull. Make a final adjustment of the guide posts so that they are tight against the rub rails.

## 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**

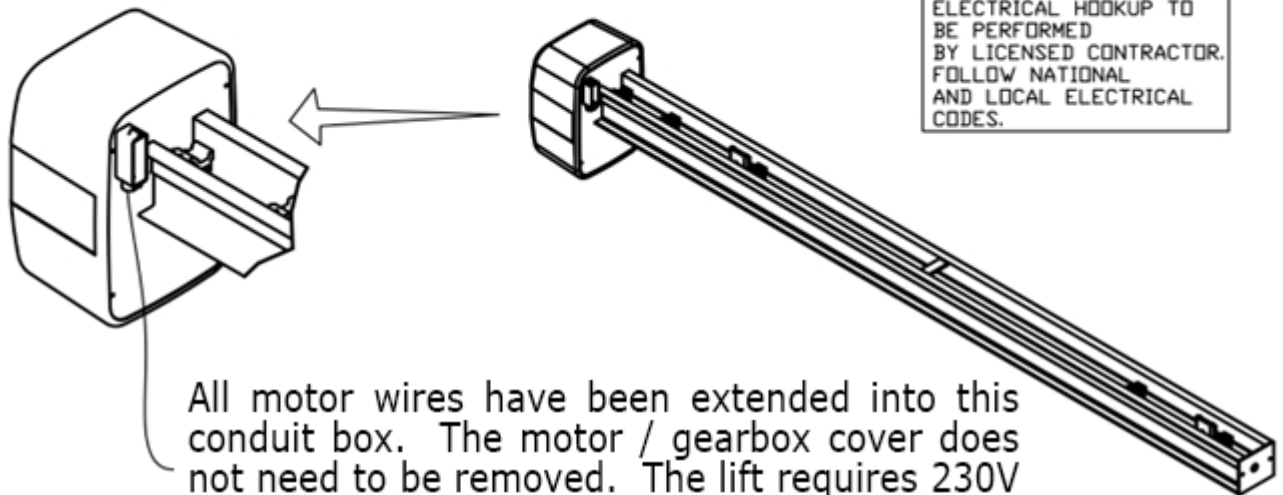
# and Motor H.P.	Amps to run		Breaker Size		50 Feet		100 feet		200 feet		300 feet		400 feet	
	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V	115V	230V
(4) 1 H.P.	----	28	----	35 A	----	#8	----	#8	----	#4	----	#4	----	#3
(4) 1 1/2 H.P.	----	36	----	45 A	----	#6	----	#6	----	#4	----	#3	----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

### Important Notes:

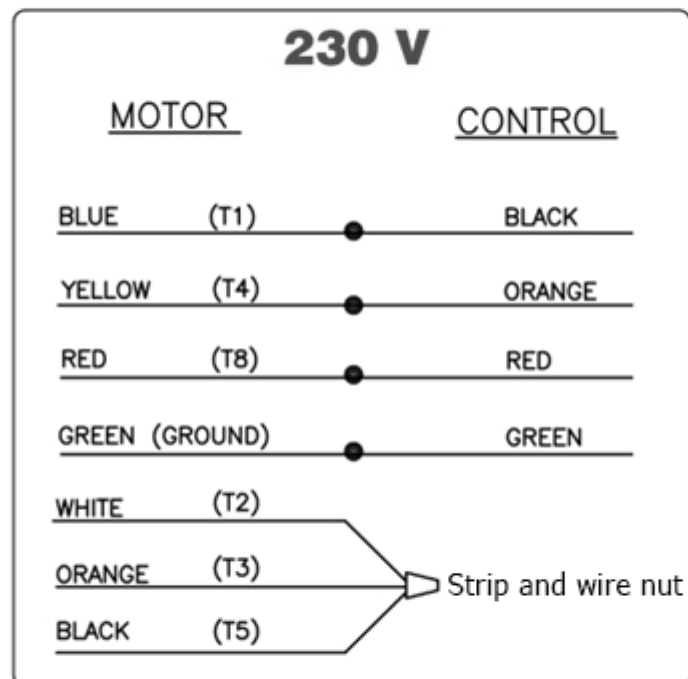
- Please use current motor label to confirm specifications in above chart.
- For Aluminum wire, increase by 1 wire size, minimum.
- The wiring recommendations and diagrams referred to are not meant to supersede any national or local codes.
- Read all instructions and wiring diagrams before connecting 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**

GEM and TEC controls



All motor wires have been extended into this conduit box. The motor / gearbox cover does not need to be removed. The lift requires 230V service. Follow the diagram below to connect the motor wires (in conduit box) with the output motor control wires from the control box.



\* To reverse motor direction, interchange Black (T5) and Red (T8)

\* Consult control box manual for specific wiring instructions to connect input power to the control box, output motor control wiring and limit switch wiring.

# Appendix A. Cable Length Determination

Please determine the desired cable length in consultation with the marine contractor and our sales and engineering teams. This information is required before construction of the lift begins.

## Cable Length Determination

Platinum/Vator 32,000-54,000 Capacity

Desired uppermost cradle position, CP = \_\_\_\_\_ feet

Upper Position Maximum (Winder full of cable)

Lower Position Maximum

32,000:  $(CP \times 4) + 52' =$  \_\_\_\_\_

40,000:  $(CP \times 6) + 76' =$  \_\_\_\_\_

54,000:  $(CP \times 8) + 100' =$  \_\_\_\_\_

Cable Length Formulas: Measurement in feet

IMM Quality Boatlifts

Cable Spec: 5/16" 7x19 SS

Note: To float a boat at low tide, the distance from the top of the pile to low tide must be less than  $CP + 12' + \text{boat draft} + 3'$  (Keel Board).

Note: Three-part cable system shown for 40K. Two-part systems for 32K and four-part systems for 54K.

