

Floating Docks

Assembly Instructions

Standard Low Profile Docks
Premium Floating Docks
Canal Floating Docks
Platform Floating Dock Sections

RECOMMENDED TOOLS



Screwdriver
(#2, #3 Phillips)



Wrenches or sockets:
M10 (or 13/32")
M14 (or 9/16")
M15 (or 5/8")
M17 (or 11/16")
M18 (or 23/32")



Work Gloves



Cordless Drill



Rubber Mallet



Allen Wrench
9mm (or 3/8")



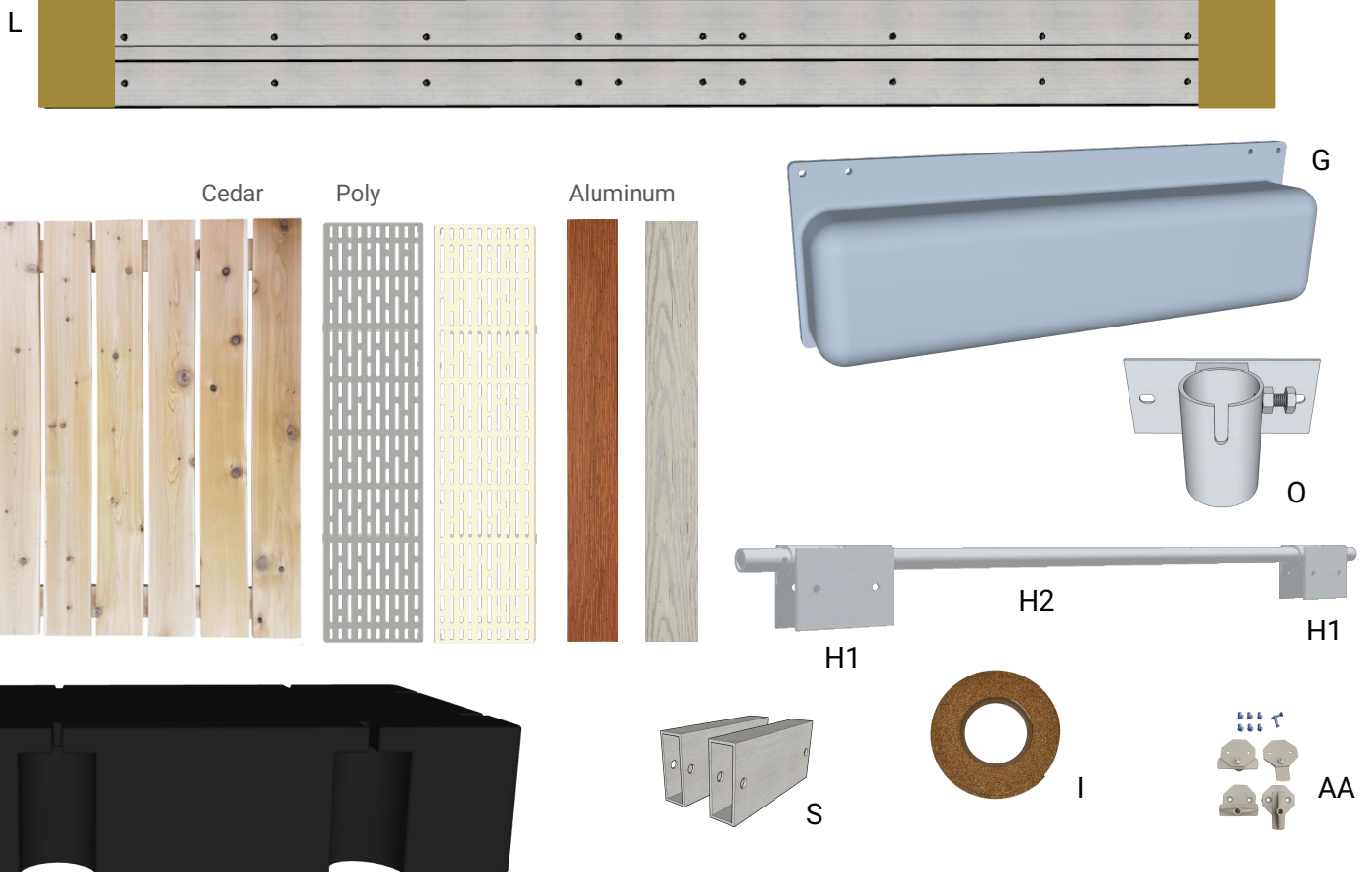
Floating Docks

Components

POTENTIAL DOCK COMPONENTS

Each dock order includes different components and quantities. Refer to your packing slip for all components and quantities. This chart represents common parts in Floating Docks.

	Part Number	Description
L	10835	LOW PROFILE FRAME KIT
A	10870/10851/10861/10957/10977	DECKING PANEL BOX (CEDAR / GRAY POLY / TAN POLY / GRAY ALUM / BROWN ALUM)
F	10862	DOCK FLOAT
G	10864	SIDE STABILITY FLOAT (Optional Accessory)
O	10938	PILING SLEEVE
H1	10847	LOW PROFILE HINGE KIT (4 BRACKETS)
H2	10847	LOW PROFILE HINGE KIT (ROD)
S	10805	SPLICE TUBES
I	10854	CORK ROLL
AA	10867/10868	DECK LOCKERS FOR POLY / ALUMINUM DECKING



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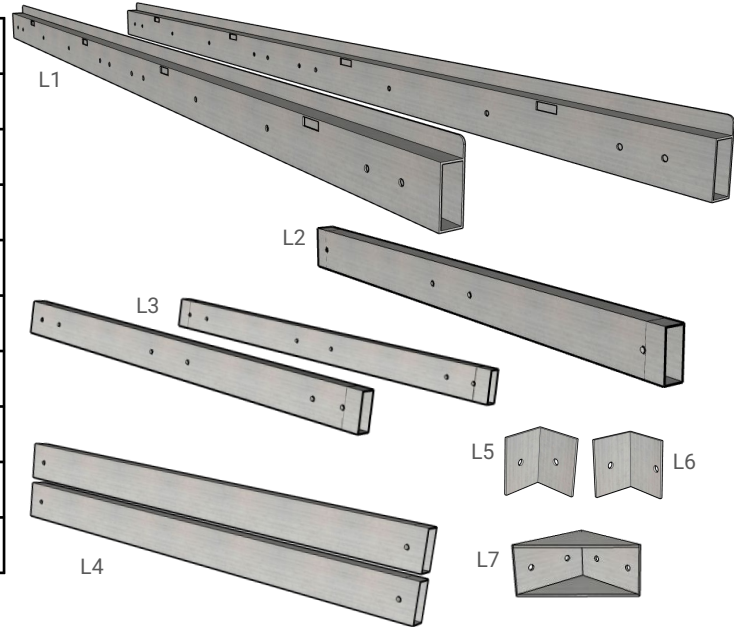
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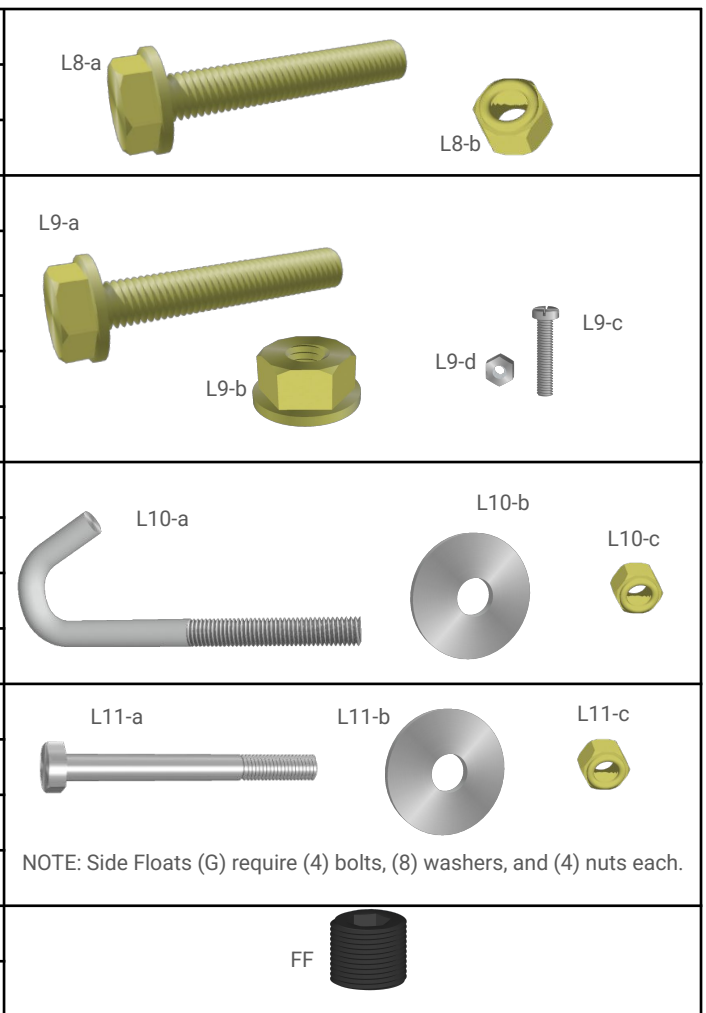
Floating Docks

Components

L. EACH FRAME PACKAGE COMPONENTS			
	Part Number	Description	Qty
L1	10835-1	SIDE TUBE	2
L2	10835-2	CENTER TUBE	1
L3	10835-3	END TUBE	2
L4	10835-4	STRINGER TUBE	2
L5	10835-5	ANGLE 1	4
L6	10835-6	ANGLE 2	2
L7	10835-7	Gusset Bracket	4
L8	NA	FRAME ASSEMBLY HARDWARE KIT	1/each



L8. Low Pro Frame Hardware Kit			Qty
L8-a	M10x60mm Flange Bolt		28
L8-b	M10 Nyloc Nut		28
L9. Low Pro Hinge Hardware Kit			
L9-a	M10x60mm Flange Bolt		8
L9-b	M10 Serrated Flange Nut		8
L9-c	M6x30mm Button Head Bolt (Phillips)		2
L9-d	M6 Nyloc Nut		2
L10. J-Bolt Float Mounting Kit			
L10-a	J-Bolt		4
L10-b	Fender Washer		4
L10-c	M10 Nyloc Nut		4
L11. 4" Bolt Kit - Labeled			
L11-a	4" Bolt		5
L11-b	Fender Washer		10
L11-c	M10 Nyloc Nut		5
Other Hardware			
FF	Float Plug		1/Float



NOTE: Side Floats (G) require (4) bolts, (8) washers, and (4) nuts each.



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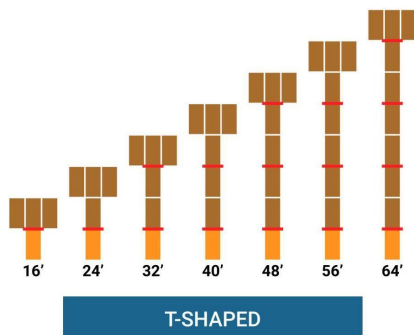
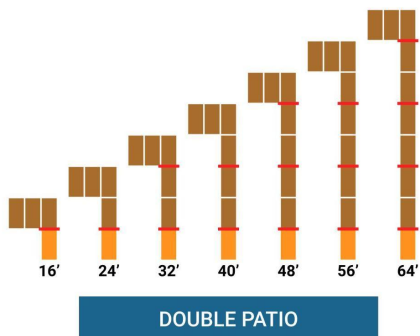
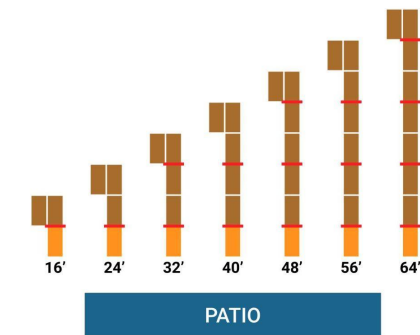
General

Layout Rules: Patriot frames are engineered to be hinged every 16 feet of linear dock after the initial ramp. Each frame is 4x8 feet, so generally there should be a hinge every other frame. In the absence of a hinge, frames are bolted together rigidly with a 4" bolt kit. Frames can be bolted end-to-end, side-to-side, or end-to-side. Some orientations may require drilling additional holes in the frame. Each 4x8ft frame should have at least 2 regular dock floats. The more floats, the more stability and weight capacity. Premium and Canal dock packages include Side Stability Floats. Though the dock frames are completely modular and customizable, below are the support locations for Floating Dock Packages:

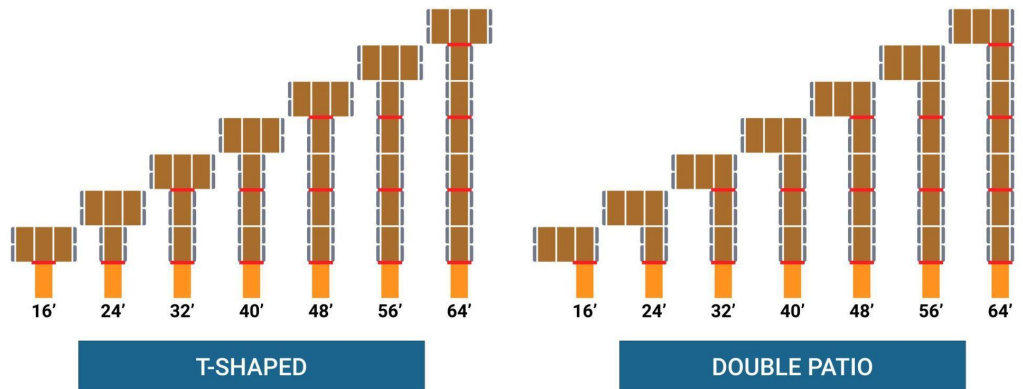
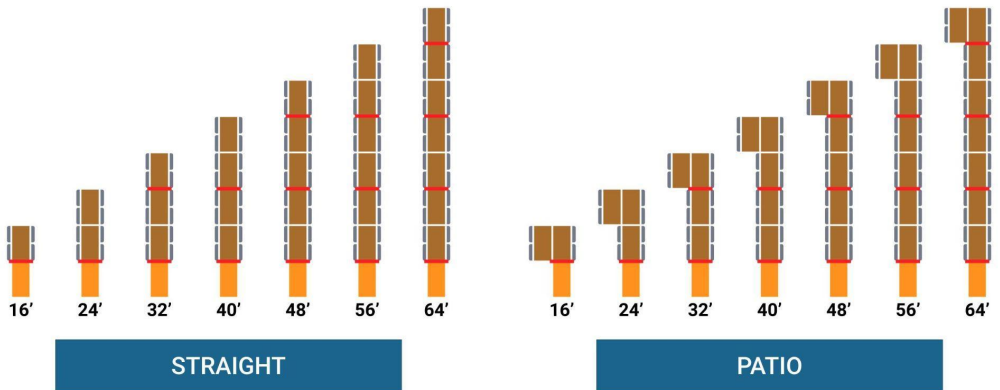
 Dock Frame  Ramp  Hinge  Side Float

Each Dock includes 2 Floats per Dock Frame and 4 Anchor Sleeves

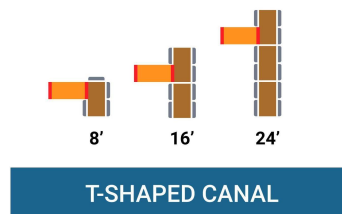
STANDARD FLOATING DOCK PACKAGES



PREMIUM FLOATING DOCK PACKAGES



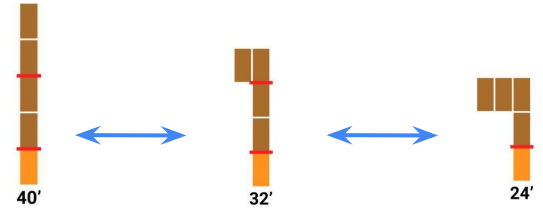
PREMIUM CANAL FLOATING DOCK PACKAGES



Floating Docks

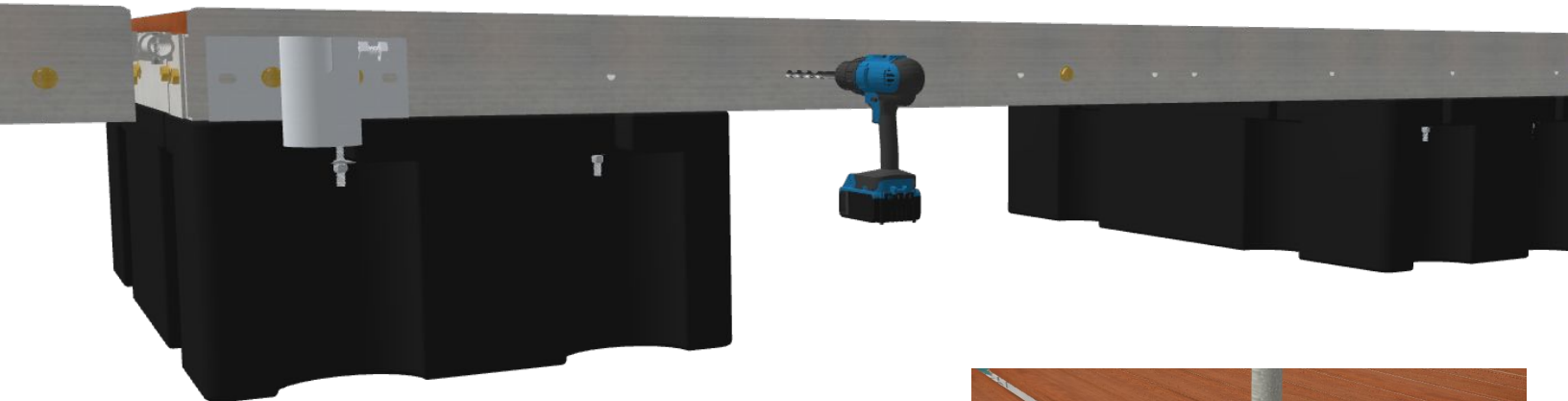
General

Modular design: Patriot Docks frames are designed to attach frames together in any orientation, given proper support. Some orientations may require drilling extra holes. Configurations can change as often as desired. Before proceeding, make sure that the number of frames, hinges, floats, and hardware match your particular design. Contact us for consulting questions.

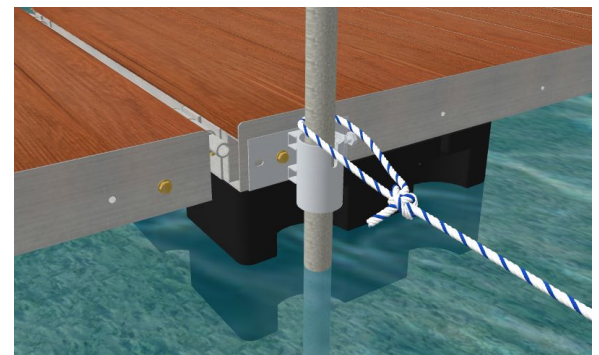


Shore Ramp: All Patriot Floating Docks begin with a ramp. This ramp is included in the overall marketed dock length. For example, a 40ft Straight Floating Dock includes an 8ft ramp, plus 32ft of linear floating dock sections. The shore ramp can be attached to shore/seawall with an additional hinge kit or a rigid connection (not included), or it can rest on the shoreline without attachment. The ramp is typically hinged to the floating dock, but this will load the first floating section with extra weight, particularly with downward sloping ramps. Though standard packages should account for this weight, extra floats may be added to the floating section. Alternatively, ramps can be rested on top of the first floating section if each is properly secured. Ramp frames and floating frames are identical.

Installing accessories: Patriot Docks accessories and aftermarket accessories all bolt to the frame of the dock, not the decking panels. Decking is drop-in style. This means that any accessory bolted to the decking is liable to be dislodged if the panel is not firmly bolted to the frame. New holes are required in the frame for nearly all Patriot Docks and aftermarket accessories.



Mooring your boat: Boats can be tied to piling sleeves, or Patriot Dock Cleats. The decking is drop-in style, so surface cleats are not readily compatible, but any cleat or top surface accessory can be mounted to drop-in decking as long as that deck panel is firmly bolted to the frame. Side-mounting mooring hardware is always compatible.



Anchoring Systems: Patriot Floating Docks do not include anchoring systems. There are many applications requiring different anchoring systems, and local governments have specific anchoring requirements. Each dock package includes piling sleeves which can be incorporated into the anchoring system, but may not be sufficient for the entire plan. See Dock Installation for anchoring recommendations.



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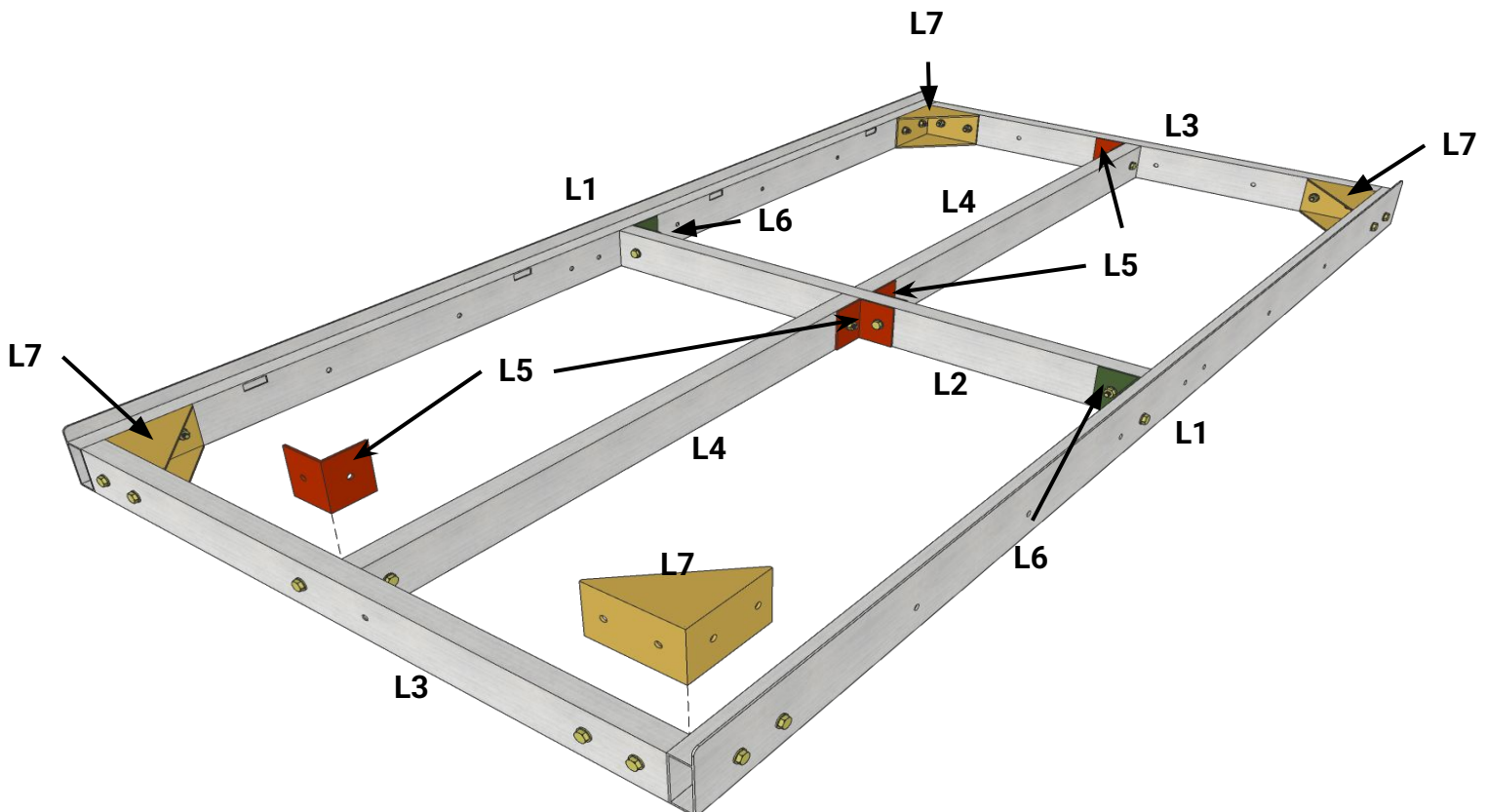
Floating Docks

Frame Assembly Steps

L. EACH FRAME PACKAGE COMPONENTS			
	Part Number	Description	Qty
L1	10835-1	SIDE TUBE	2
L2	10835-2	CENTER TUBE	1
L3	10835-3	END TUBE	2
L4	10835-4	STRINGER TUBE	2
L5	10835-5	ANGLE 1	4
L6	10835-6	ANGLE 2	2
L7	10835-7	GUSSET BRACKET	4
L8	NA	FRAME ASSEMBLY HARDWARE	1/each

Each individual modular Frame (A) can be assembled individually as below.

Important: To avoid having to redo bolts, assemble the frame with other components (see Step 1 on the following page).



Floating Docks

Frame Assembly Steps

Remember when assembling frames:

Independent Frame Assembly: Lay out parts before adding bolts because some bolts are shared between the frame and components

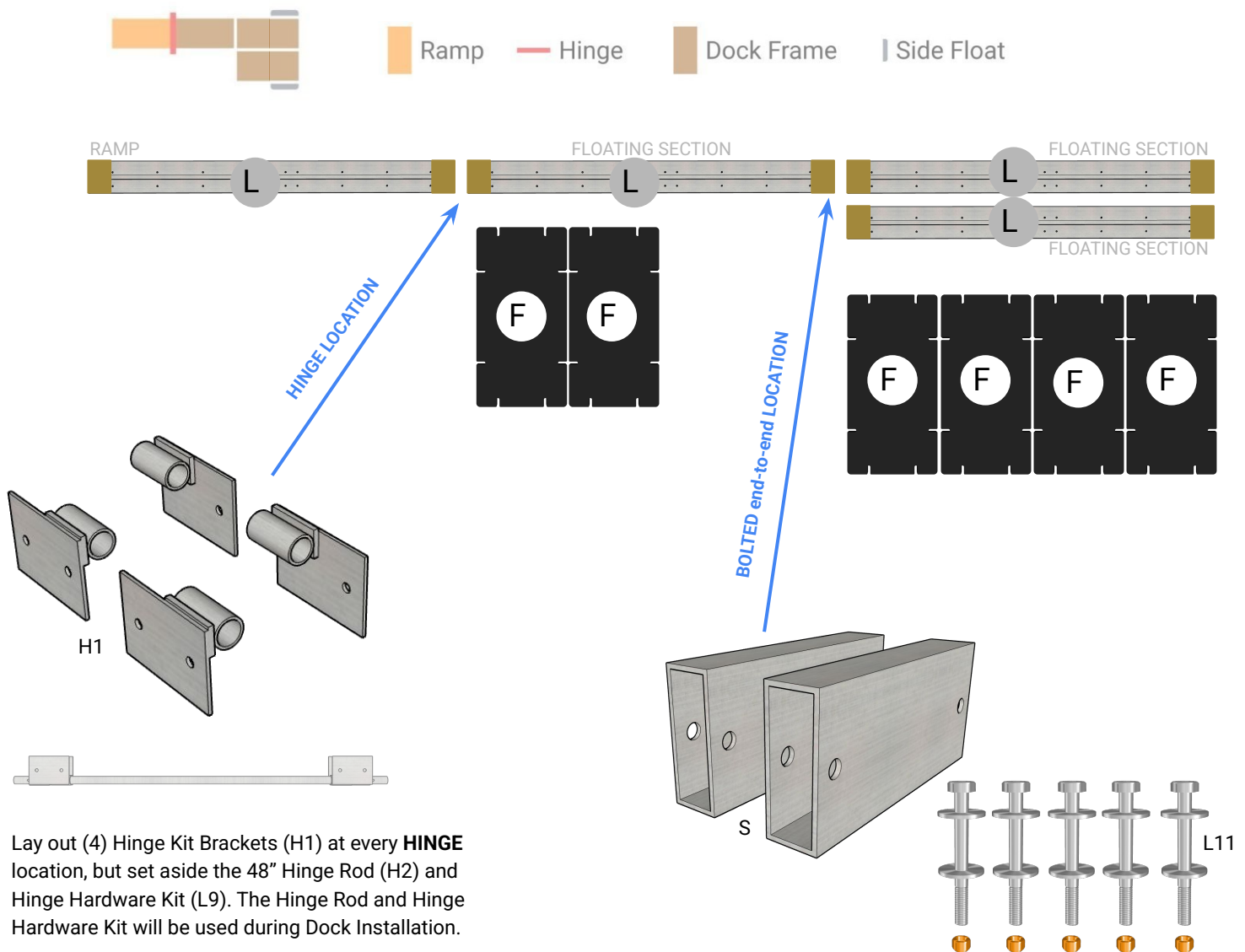
Start with the Ramp: Though all frames can be assembled individually, start building from the shore with a ramp with no floats

Hand tighten at first: Hand tighten all bolts and tighten with wrench or drill only after fitting the entire frame together

Drop-in Decking Panels: Decking panels drop in after frame is assembled and installed

On Land Assembly: Assemble frames on land in the most level space available

- 1 On relatively dry and level ground, lay out the Frame Kits (L) and Dock Floats (F) according to your configuration. Reference Layout Rules on Page 4. Skipping this step will require removing bolts on later steps. This example demonstrates the assembly of a 24ft Patio Floating Dock package with (2) Side Floats, which is a customized dock showing all aspects of assembly.



- 2 Lay out (4) Hinge Kit Brackets (H1) at every **HINGE** location, but set aside the 48" Hinge Rod (H2) and Hinge Hardware Kit (L9). The Hinge Rod and Hinge Hardware Kit will be used during Dock Installation.

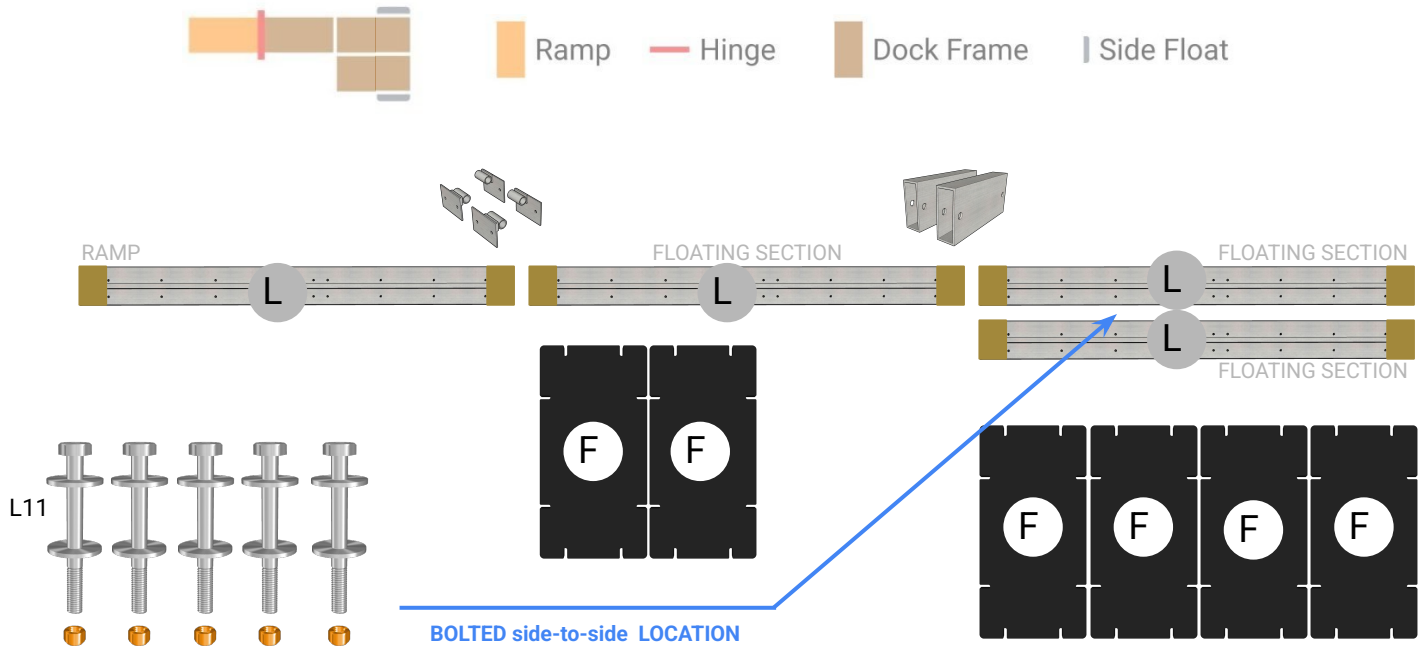
- 3 Lay out (2) Splice Tubes (S) and (1) 4" Bolt Kit (L11) at every **BOLTED** end-to-end frame connection (bolted side-to-side or end-to-side connections do not require Splice Tubes, but do require (1) 4" Bolt Kit. See Step 4.)



Floating Docks

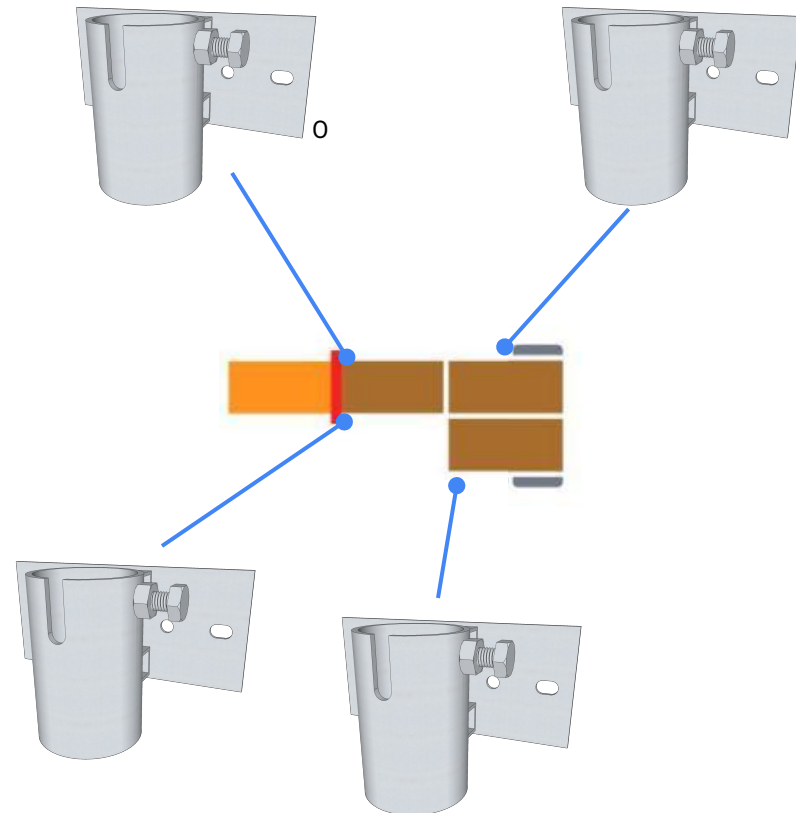
Assembly Steps

- 4 Lay out (1) 4" Bolt Kit (L11) at every BOLTED side-to-side or side-to-end connection. These connections do not require a Splice Tube.



- 5 Lay out the Piling Sleeves (O) in the preferred locations. Piling sleeves can be bolted to the End Tubes (the 4ft side of the frame) or the Side Tubes (the 8ft side of the frame) for Standard Floating Docks. Premium Floating Docks can only accept piling sleeves on End Tubes or the middle of Side Tubes, and bolts will be shared. Piling sleeves cannot be located at the ends of the 8ft side of the frame for Premium Floating Docks. Reference Dock Installation for tips and recommendations to determine the best locations for Piling Sleeves for your application.

Note: Piling Sleeves can be mounted between Side Floats in Premium Dock packages. Also, Piling Sleeves help with dock stability when mounted over a frame seam.



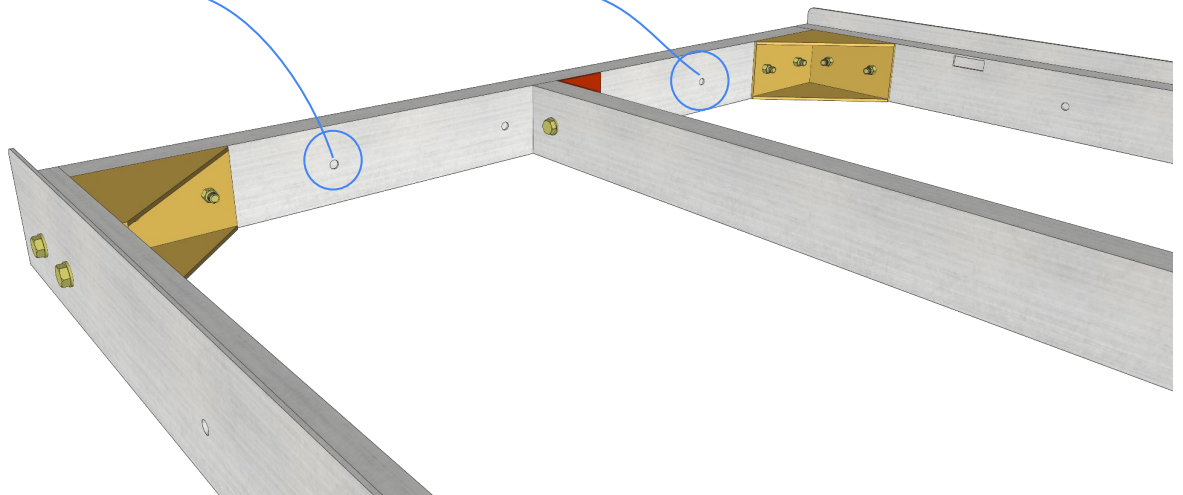
Floating Docks

Assembly Steps

- 6 Assemble the Ramp by laying out all parts of the first Frame Kit (L), making sure the End Tubes (L3) are oriented with the single-sided holes pointed inward. Assemble with M10x60mm bolts and **Nyloc** nuts (L8) as shown below. The Hinge Kit Brackets (H1) will share (4) M10x60mm Bolts and Nyloc Nuts with the frame assembly. Orient the round receiver upward. It should line up with the adjacent round receiver on the other frame. Hand tighten. Set the ramp aside.



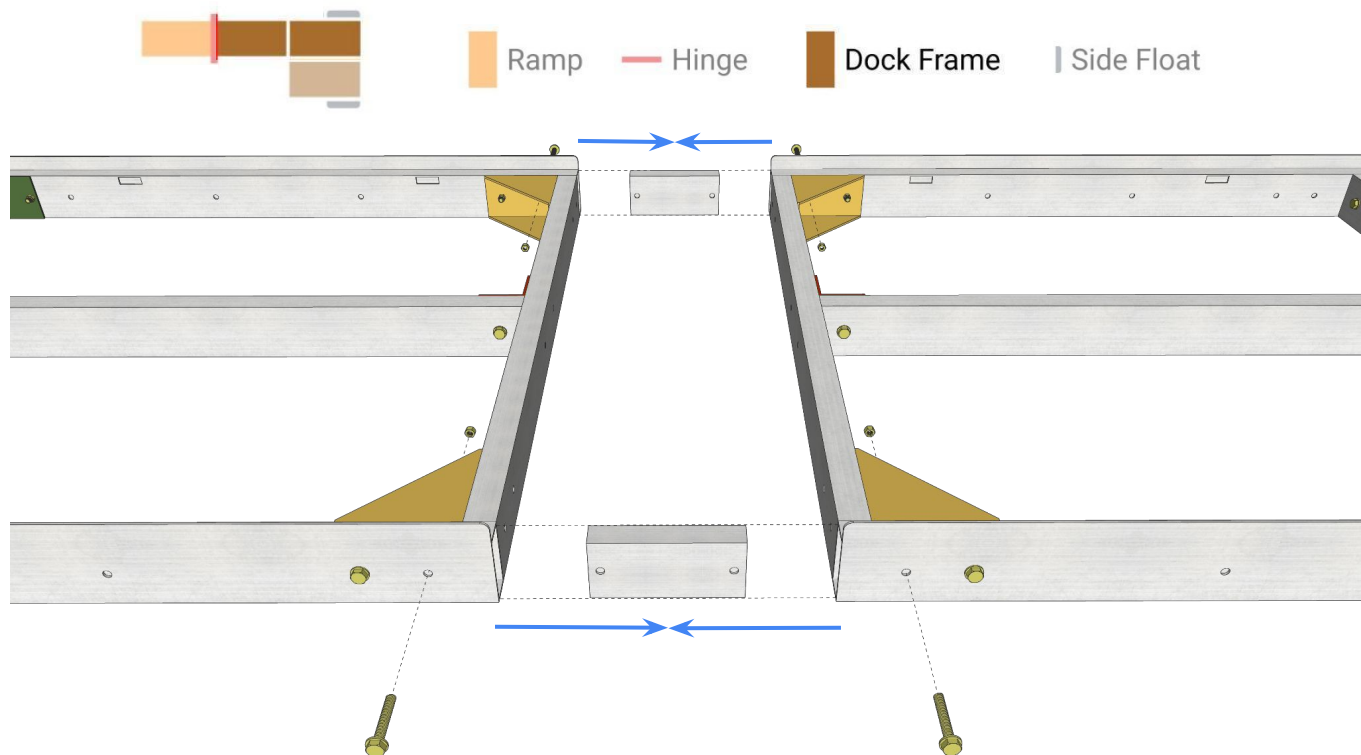
Single-sided holes in End Tube face INWARD



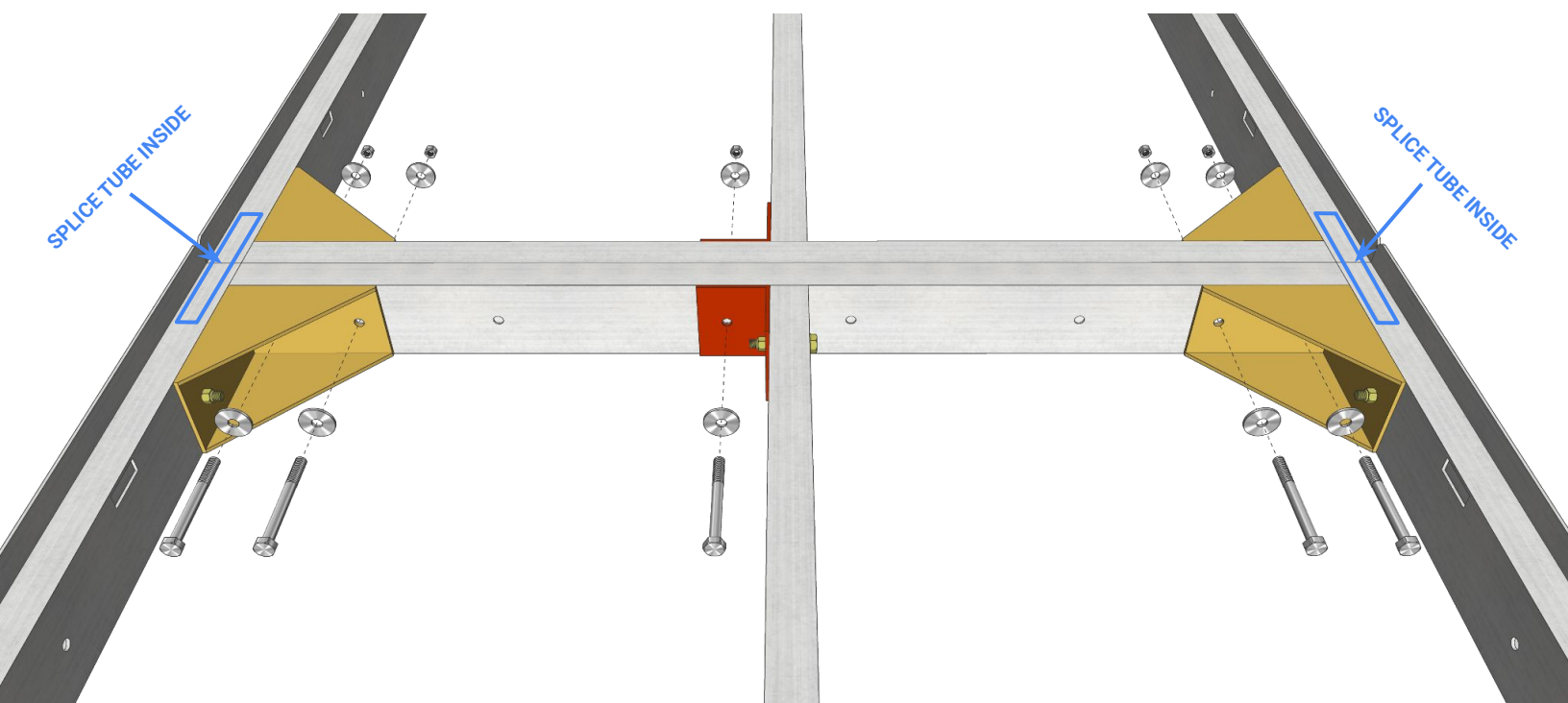
Floating Docks

Assembly Steps

- 7 Assemble the next consecutive floating frames as a bolted end-to-end connection with (2) Frame Kits (L) and (2) Splice Tubes (S). Insert (2) Splice Tubes (S) into the End Tubes (L3) when connecting two frames end-to-end before adding the angles closest to the connection. Use the M10x60mm frame hardware that secures the corner angles to also secure the Splice Tubes.



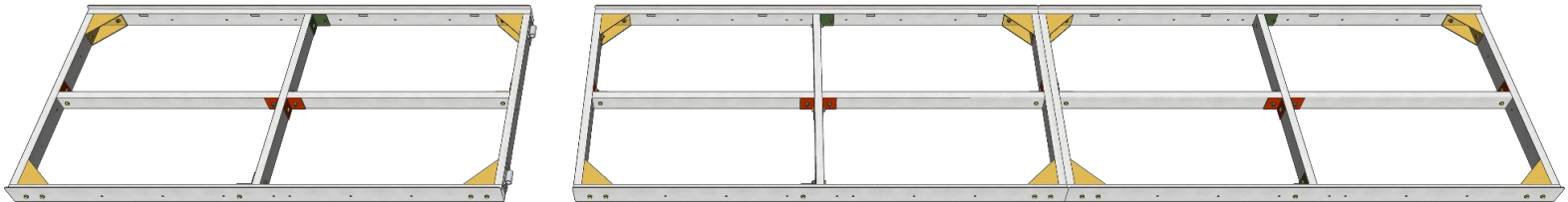
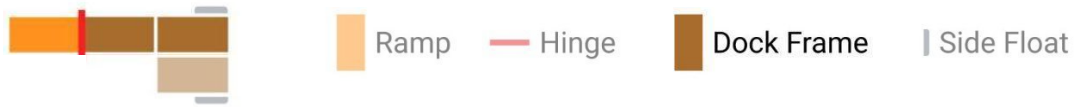
- 8 Use (5) 4" Bolts (L11) to join the two frames together. Make certain the fender washers are on either side of the frame tube. The 4" bolts replace the M10x60mm frame hardware in two locations.



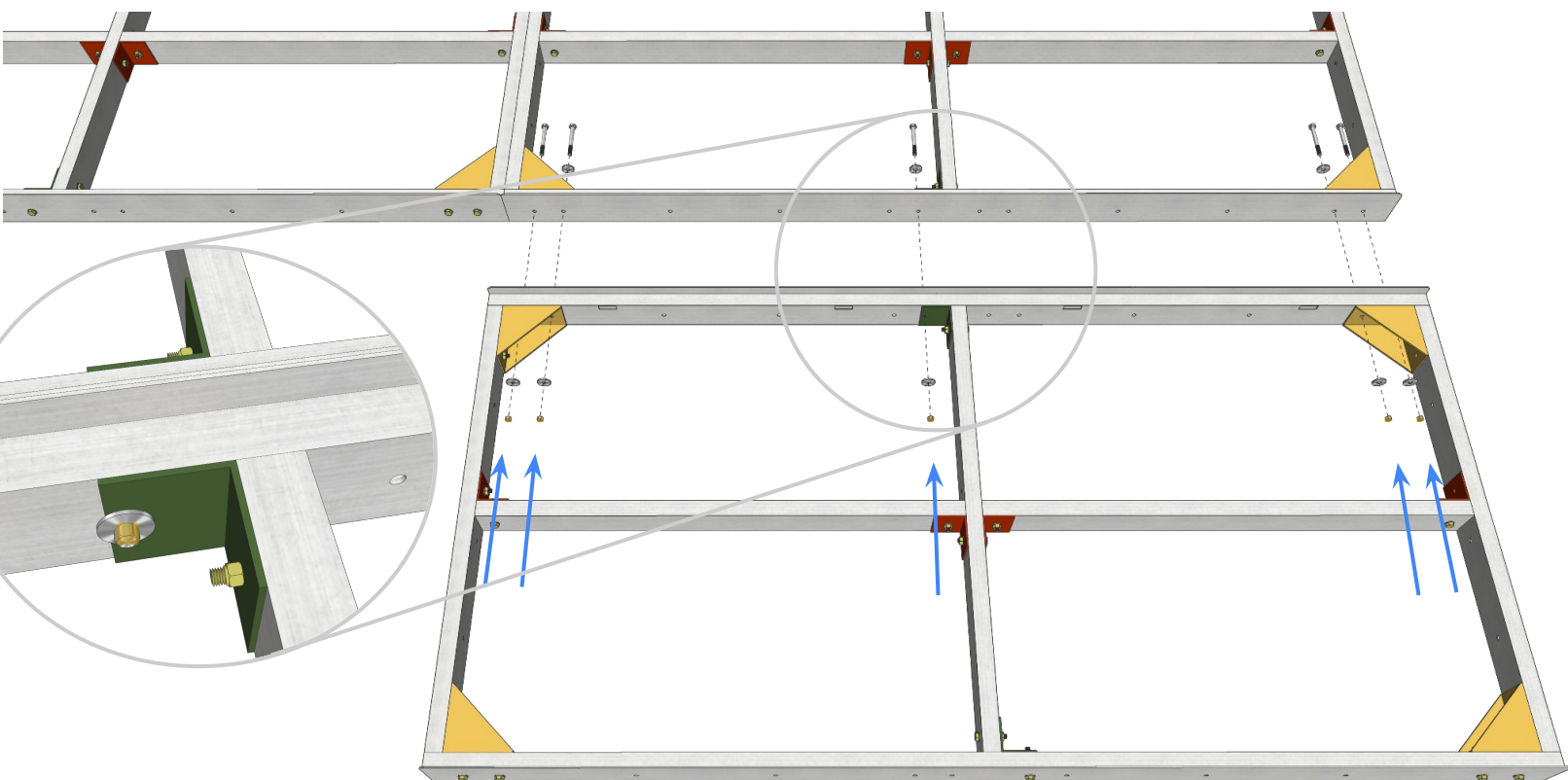
Floating Docks

Assembly Steps

- 9 Repeat Steps 7-8 for all bolted end-to-end connections in your dock layout. Line up with the completed ramp (the hinges are not yet joining frames together).



- 10 Assemble the patio frames (extending left or right) as a bolted side-to-side connection with (2) Frame Kits (L) and (1) 4" Bolt Kit (L11). This may require removal of frame hardware in the main stretch of dock. Use (5) 4" bolts (L11) on both ends of frame unit and on one sides of center tube. Loosely tighten the nyloc nut.



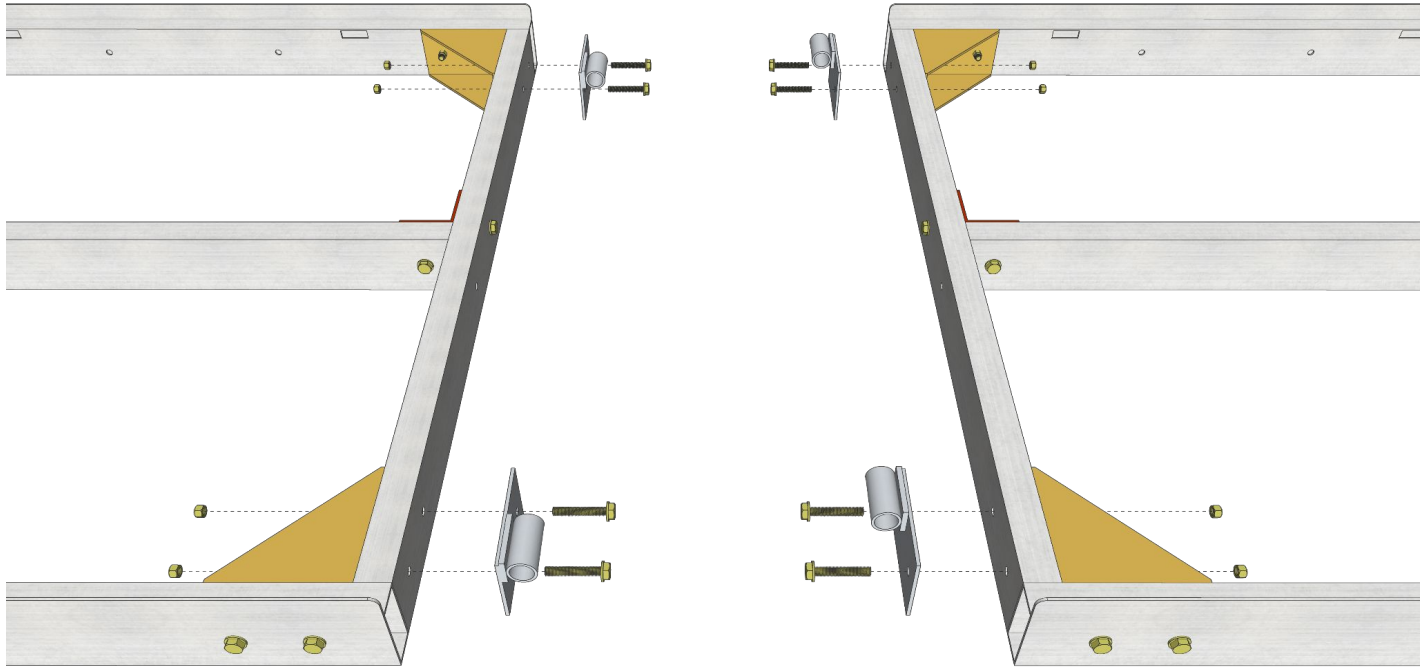
Floating Docks

Assembly Steps

11

Add all Hinge Kits (H), and Piling Sleeves (O) according to your dock package or custom design. Do not join the frames together yet. Hand tighten.

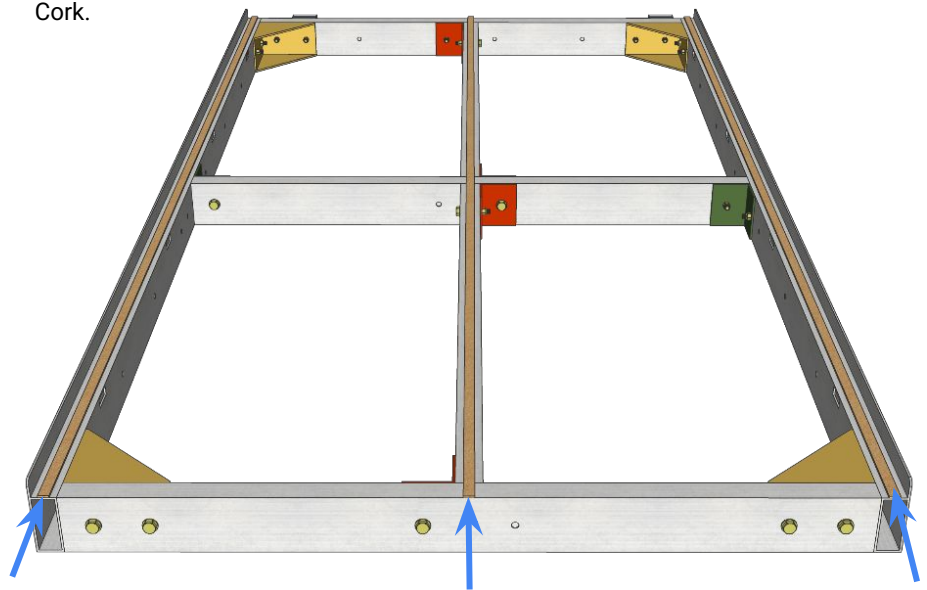
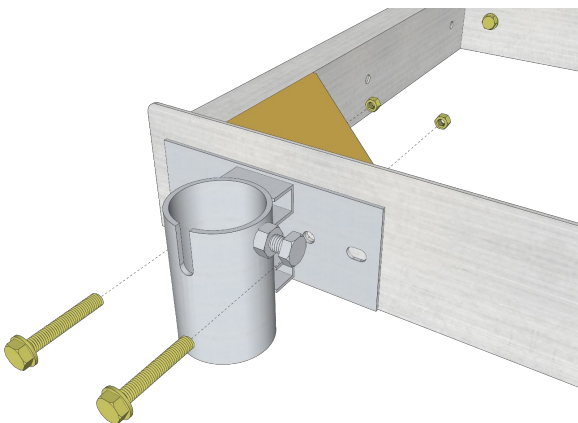
- A. **Hinges:** Add Hinge Brackets (H1) at each location requiring a hinge. Each Hinge Kit bolts on both sides of the frame and on both sides of the connection. Hinge Brackets will share the Frame assembly hardware. Orient the round receiver upward and it should line up with the adjacent round receiver on the other frame. Do not add the Hinge Tube until the dock is ready for installation.



- B. **Piling Sleeves:** Add Piling Sleeves (O) to the floating dock frame with M10x60mm Bolts and M10 Nyloc Nuts (L8). These bolts can be shared with the frame hardware locations. Note: the sleeve projects downward.

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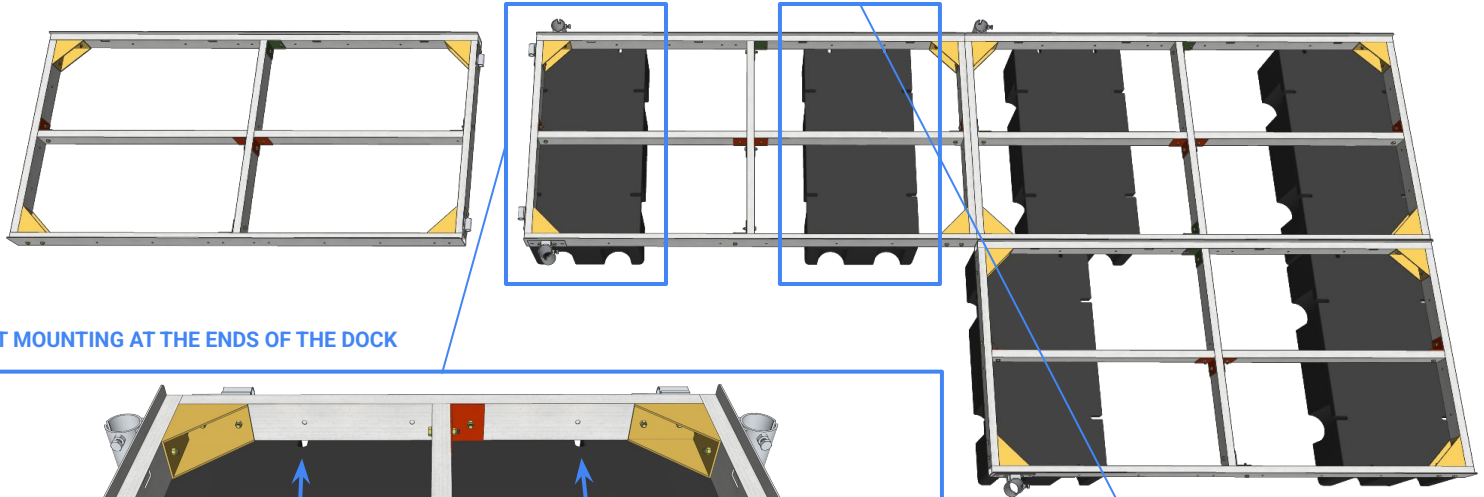
For docks with aluminum decking, adhere the Cork (I) to the Side Tubes (L1) and Stringer Tubes (L4) of the frame. Remove the sticker back, and stick the Cork to the surface, removing more sticker back as you unroll the material. Cut to length with scissors or a utility knife. Docks with cedar and poly decking do not require Cork.



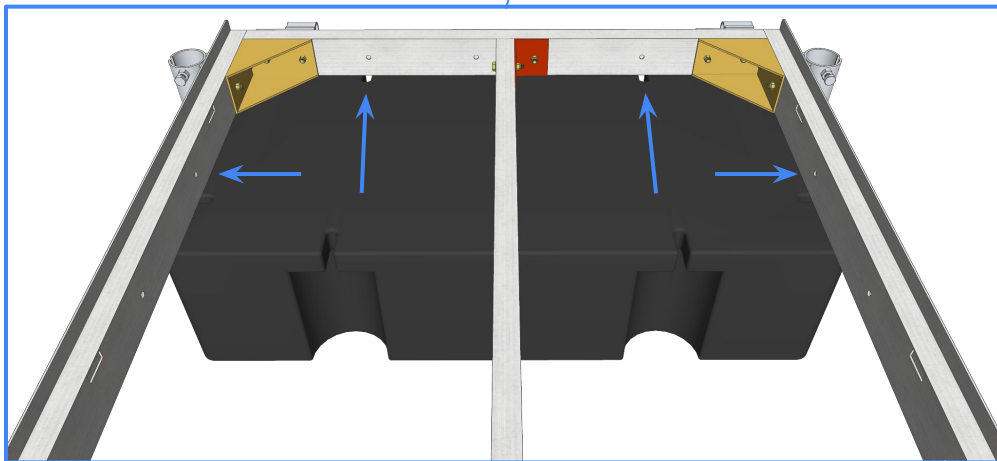
Floating Docks

Assembly Steps

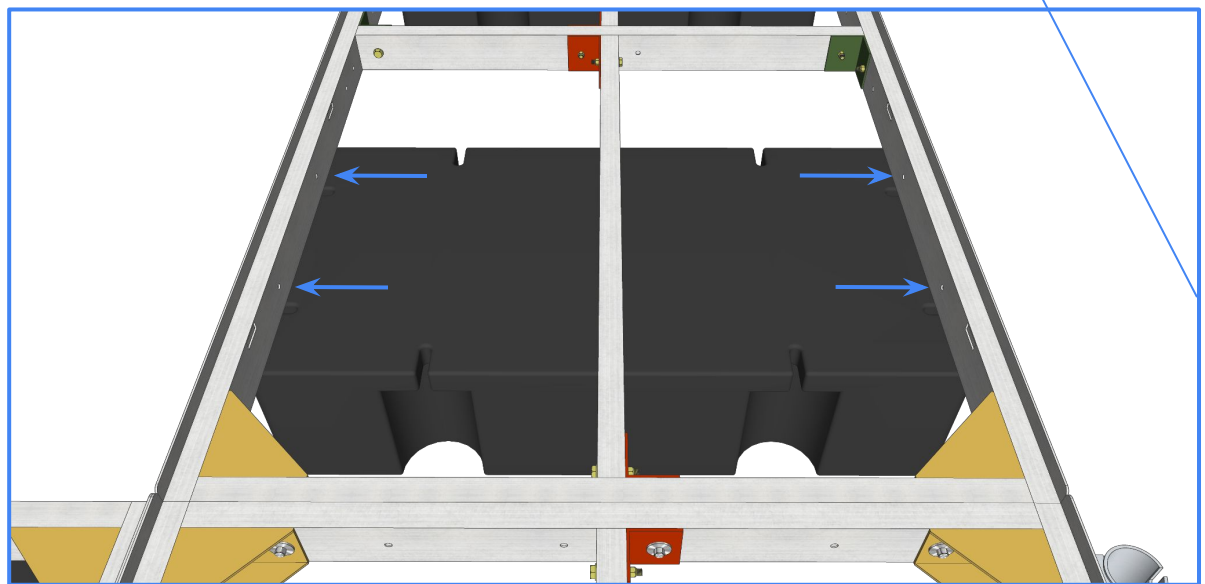
- 13 A. Lay out (2) Dock Floats (F) to each frame. Floats are mounted to 4ft End Tubes (L3) at the beginning and end of the overall dock, but when end-to-end connections are made between frames, the floats are mounted directly to the Side Tubes (L1). Though dock packages include 2 Dock Floats per frame, up to 3 floats can be secured to 1 frame. Proceed to the next step to fasten the floats to the frame.



FLOAT MOUNTING AT THE ENDS OF THE DOCK



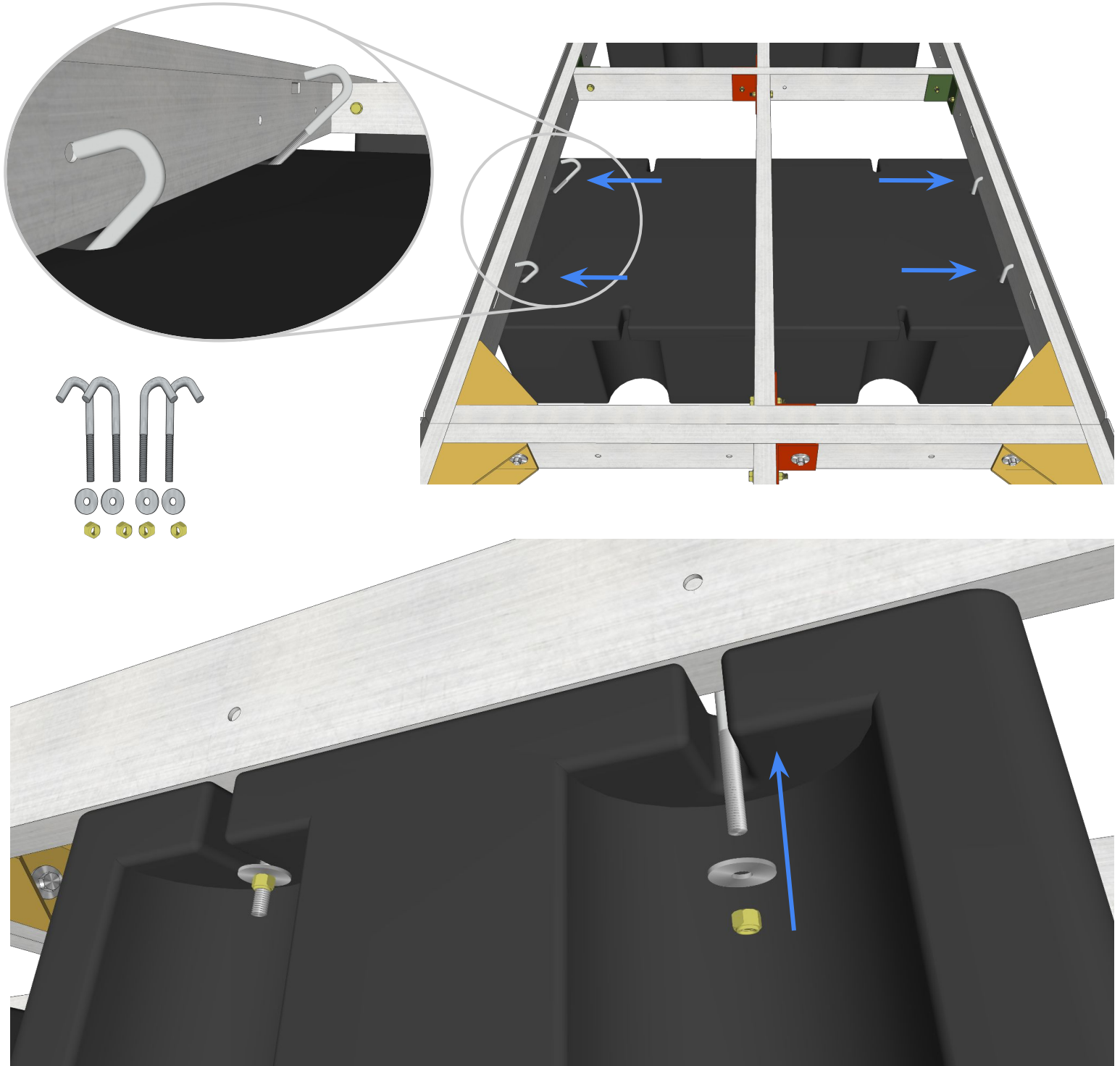
FLOAT MOUNTING AT END-TO-END CONNECTIONS



Floating Docks

Assembly Steps

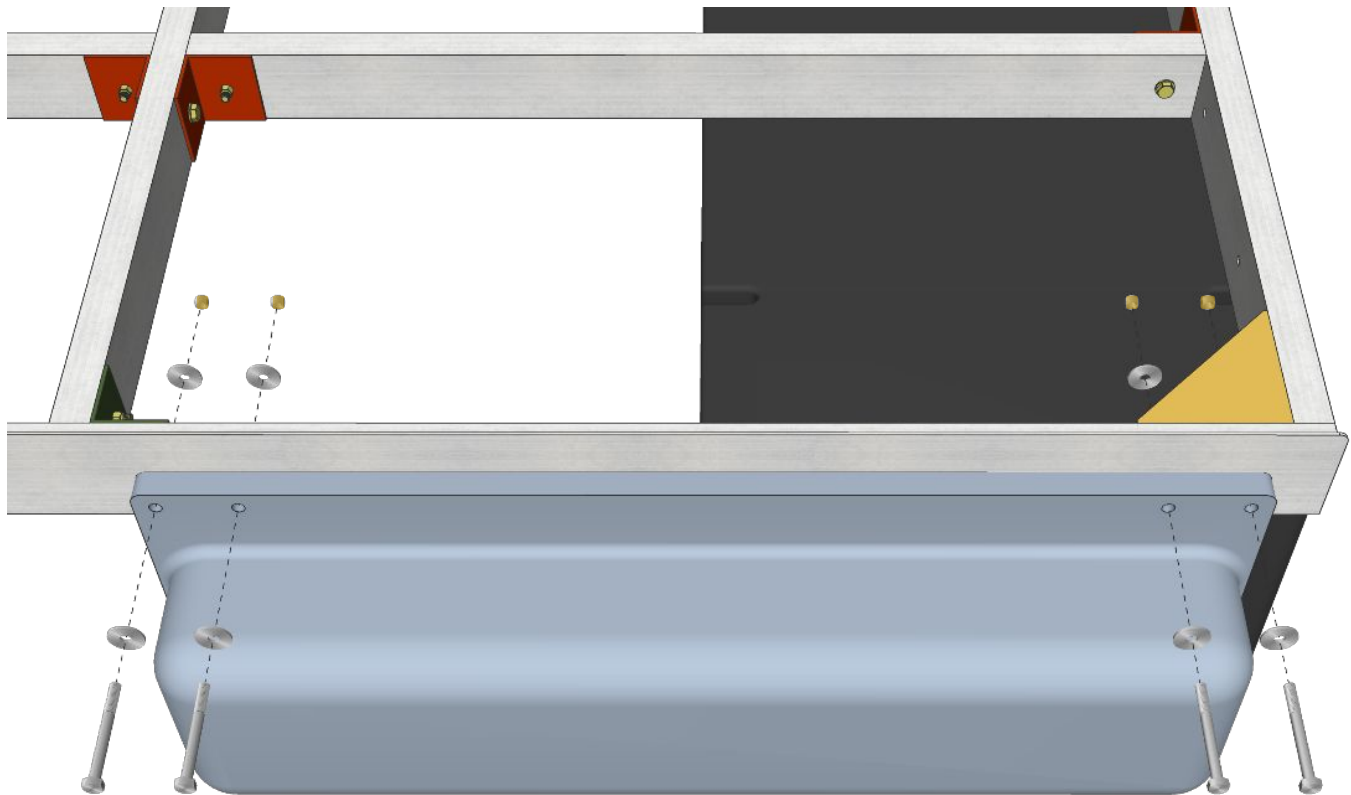
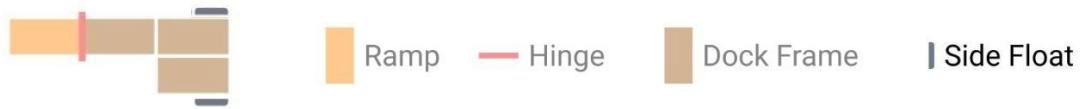
- 13 B. Mount each Dock Float (F) to the Dock Frame (L) using a J-Bolt Kit (L10). Position the threaded side down through the Dock Float in the flange notch and hook the J-bolt into the hole inside the frame Side Tube (L1). Secure using the M10 Nyloc Nut and Fender Washer. Tighten all bolts with a wrench or impact driver. Make sure the Float Plug (FF) is inserted into each Dock Float.



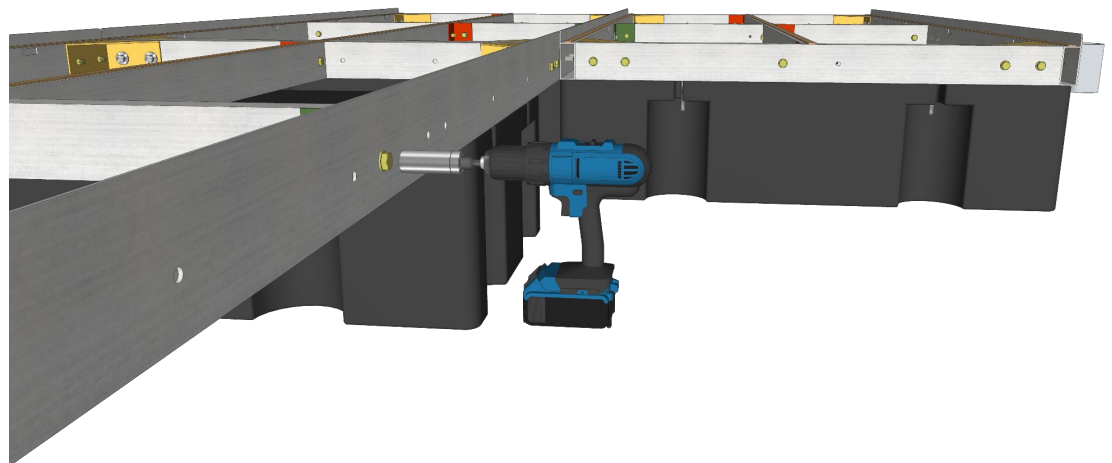
Floating Docks

Assembly Steps

- 14 **Side Stability Floats:** Add Side Stability Floats (G), if applicable. Side Stability Floats require a 4" Bolt Kit (L11) with only (4) Bolts to mount to the frame. Replace the frame hardware with 4" Bolts on the two inside holes. Warning: Side Floats are not stepping surfaces.



- 15 Your dock frame is now completed. Tighten all bolts with a wrench or impact driver.

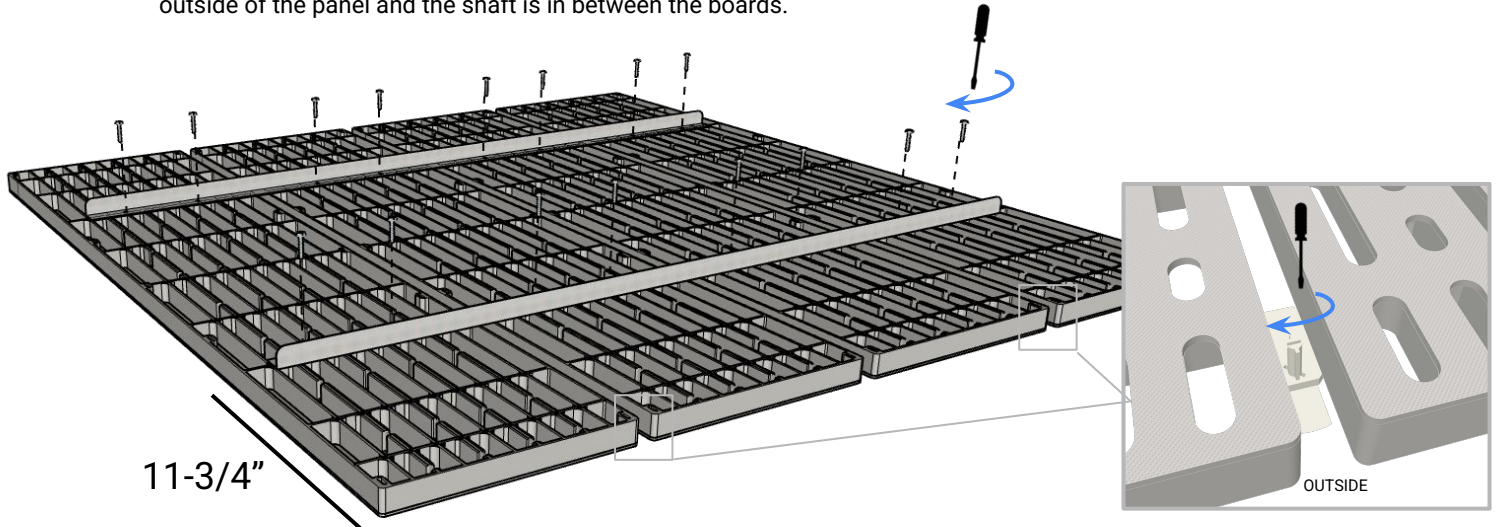


Floating Docks

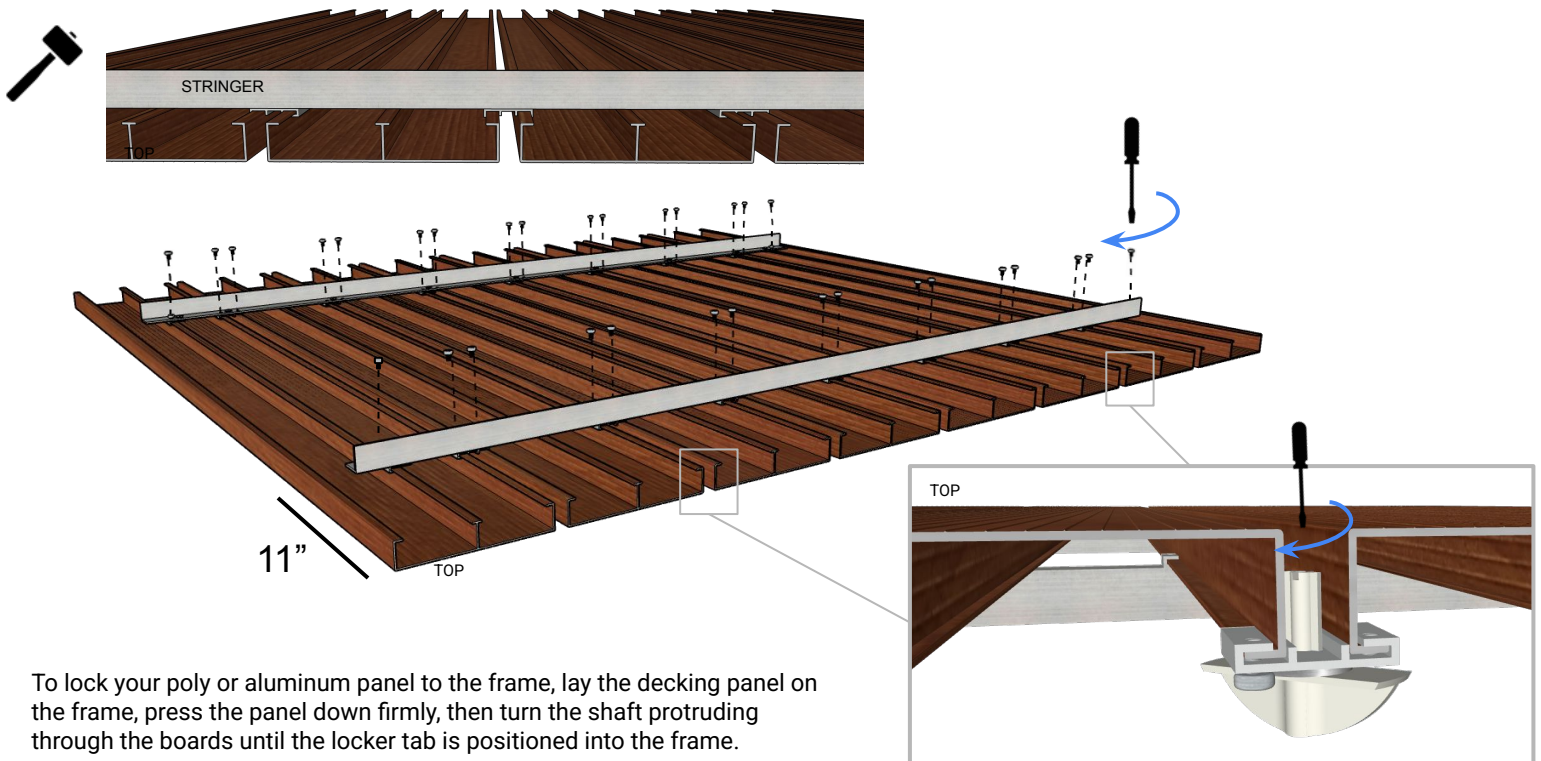
Assembly Steps

16 Assemble each 4x4 Decking Panel (A).

- **Cedar Panels** are pre-assembled. At this point, panels can be sealed with deck sealer for longest life.
- **Poly Panels** are assembled by screwing the stringer to the back of (4) boards. The stringer is screwed to the panels 11-³/₄" from the outside edge of the panels using (8) screws. Poly Deck Lockers (AA) can then be mounted to the board gaps near each of the 4 corners of the 4x4 panel. Use (2) screws provided in the deck locker package to screw the locker so the tab is facing the outside of the panel and the shaft is in between the boards.



- **Aluminum Panels** are assembled by screwing the stringer to the back of (8) boards. The stringer slides on the boards so that the stringer clips accept the bottom tongue of each board tightly. A rubber mallet may help to tap the stringer into place so that it is positioned about 11" from the outside edge of the panel. Once in position, the (16) set bolts in the stringer tighten down onto the panel. Do not overtighten or strip the bolt heads by tightening quickly. This is best done with a screwdriver by hand. Aluminum Deck Lockers (AA) can then be mounted to the board gaps near each of the 4 corners of the 4x4 panel. Tap the locker onto the panel and slide it 1-1/2" from the edge of the board. Use (1) screw provided in the deck locker package to screw the locker so the tab is facing the outside of the panel and the shaft is in between the boards.



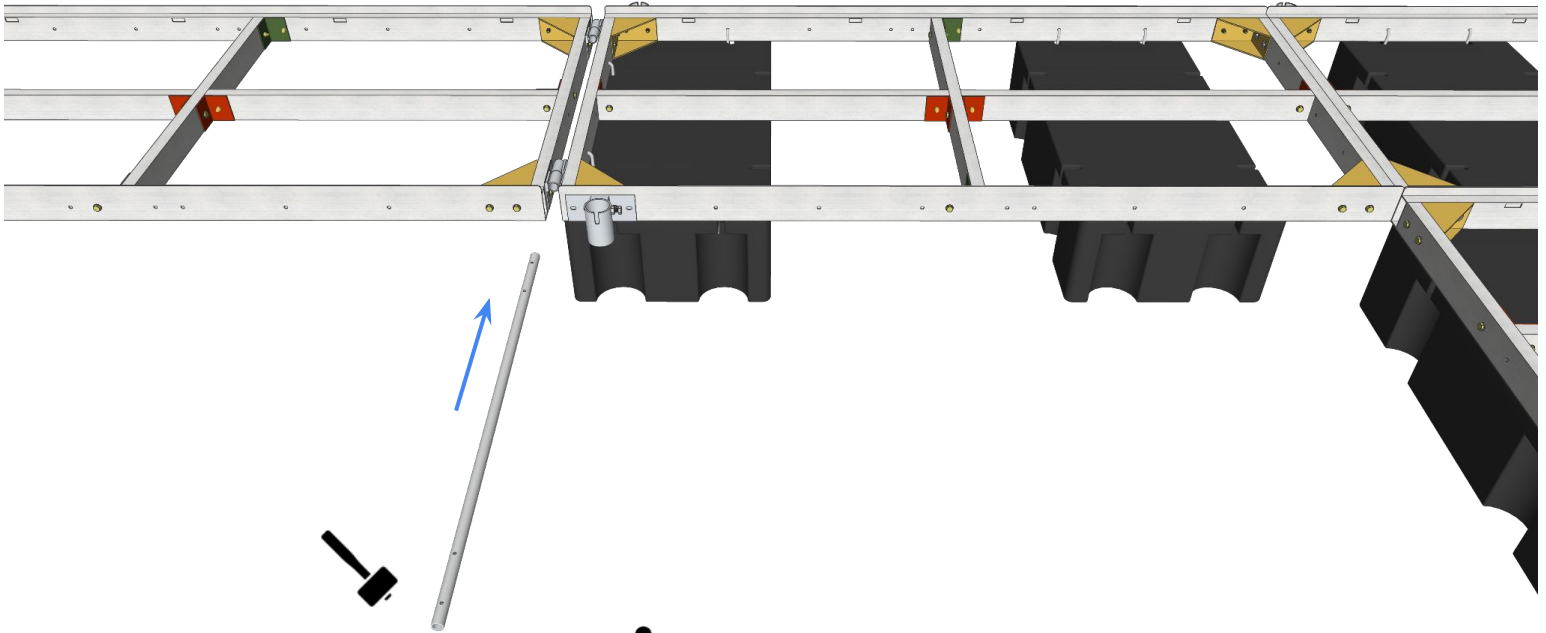
To lock your poly or aluminum panel to the frame, lay the decking panel on the frame, press the panel down firmly, then turn the shaft protruding through the boards until the locker tab is positioned into the frame.



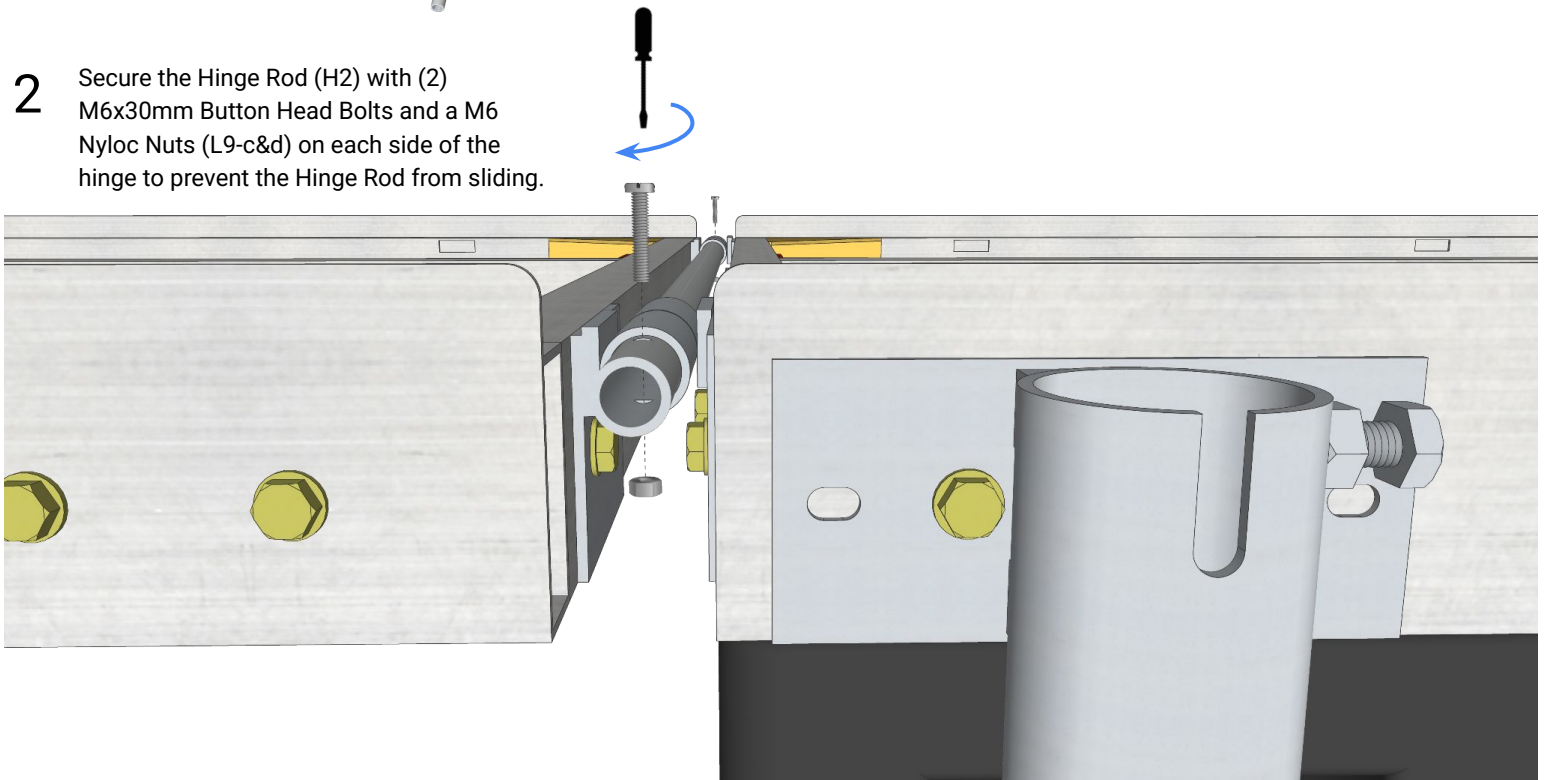
Floating Docks

Dock Installation

- 1 Install your dock on the water by carrying each set of bolted frame sections into place, and sliding the Hinge Rod (H2) through the Hinge Brackets (H1). Tapping with a rubber mallet may help to drive the rod through the brackets. Helpful tip: Grease may be used if desired. Warning: Do not use machinery to install your dock as damages are not covered under warranty!



- 2 Secure the Hinge Rod (H2) with (2) M6x30mm Button Head Bolts and a M6 Nyloc Nuts (L9-c&d) on each side of the hinge to prevent the Hinge Rod from sliding.



Floating Docks

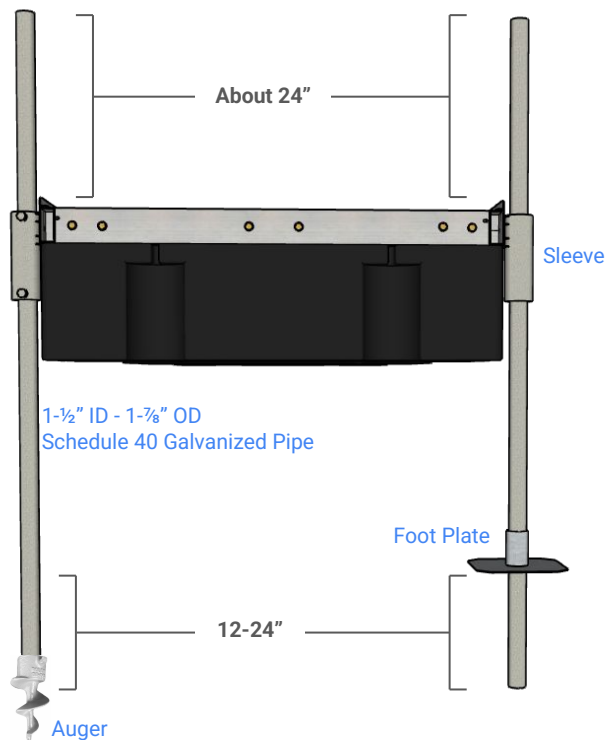
Dock Installation

- 3 Dock anchoring will depend on the particular anchoring system, which is not included in dock packages. Due to the large degree of variation between floating dock applications and locations, carefully consider the details of your floating dock application when determining how to best anchor the pier. Anchor your Patriot Floating Dock at locations that tend to move the most. Some applications may need more than 4 anchor points. Consider the water depth, the desired location of boats, and how well secured the ramp is to the shore when selecting anchor points. Successful anchoring systems will limit horizontal movement but will allow for the dock to rise and fall with the water level. Sleeves can be mounted to the pre-drilled holes in the frame or to other locations on the frame if you drill new holes. Anchoring systems include, but are not limited to sleeve and pilings or chain and deadman weights. See below for recommendations for each of these anchoring methods. Be aware of local regulatory restrictions.

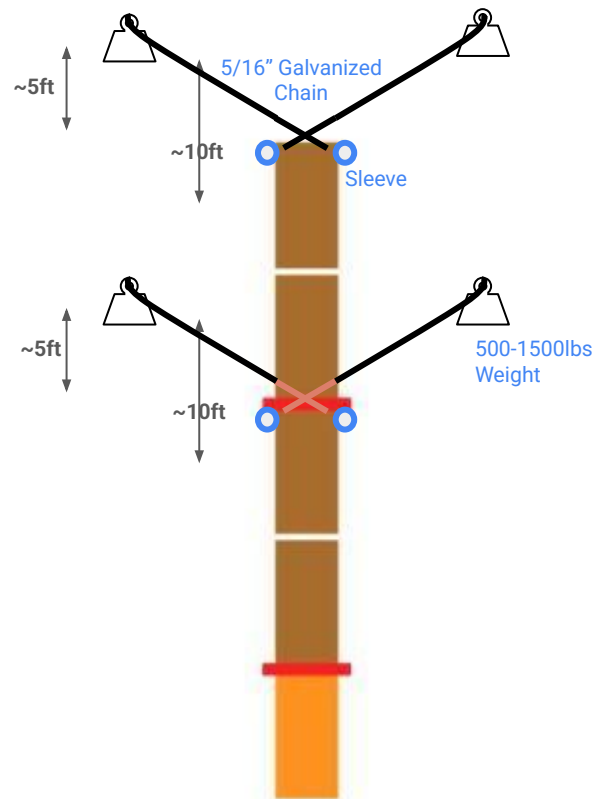
Sleeve and Piling: This method of anchoring uses the Piling Sleeve to travel up and down on a 1-1/2" ID schedule 40 galvanized pipe. This is a rigid method of anchoring and is generally preferred for water depths up to 4ft deep. This method requires little maintenance as the sleeves should move freely along the pipes with fluctuating water levels. Longer pipe is available for deeper applications but one should consider using the following chain and deadman weight method or a combination of both. Pipe can be driven into place on its own or using a Dock Auger. Pilings should be driven at least 12 inches into the lake bottom and deeper if a boat is to be moored to the floating pier.

Chain and Deadman Weights: This style of anchoring is a great all around method, especially useful in deeper water. The Piling Sleeve is also used as the tie off point for the anchor chain. It is recommended that 5/16" galvanized chain and galvanized shackles be used as leads for the deadman weights. Chain length should be double the water depth. Floating docks will require between 500-1500lbs of anchor weight depending on dock size and water conditions. Anchors should be placed at least every 32' of dock length and at key perimeter points as needed.

Sleeve and Piling
generally water depths less than 4ft



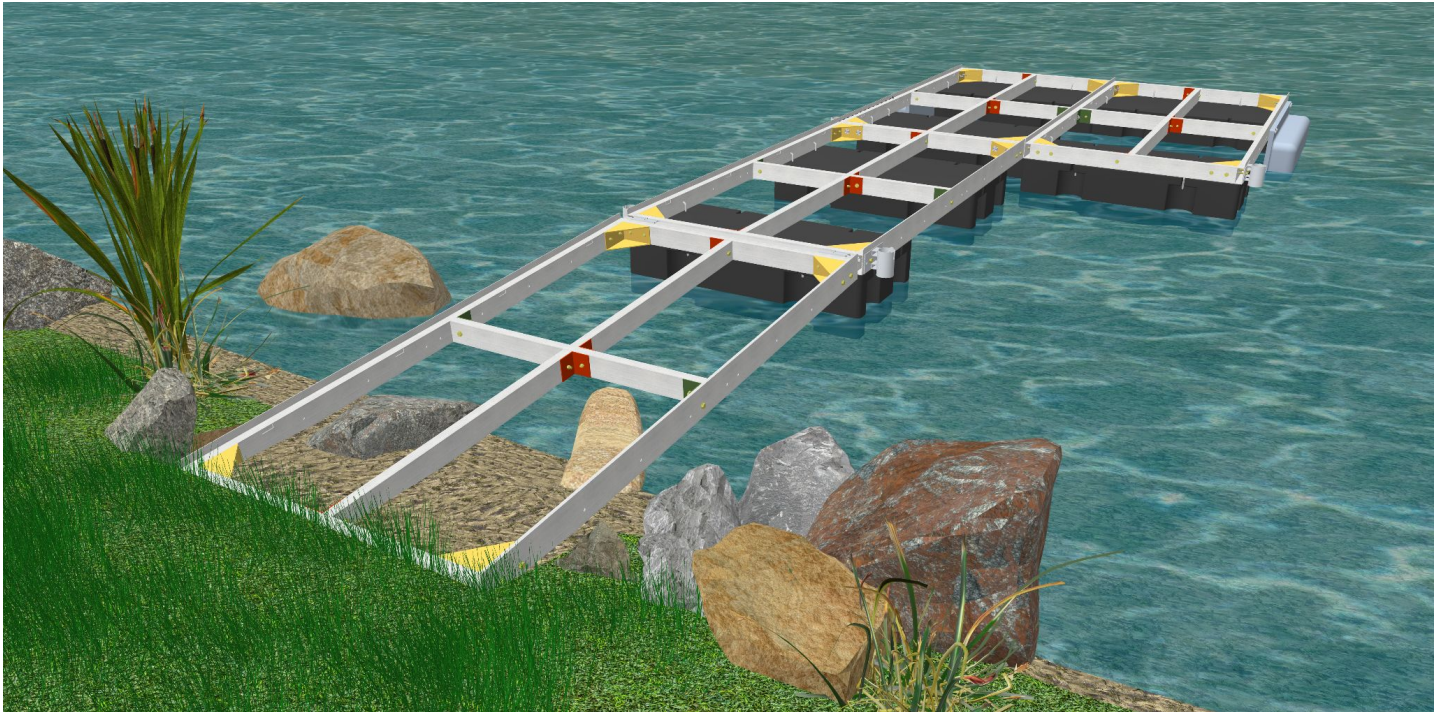
Chain and Deadman Weights
generally for deeper water



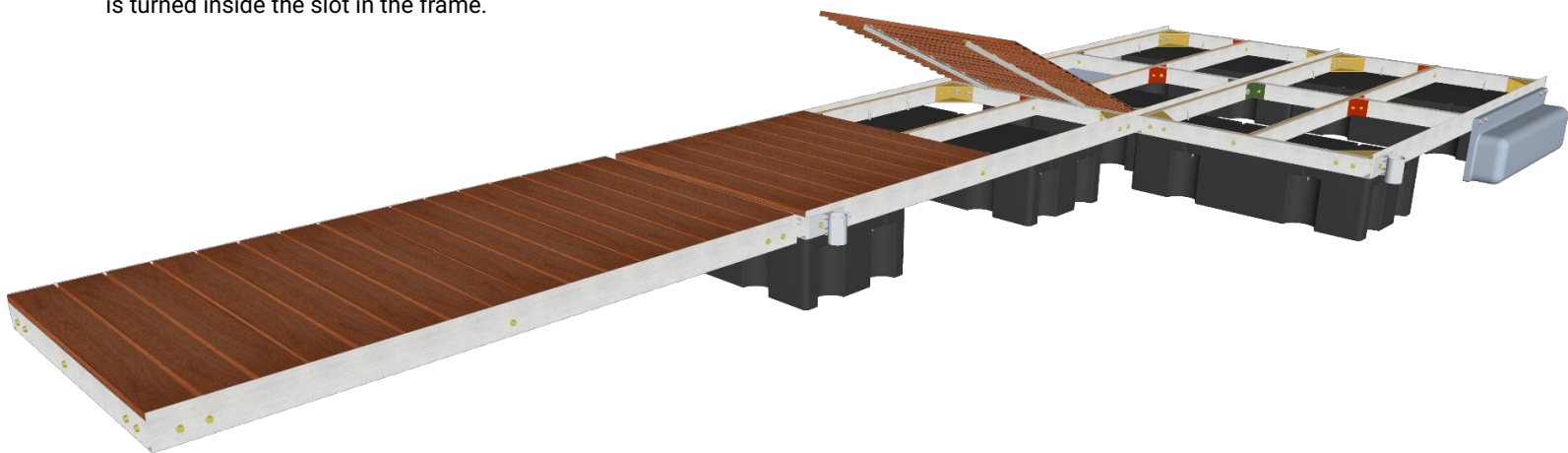
Floating Docks

Dock Installation

- 4 Situate the ramp on the shoreline for the easiest entry. The ramp can articulate up or down, and the shore end can rest on land or be secured to a seawall or hinged to a rigid structure.



- 5 Add decking panels to your assembled and installed dock frame. Start with the shore end, lay a decking panel down into the nest in the frame. Continue to lay down panels from the shore to the lake end until all panels cover the dock. If you have lockers, can be turned to the lock position by turning the shaft of the locker with a screwdriver between the boards until the tab is turned inside the slot in the frame.



- 6 Your dock is now assembled, installed, and ready for use! Your dock will automatically level itself based on the position of the water.





Winterization:

Floating Docks are designed to be removed in all bodies of water that freeze. Freezing water can heave and ruin the whole dock.



Frame height over water:

The draft of the floating dock will depend on the weight of the decking, accessories, and additional load added. Typically the floating dock sits about 12" from the decking surface to the water. It is recommended to remove the dock when flooding is expected.



By-hand installation:

Floating Docks are designed to be installed in the water by hand. Decking panels are removable to decrease the weight by half for this reason. Use of machinery and winches can damage your dock, and all damages associated with installations that are not done by hand void the warranty.



Currents and tides:

Floating Docks dock packages can handle some moving water and fluctuating water with proper anchoring (not provided with any dock package). Augered dock posts should be twisted into the ground at least 12 inches. Salt water will increase the rate of corrosion. Not all applications for rivers and tidal waters are appropriate for standard models. Carefully secure your dock to protect against damage.



Max weight capacity:

The maximum weight capacity for your dock can be calculated by multiplying the number of your 4x8 floating frames by 650 lbs. This is the float capacity of each floating 4x8ft section with two floats, each with a 390 lbs float capacity.



Extra parts:

It is expected that you have some extra hardware and parts. This is intentional. Do not be alarmed that the dock was improperly assembled if you notice extra hardware.



Severe Storms: In the event of an expected severe storm, it is recommended that the dock be removed from the water or at least the decking removed and stored safely inside and away from extreme winds.



Floating Docks

Suggested Products

Gangways (10360-10367)

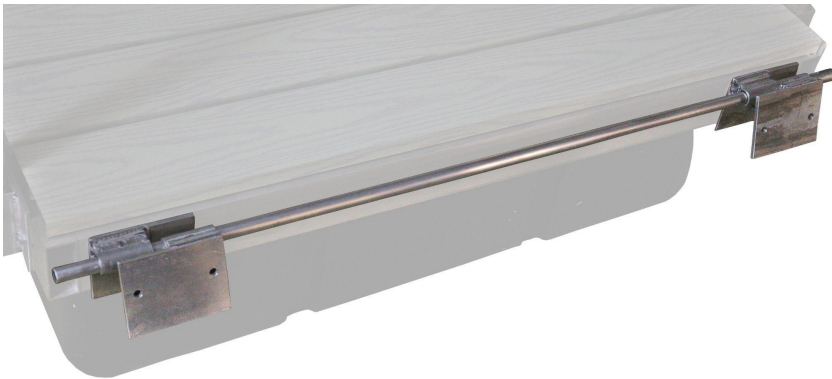
Add an 8ft or 16ft Gangway Kit to match your floating dock and increase the safety and length of your entry point. Gangway Kits include a hinge to either mount to your seawall or to your dock.



Piling Sleeve (10938)

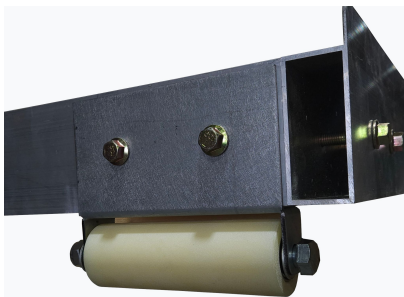


Low Profile Hinge Kit (10847)



Dock Floats (10862) and J-Hook Mounting Hardware for Floats (10849)

Add premium floats to your dock to increase the buoyancy rating on your floating dock. Each frame can hold 3 Floats.



Gangway Rollers (40400)

The Gangway Rollers offer an attachment alternative when joined to a Floating Dock. Instead of hinging, the gangway can rest on top. Rollers allow for fluctuating waters.



Side Stability Float (10864)

Add a Side Stability Float to increase the width of your decking surface, increase buoyancy capacity, increase stability, and create a bumper for your floating dock. Side Floats are not surfaces for stepping.





PATRIOT DOCKS

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(651) 674-2450



info@patriotdocks.com