Owner's Manual
Fendock Floating Docks (info PN02067)

Contents:

Questions or Comments?

GENERAL INFO

Being one of the first aluminum dock manufacturers, Fendock has been continually developing and manufacturing lightweight portable aluminum docks since 1955. Our fully engineered products now utilize a wide range of manufacturing technologies, including computer aided manufacturing and robotics providing the highest quality and component fit.

With new technology, innovative ideas & customer feedback, Fendock continues to research, design and manufacture products to complement and/or make improvements to our product lineup. Fendock reserves the right to change products & specifications without notice.

IMPORTANT SAFETY INFORMATION

-Read all instructions
-If purchasing more than one dock, open only the package for one dock assembly at a time
-Wood decking must be made to specifications, using 2" x 6" nominal lumber
-Aluminum docks must be removed from the water for the winter
-Decking must be removed before moving the aluminum frame in or out of the water
-Aluminum docks are meant to be moved by hand, not with the aid of motorized vehicles (lifting bar accessory available and are strongly recommended)
-If the legs and base plates are stuck in mud, the suction must be released before pulling dock out of the water.
-Truss Docks can accommodate water depths up to 6.5" with the standard 8' leg
-Additional "Deep Water Stabilizer" is recommended for water depths over 3'
-Attaching a boat to an aluminum dock changes the dynamics of the dock. Aluminum docks are not meant for permanent mooring of boats. **Damage may occur if care is not exercised with heavy boats and/or rough water.** In such case, boats should be anchored away from the dock. Talk to your dock expert on how to protect your investments.
-Before installing your dock in the spring, a yearly inspection of your dock is recommended. Checking that all parts are without damage and fully tightened is good practice.

FLOATING DOCKS

Floating docks are very different from docks on legs, in that as soon as you step onto floating docks there will be movement. Floating docks start at 8' wide, and go up in 2' increments to 20' wide. 4' wide & 6' wide floating structures will be tippy, and therefore are only used as "fingers" coming off a main dock. The longer a "finger" is, the more unstable it will be at the end that is not attached to the main structure. Aluminum floating docks will have more movement than an old wooden structure (which would be much heavier).

Floating docks need to be in water deep enough that the floats do not "bottom out", as this could damage the floats. The larger the dock, and the more water activity, the more anchors will be required.

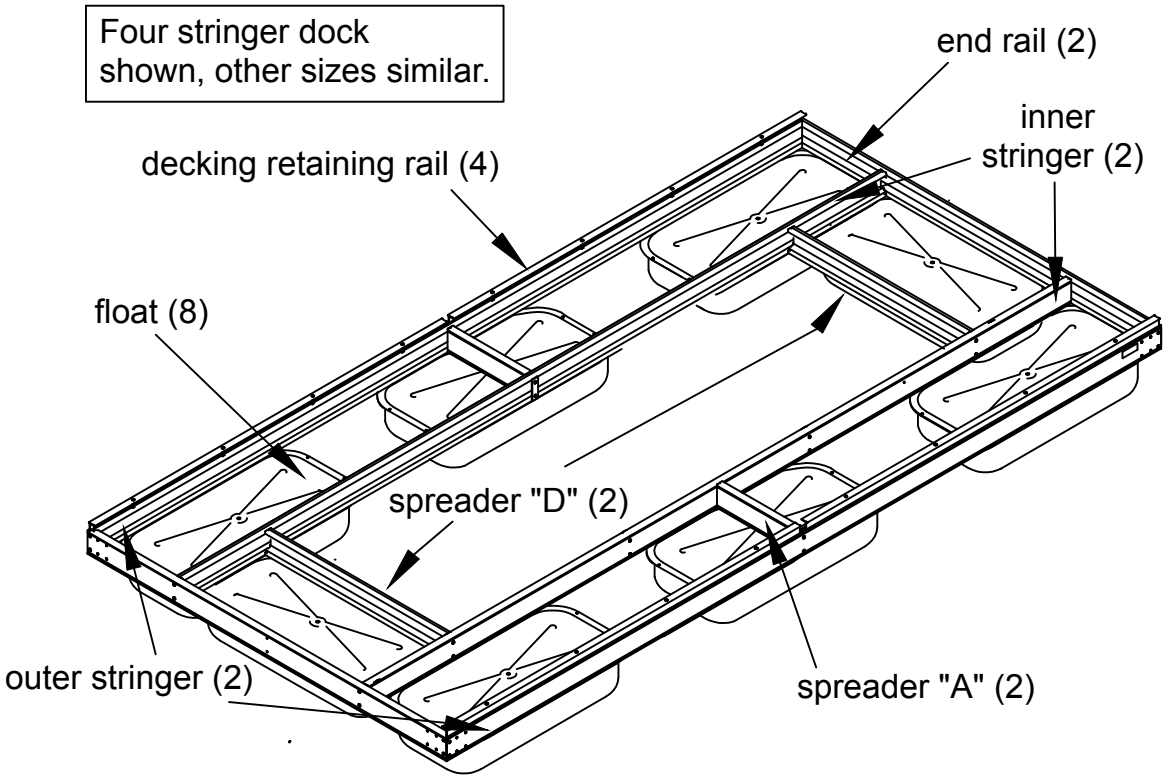
Floating docks can be hinged together in different configurations.

CAUTION: Damage may result if care is not exercised with heavy boats and/or rough water. In such cases, boats should be anchored away from dock.

1.0 Floating Dock Components

1.0 General Arrangement

Four stringer dock shown, other sizes similar.



Depending upon the width of the dock system, dock frames are constructed with either four or six stringers. Four foot wide ramp frames use only two stringers.

End View of Stringers Showing Orientation

Two Stringer Frame

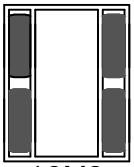
Screw ports of all stringers off-set to top.

Four Stringer Frame

Inner stringers on six stringer frame oriented "back to back".

Six Stringer Frame

1.1 Float Positioning ○ = Back up plate locations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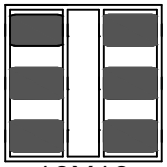
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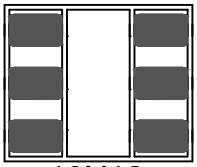
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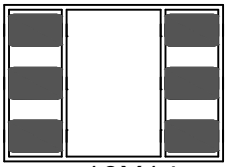
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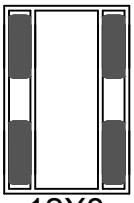
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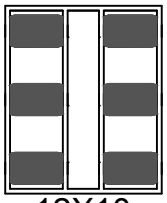
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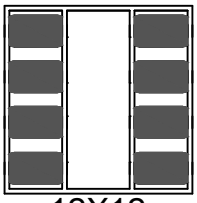
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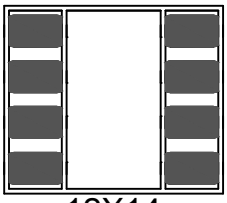
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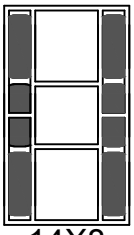
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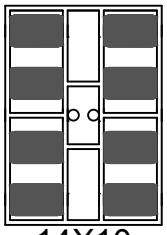
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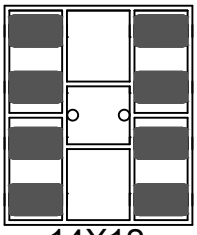
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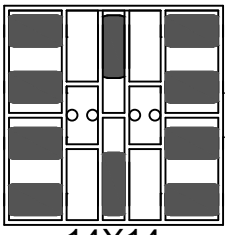
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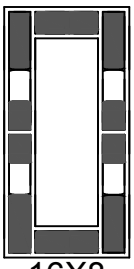
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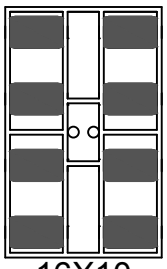
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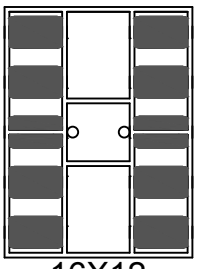
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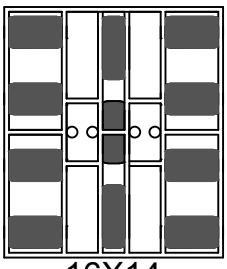
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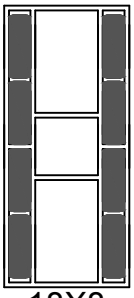
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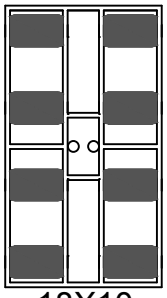
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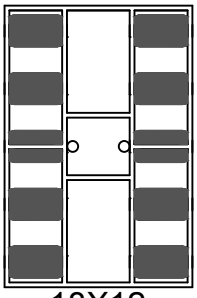
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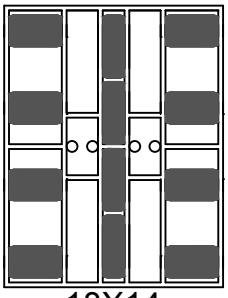
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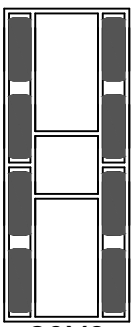
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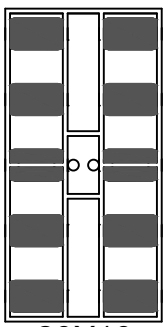
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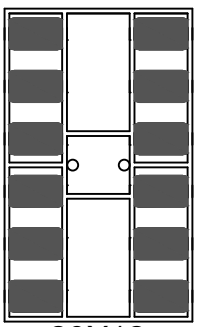
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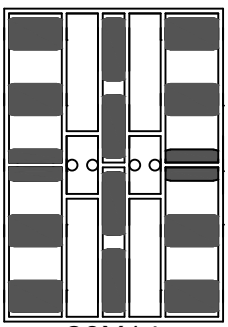
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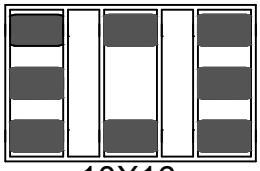
○ = Back up plate locations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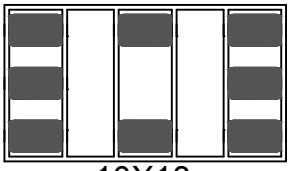
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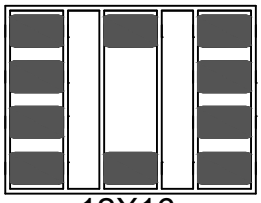
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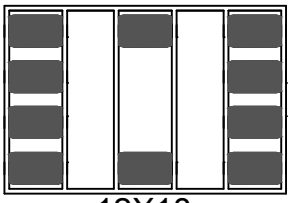
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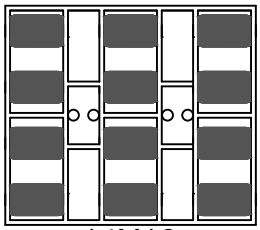
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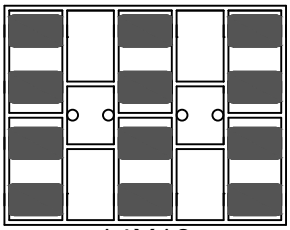
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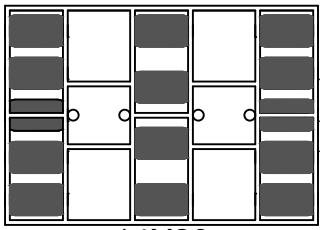
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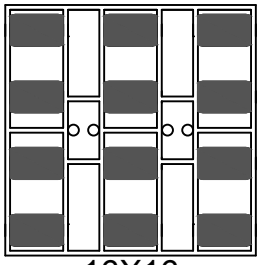
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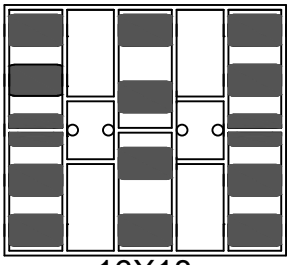
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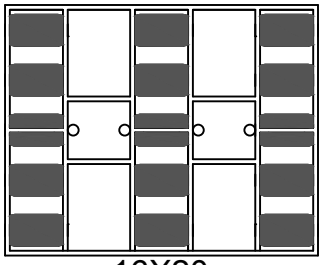
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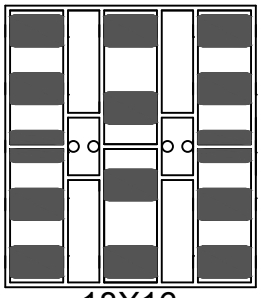
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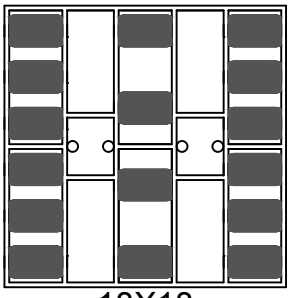
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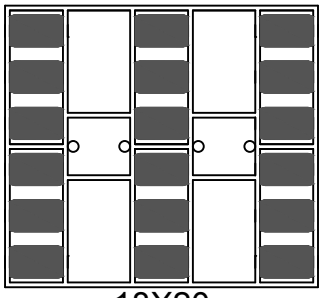
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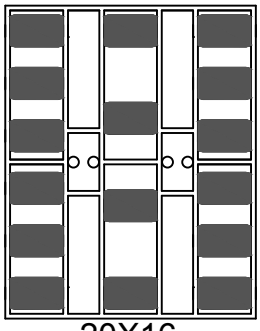
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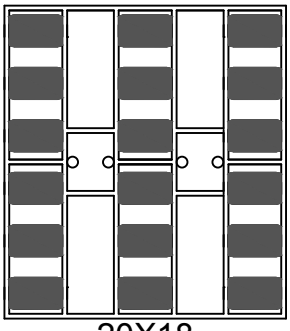
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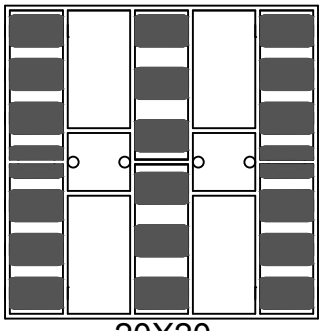
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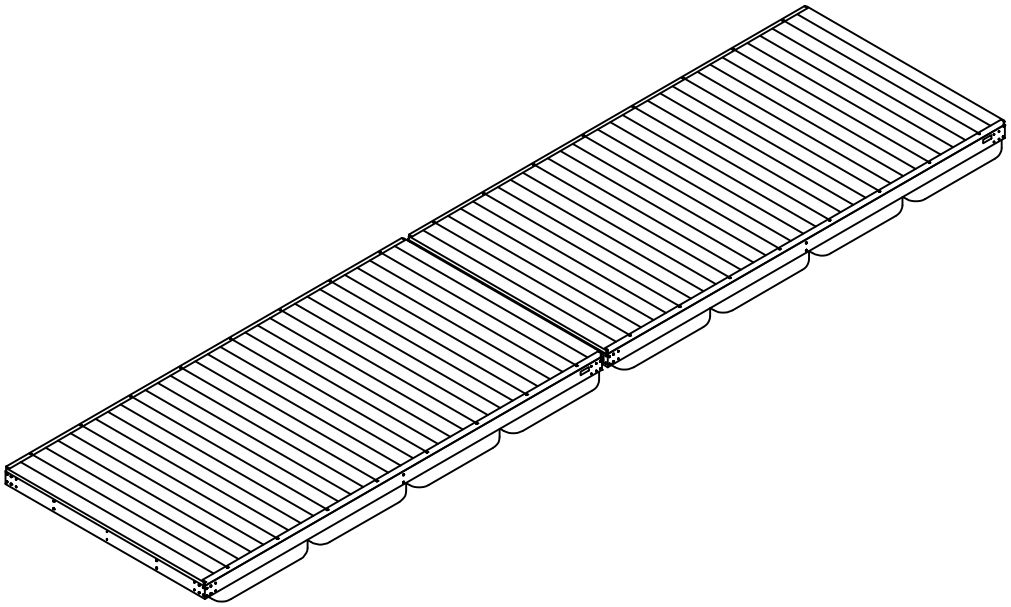
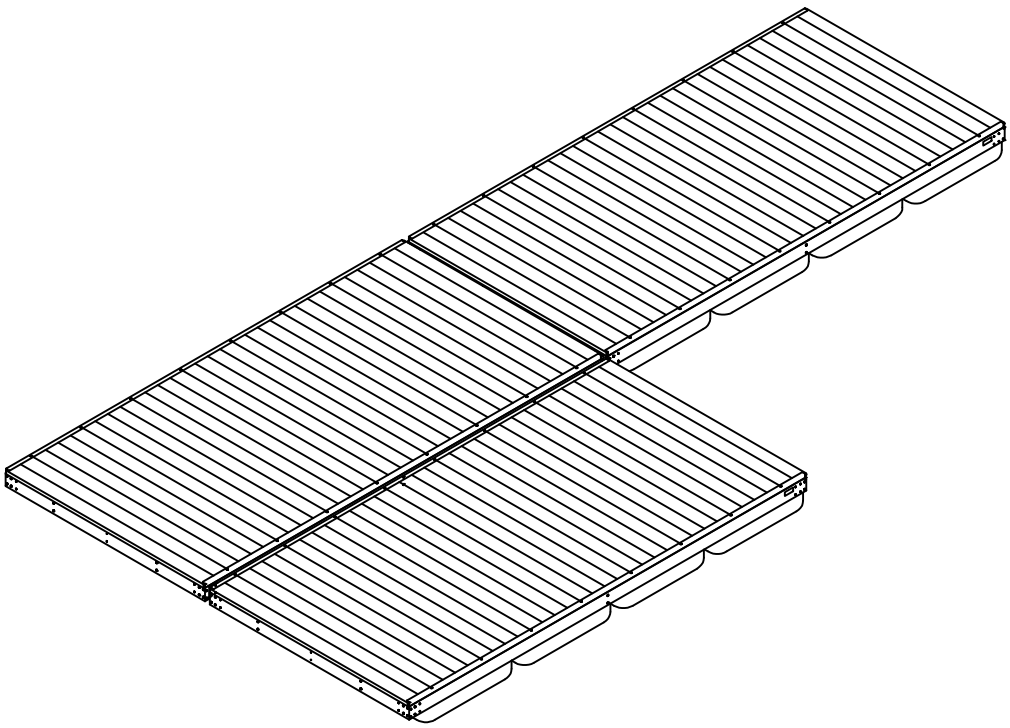
1.3 Floating Dock Configurations

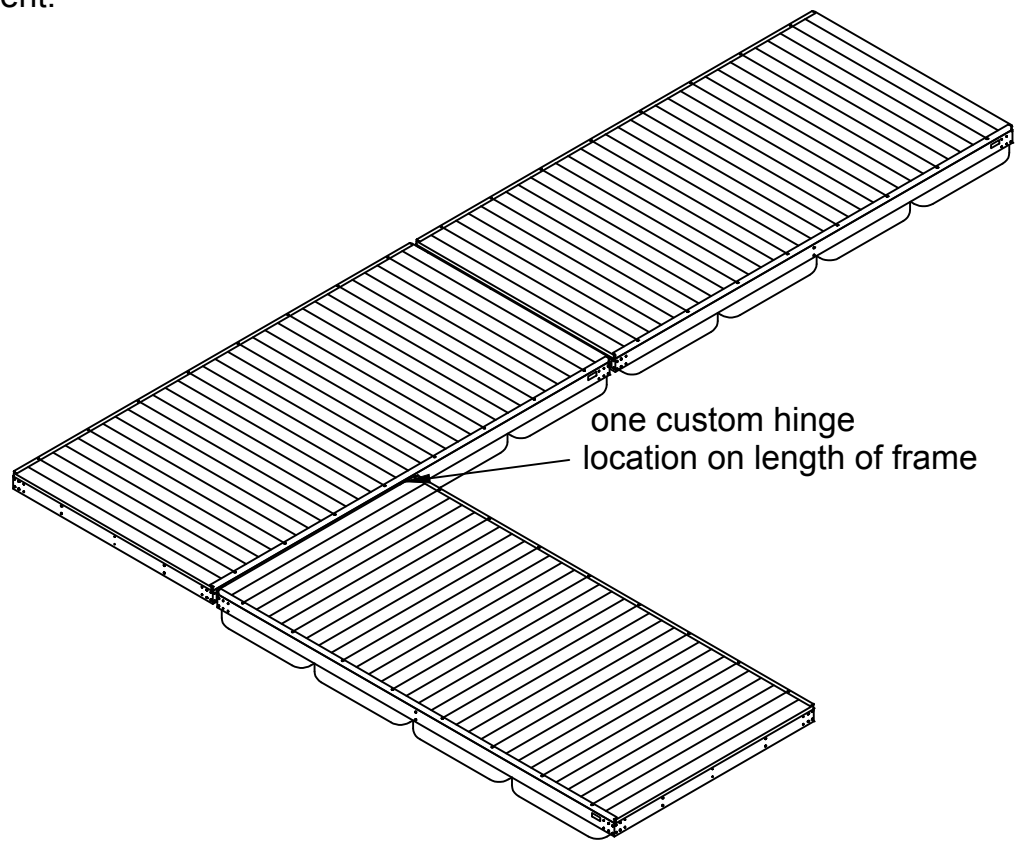
Fendock floating docks may be connected "end to end" up to any length.



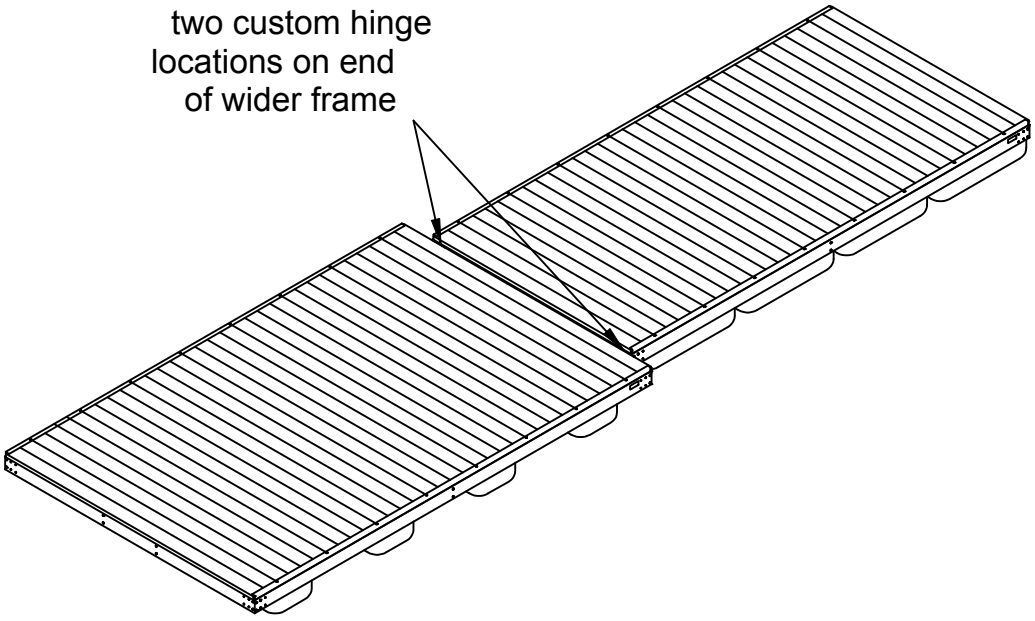
In addition to hinge locations on the end rails, Fendock floating docks also include hinge locations on their side stringers allowing "side by side" installations.



Furthermore, custom hinge locations allow the connection of docks at right angles. Whenever there is a custom hinge location a hinge relocation kit will be required (PN98202), the customer will be required to drill additional holes for hinge attachment.



... or the "end to end" connection of different width dock frames.



2.0 Getting Started

About the instructions...

Reading all of the instructions that pertain to a particular step, before proceeding, and following the order of the steps will assure easy assembly.

Tools and Tricks

Keeping all of the nuts, bolts and other components that have been emptied from opened hardware kits in a suitable container may help to avoid losses during assembly. Some extra nuts and bolts may be found in the hardware kits, and are needed for other applications.

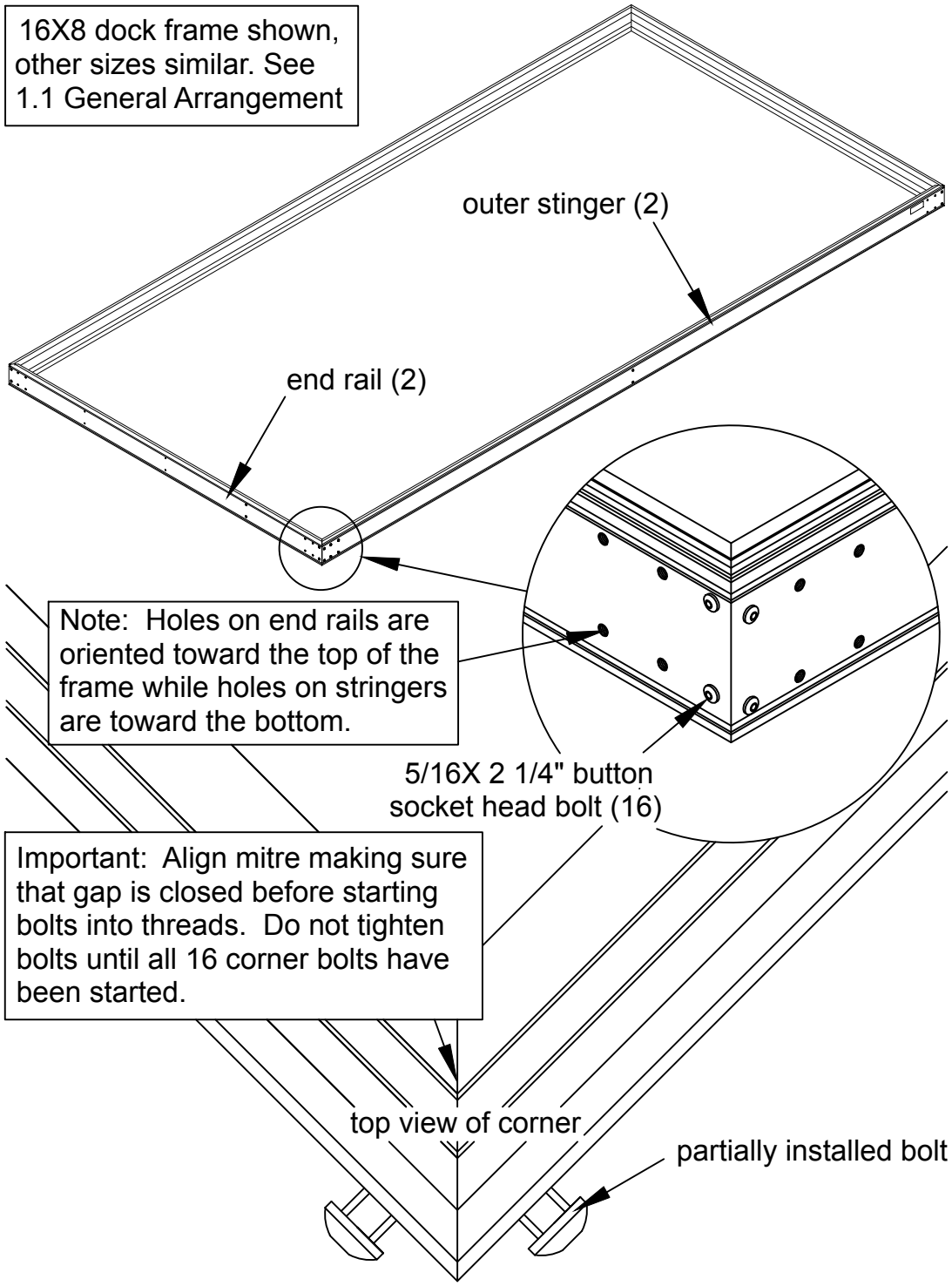
The only tools required for assembling a floating dock frame are a $\frac{9}{16}$" and $\frac{1}{2}$" sockets with a ratcheting handle, a cordless electric drill or impact driver. A $\frac{3}{16}$" allen hex power bit is included with the supplied hardware. (In outer stringer hardware bag PN97181).

The assembly and installation of the decking and accessories will require additional tools as is detailed in their instructions.

3.0 Assemble Frame

3.1 Assemble Perimeter

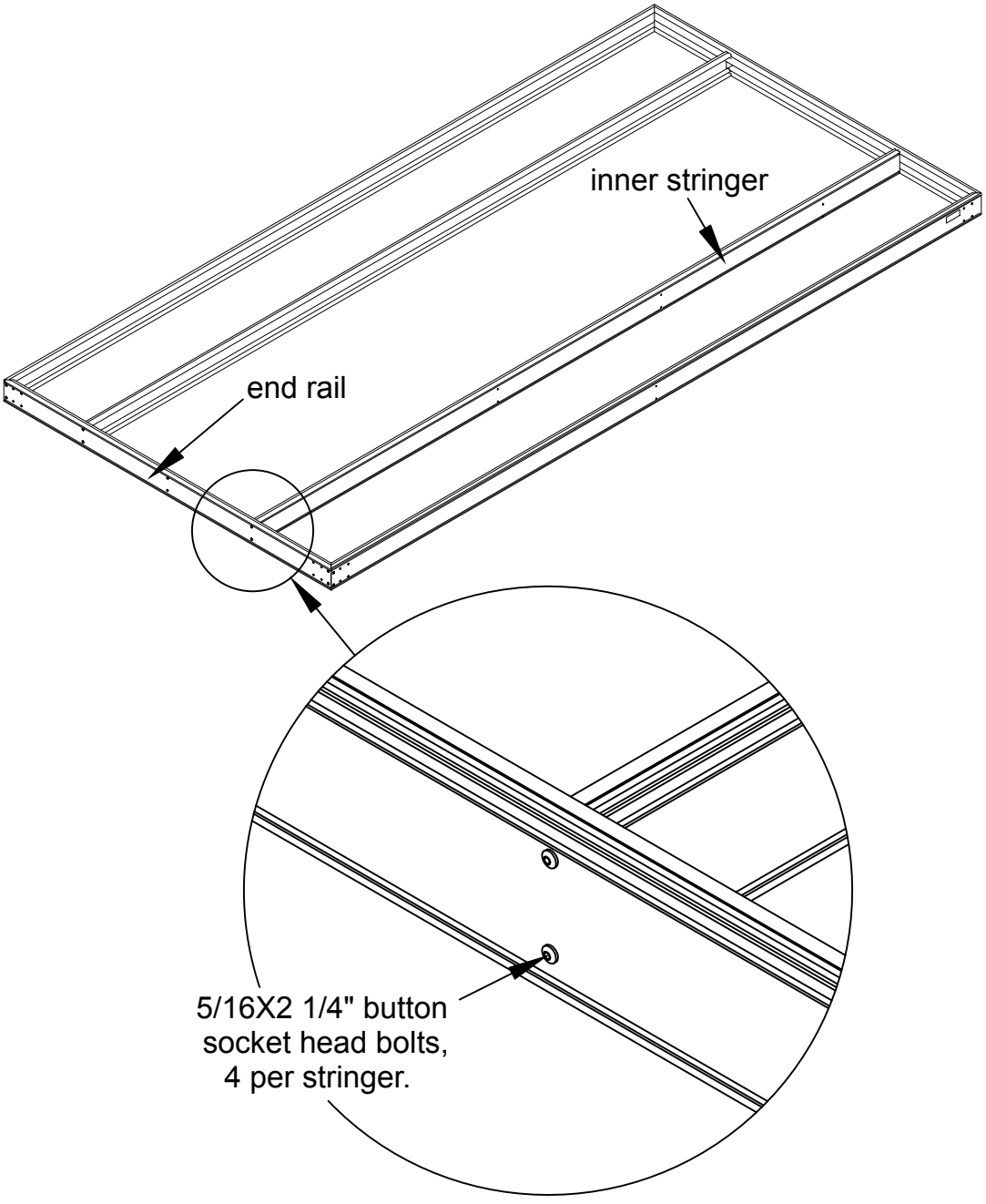
Assemble perimeter of dock frame using sixteen 5/16X 2 1/4" button socket head bolts. Start all 16 bolts into threads before tightening.



3.2 Install Inner Stringers

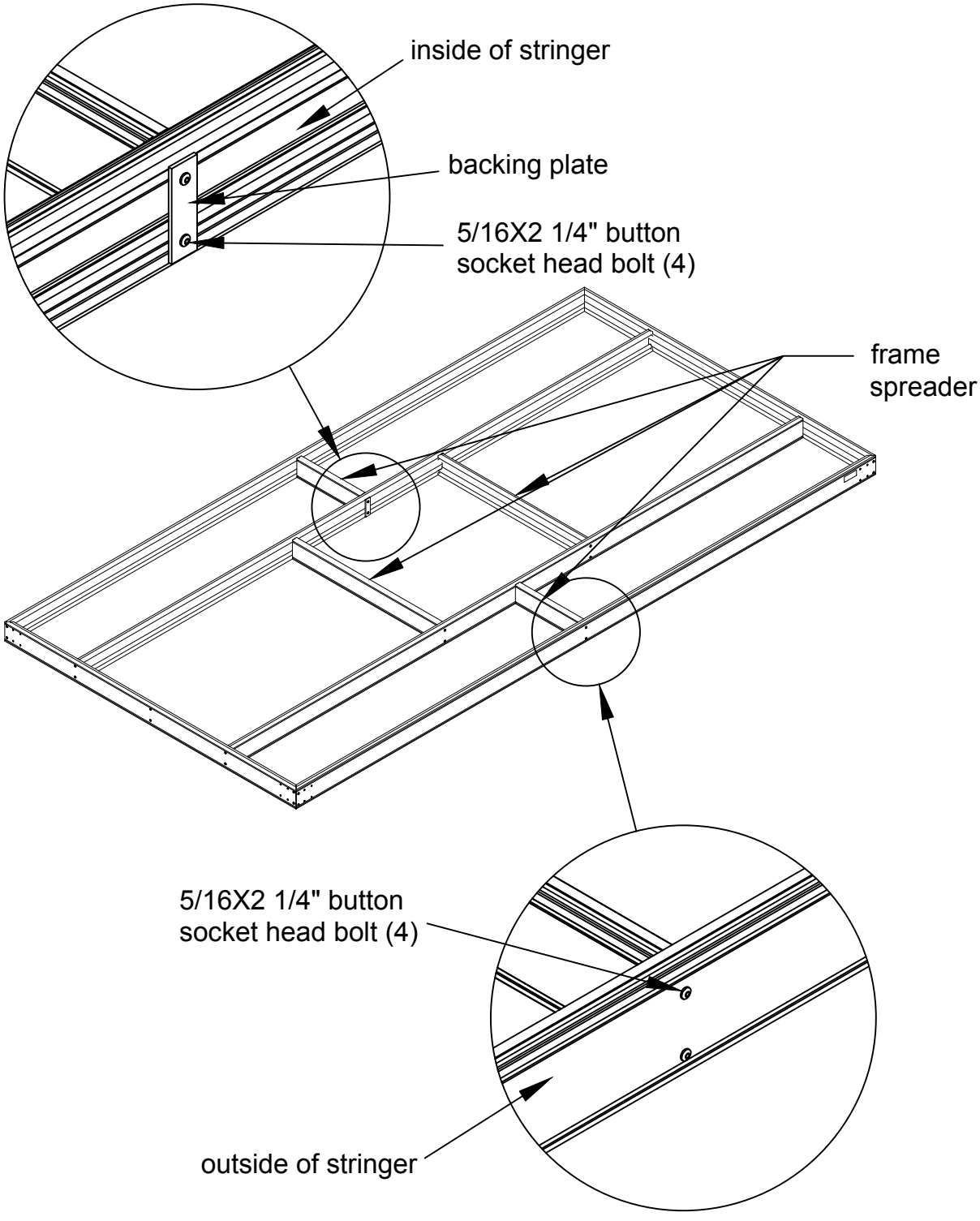
Depending upon the width of the dock system, dock frames are constructed using two, four or six stringers. See 1.0 & 1.1 General Arrangement for correct stringer "orientation". The stringer orientation is important for spreader installation (3.3).

Install inner stringer(s) using four $\frac{5}{16}$" X 2 $\frac{1}{4}$" button socket head bolts each. Bolts must line up with the screw ports in the stringer. Hole orientation on the inner stringer is the same as the outer stringers (towards the bottom see Note on 3.1)



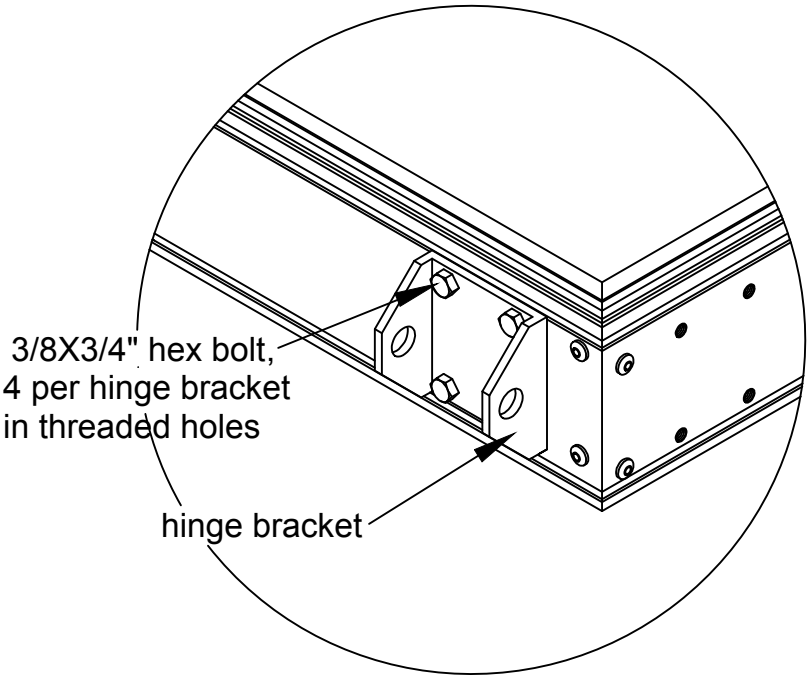
3.3 Install Spreaders

Install the spreaders using four $\frac{5}{16}$ x 2 $\frac{1}{4}$" button socket head bolts each. Where the bolts are to be inserted from the inside of the stringers, backing plates are provided. **If the stringers are not orientated correctly you will find yourself with not enough backing plates.** Dock frames shorter than 14' do not have spreaders. When installing spreaders, get the bolts on one side started but do not tighten. Once the bolts are started on the other side, then all bolts can be tightened.

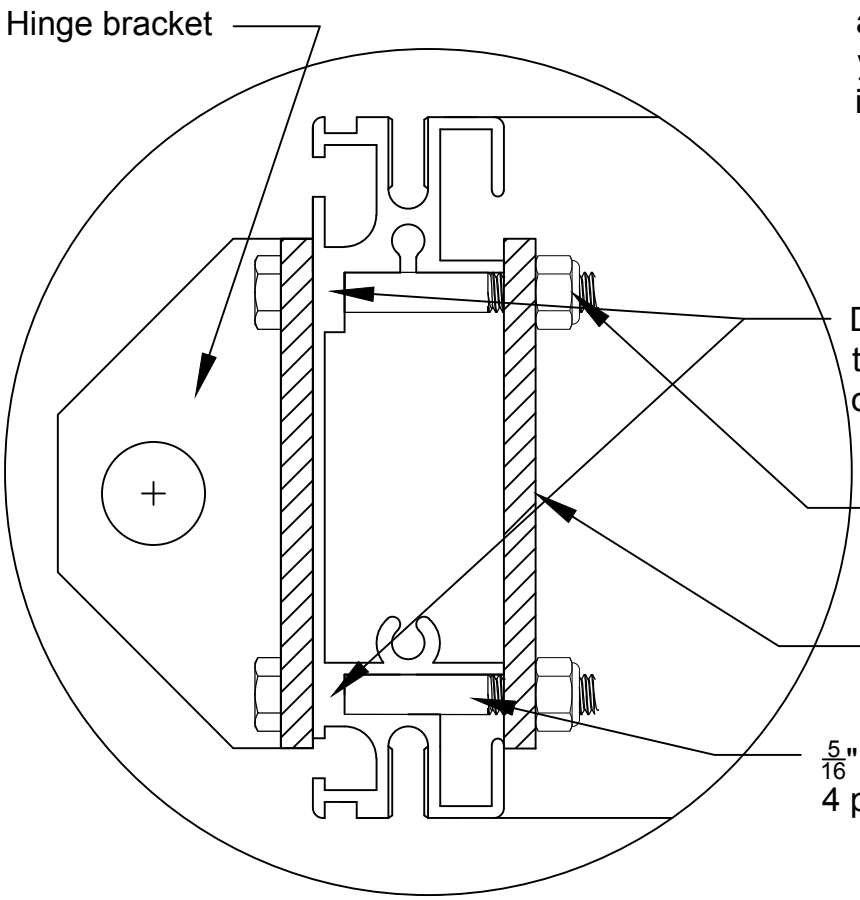


4.0 Install Hinges

Install the optional hinge pair kits (PN98200/PN98206) to any locations that are required for the desired system layout using the $\frac{3}{8}$" x $\frac{3}{4}$" hex bolts that are included in the hinge kits. Standard pre-punched and threaded hinge locations are provided at the ends of both the outer and the end rails.



Hinges may be installed to non standard locations by ordering hinge relocation kits (PN98202). Hinge relocation kits contain an aluminum backing plate, $\frac{5}{16}$" x 2 $\frac{1}{2}$" hex bolts and nuts. The plate is also used as a template, so you can drill your own holes in the frame.



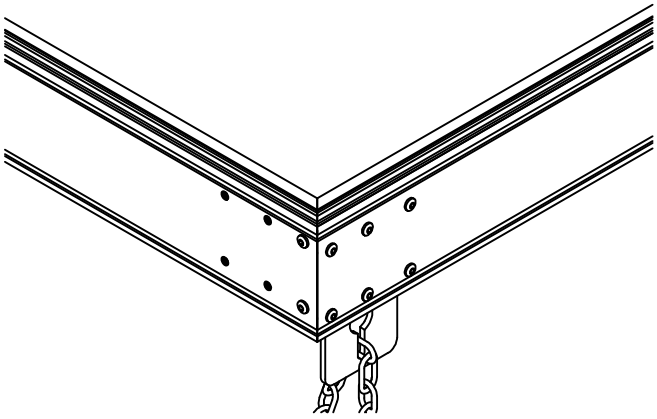
5.0 Install Anchor Points

Different shoreline features, water depth fluctuations and underwater conditions require different approaches to floating dock anchorage.

While choosing a suitable method of anchorage is the responsibility of the installer, Fendock manufactures the anchor point hardware that is required for most installation scenarios.

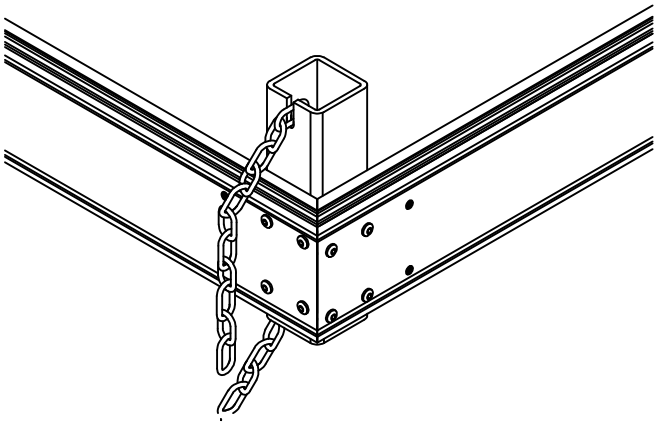
Anchor Plates

PN98020. Anchor plates mount entirely below the decking surface, providing a clean look and fewer dock surface obstacles. Sold individually with hardware (chain not included).



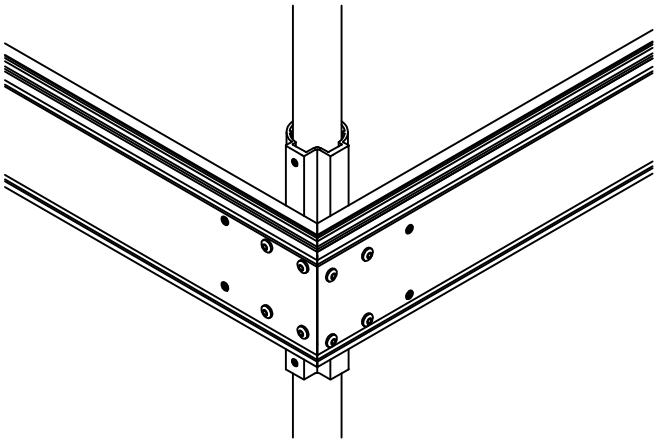
Chain Retainers

PN98024. Easier to disengage tight chains when making adjustments. Simple decking modifications required. Sold individually with hardware for mounting with or without hinge (chain not included).



Guide Pole Sleeves

PN98029. Self adjusting. Ideal for sheltered locations up to 18' in depth. Sold individually with mounting hardware for mounting with or without hinge (1 $\frac{1}{2}$" I.P.S pipe not included).

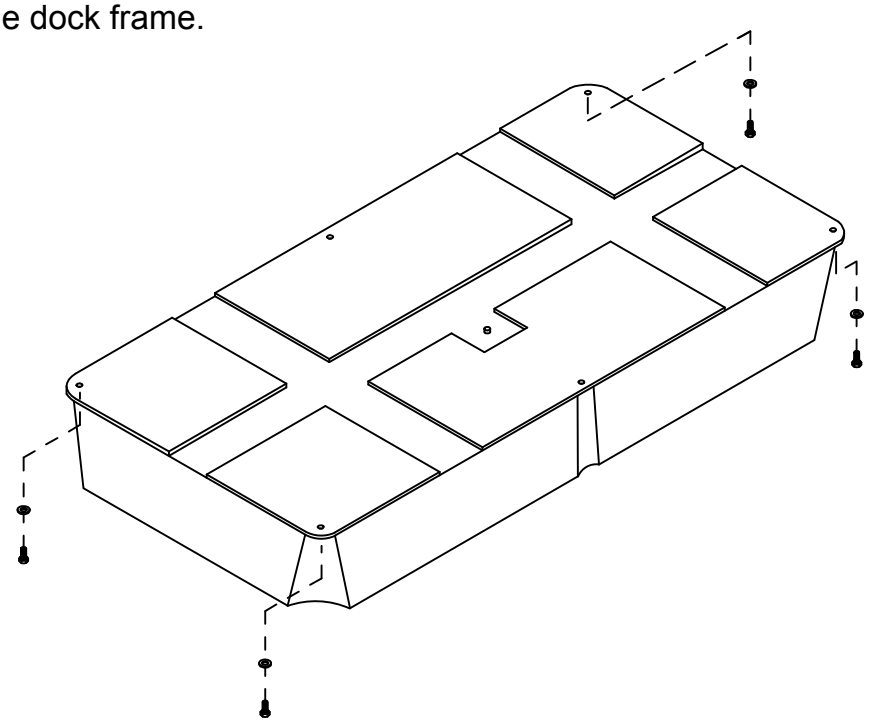


6.0 Float Mounting

Refer to 1.0 & 1.1 General Arrangement for the float location details for the dock frame size that is being assembled.

In some instances, it may be found that inverting the dock frame may make it easier to install the floats. Alternatively, you can put a float under each end of the dock to elevate it while placing floats in correct location for mounting.

The floats install to the continuous screw tracks that run along the entire length of the bottom of the stringers using the four $\frac{5}{16}$" x 1 $\frac{1}{2}$" hex bolts and washers that are included in the float mounting hardware bag that is attached to each float. (There are additional holes in the floats, but only the four holes at each corner of the float are used to secure it to the dock frame.



The float locations may be slightly relocated along the screw track to provide clearance for accessories such as wheel kits and anchor plates, and to level docks that are unevenly loaded due to the installation of ramps that are not supported by their own floatation.

Note: Before putting decking on, make sure to close vents on floats.

7.0 Building Decking

7.1 Decking Types

Wood Decking

Strong, lightweight, durable and affordable, wood is most common choice among Fendock owners. Prefabricated panels may be ordered through a Fendock dealer or one may easily make their own panels by following the instructions provided in this manual.

Typically, unfinished local cedar provides the best balance with regards to weight, strength, appearance, maintenance and cost. The hold down angle is designed to accept standard 2" x 6" ($1\frac{1}{2}$" thick) lumber which provides the necessary strength required to span the width of the dock frame when the decking panels are fabricated according to the instructions provided.

Pressure treated lumber may also be used, but check with your lumber supplier to be certain that the preservative is compatible with aluminum. Treated lumber may also be subject to local restrictions and bylaws.

Aluminum Decking

Cooler than wood in the hot summer sun, aluminum decking is virtually maintenance free alternative that provides a clean modern look for your waterfront, and has a virtually infinite life span.

Aluminum decking is available in plain mill finish or a beautiful anodized finish (light bronze or black) and may be ordered through your local Fendock dealer. Anodized decking is a special order item.

Composite Decking

Not recommended due to its high weight, and low strength coupled with high cost.

7.2 Decking Panel Configurations

For simplicity of constructing decking panels, all decking panels will be made the same. You will only require "cut outs" in decking if and when an anchoring accessory extends above the decking, and in such cases the standard decking panel may be easily modified.

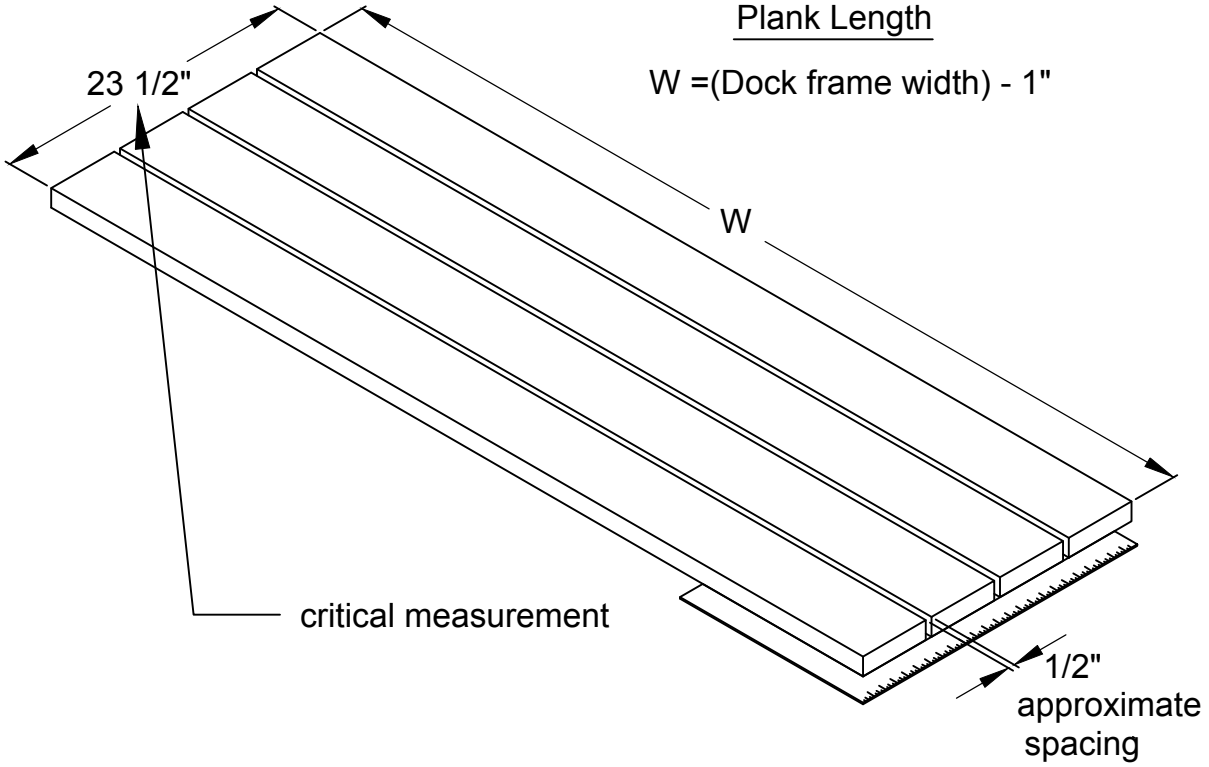
Each dock frame uses one decking panel for every two feet of dock length. Each decking panel is comprised of four 2 x 6 ($1\frac{1}{2}$" x $5\frac{1}{2}$") planks with approximately $\frac{1}{2}$" spacing between them. The four planks are connected by 1 x 6 stringers and fastened with #10 x $1\frac{3}{4}$" wood screws.

When the decking panels are constructed according to the instructions provided, the through bolts in the decking retaining rails will pass through the $\frac{1}{2}$" space between the second and third decking planks and engage with the continuous screw track in the top of the outer stringer of the frame.

The hole pattern of the decking retaining rail will set the panel locations. The end panel planks will overhang the end of the dock frame by approximately $\frac{1}{4}$".

7.3 Fabricating Decking Panels

7.3.1 Prepare two 2 x 6 (1 ½" x 5 ½") planks per foot of length of dock frame, cutting to the plank length (W) that corresponds to the dock frame size being built.



7.3.2 Prepare 1 x 6 (¾" x 5 ½") stringers, cutting to 19 ½". The required quantity of stringers for 8', 10' and 12' wide docks is three per decking section with one at each end and one in the middle (see 7.3.4).

The required quantity of stringers for 14', 16', 18' and 20' wide docks is five per decking section with one at each end, one in the middle and two at quarter points.

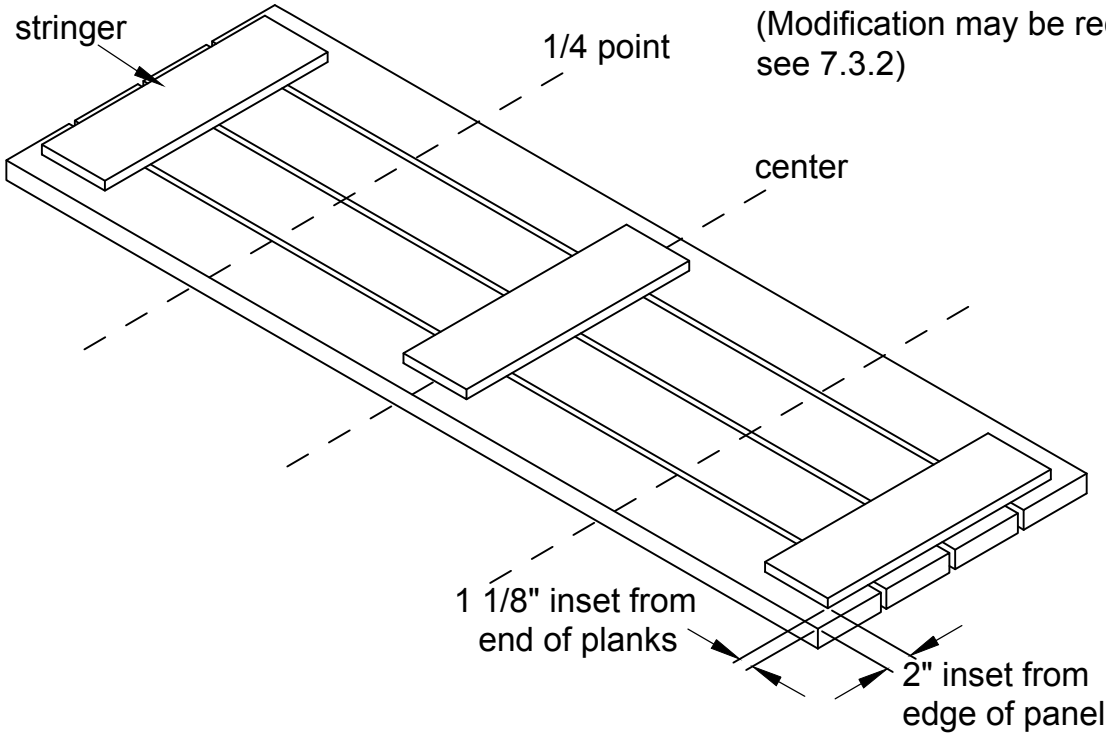
Note: The middle decking panels for 14' long and 18' long docks require modification to the outer stringers and center stringer to provide clearance for the frame spreaders. I.E: The stringer will have to be notched out to provide clearance of the spreader. Or as an alternative this decking panel can simply be made into two sections, each with just two pieces of 2 x 6 (instead of 4 pieces of 2 x 6)

7.3.3 Carefully set out four planks on a flat surface (or leveled saw horses) with their ends even and squared and approximately ½" spaces between them.

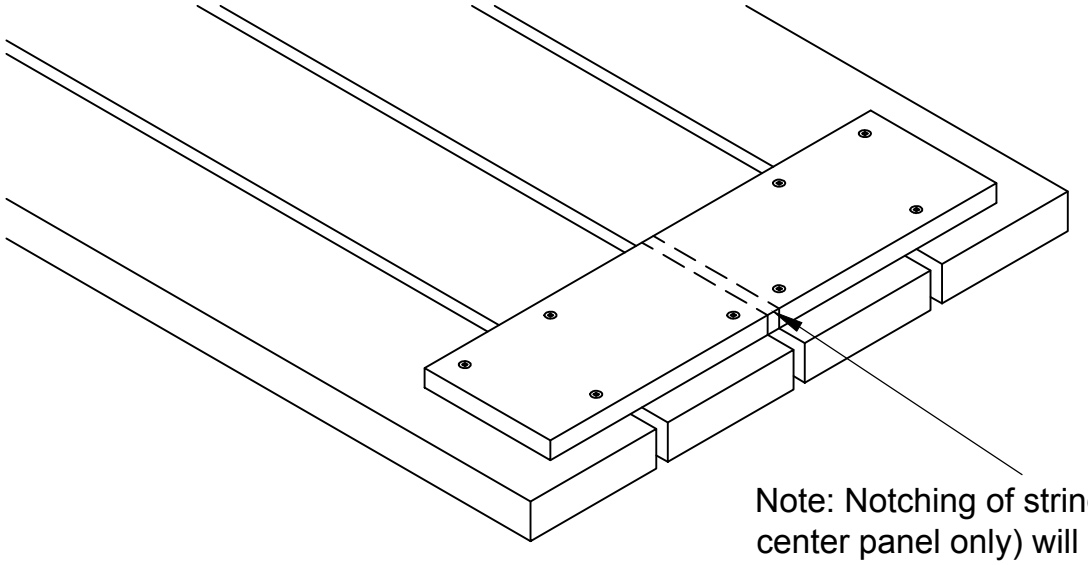
Check to be sure that the total distance measured across the four planks equals 23 ½"

Carefully set-up of this first decking panel allows it to be used as a template for the remaining panels.

7.3.4 Set out stringers in the locations shown.



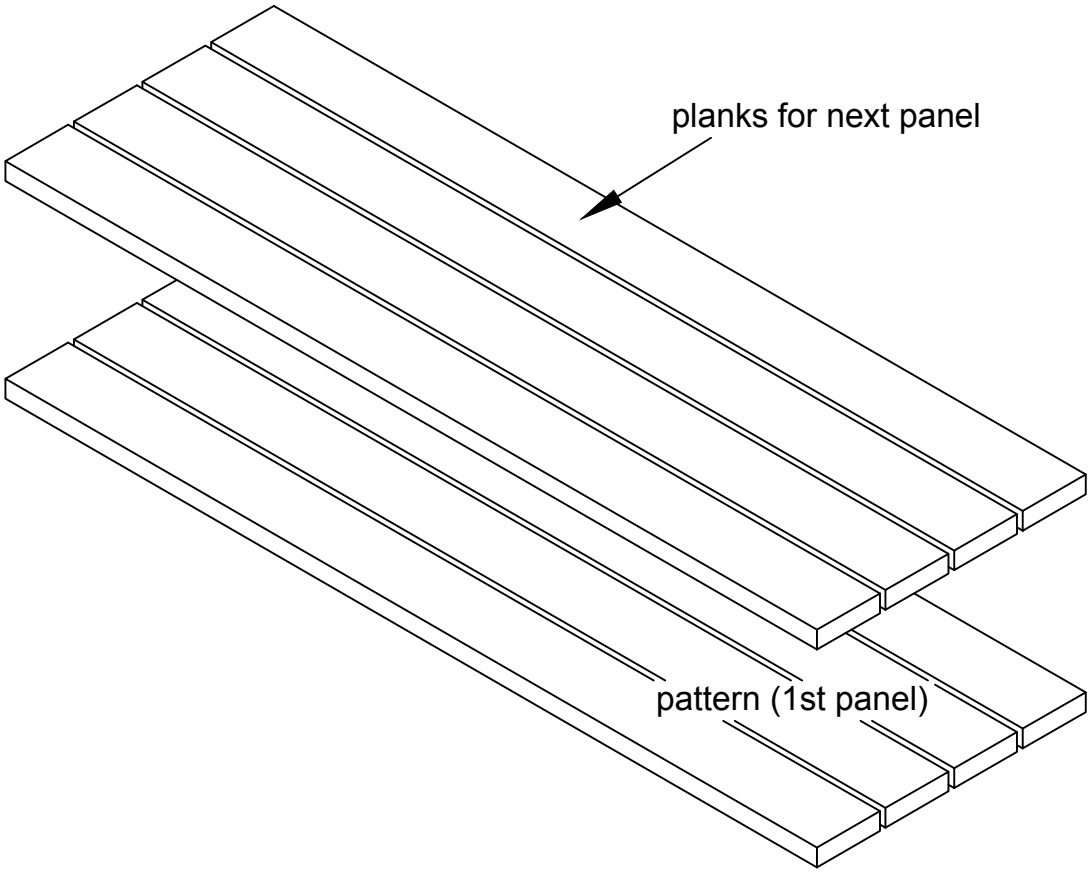
7.3.5 Using eight #10 x 1 $\frac{3}{4}$" wood screws per stringer, fasten the stringers in place by the approximate screw locations shown. (Ensure boards are square)



Note: Notching of stringers (in center panel only) will be required for 14' & 18' long docks for clearance of the spreaders.

7.3.6 Flip over the finished panel. It can now be used as an assembly pattern to aid in aligning the decking planks for the successive decking panels.

Assemble the remaining panels as per 7.3.4 and 7.3.5.



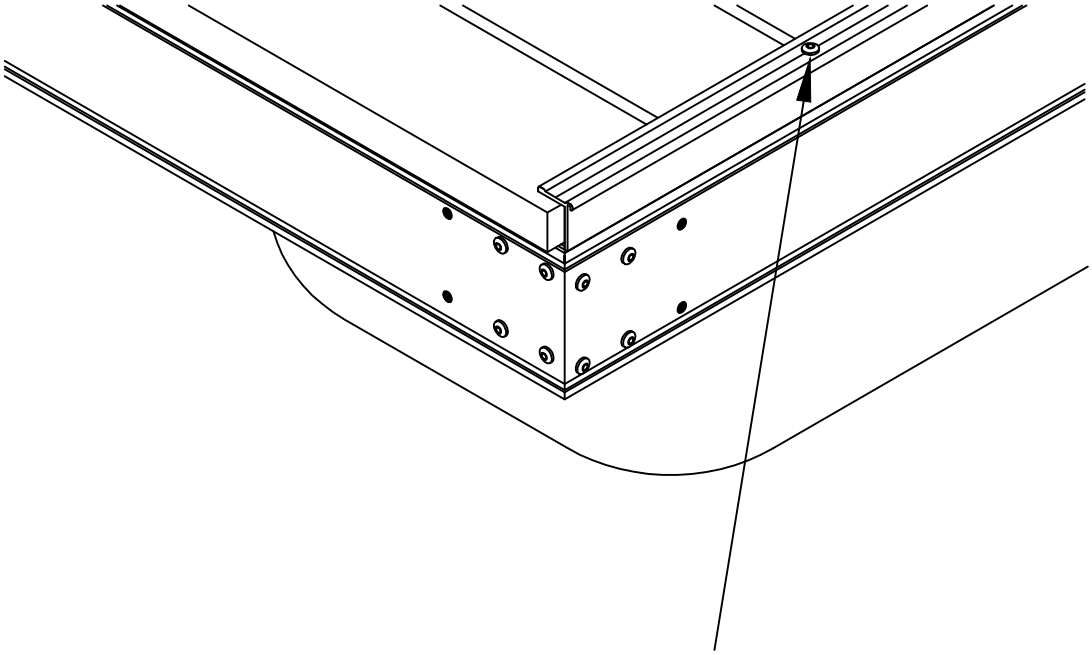
8.0 Install Decking

Set out the decking panels along the dock frame with about $\frac{1}{2}$" of space between them and with the end panels overhanging the end of the dock frame by about $\frac{1}{4}$".

Center the panels, left and right, between the grooves for the decking retainer rails.

Set out the retaining rails on top of the decking panels and engage their flanges in the frame rail grooves. The hole pattern of the retainer rails will determine the final location of the decking panels as the bolts must pass between the 2nd and 3rd planks on each panel.

"lake end" of a floating dock.



5/16" x 2 1/4" button socket head bolts

9.0 Optional Bumper System

9.1 Overview

An optional side rail bumper system is available that simply clips into retaining grooves that are incorporated into the extruded aluminum profiles of the dock frame and decking retaining rails.

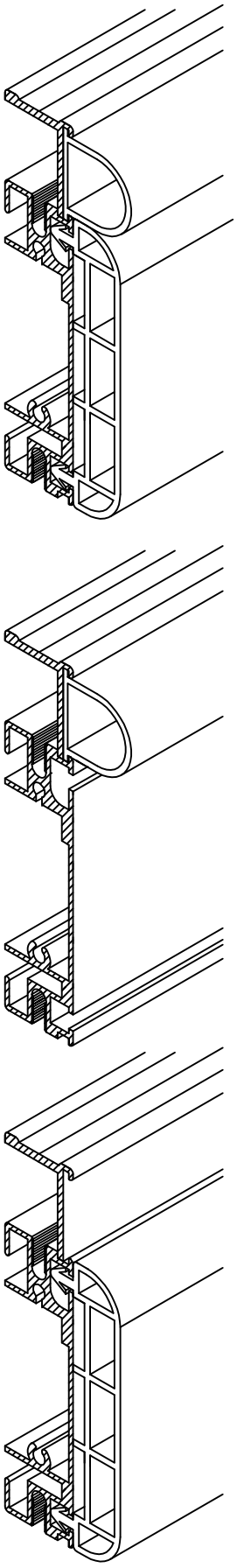
The bumper system, comprised of separate upper and lower bumpers in conjunction with specially designed trim corners and end caps, can be tailored to meet the specific protection requirements of your docking needs.

The upper and lower bumpers, designed to be installed together for maximum protection, may also be used individually or omitted entirely for different applications or sections of dock.

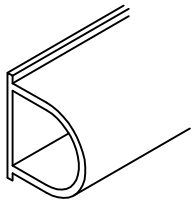
To install the small upper bumper the hold down angle must be loosened to fit the bumper in place.

To install the large lower bumper use a rubber mallet to hit the bumper prongs into the grooves in the aluminum frame.

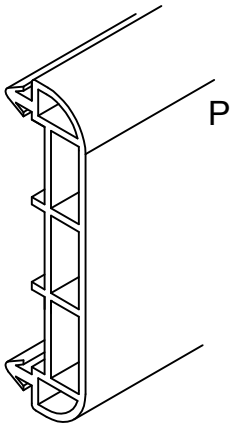
Note: The bumpers do not slide into place



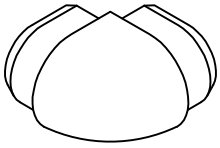
9.2 Bumper Components



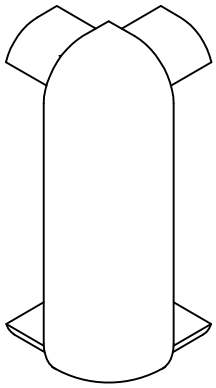
PN90100 Upper side rail bumper, available in 120" "trim to fit" lengths.



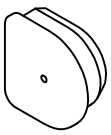
PN90200 Lower side rail bumper, available in 120" "trim to fit" lengths.



1049-F Upper bumper corner, package of four.



PN01507 Lower bumper corner, sold individually.



1027-F Upper bumper end plug, package of four.

10.0 Accessory Selection

Hinge Kits. (PN98200)

Fendock floating dock hinges may be readily installed to the corners of the dock by making use of the standard factory hinge bolt locations that are punched and threaded at each end of both the outer stringers and the end rails.

Stainless Steel Hinge Kit (PN98206)

A heavy duty hinge kit for applications on large bodies of water, where wind, waves and water fluctuations can be extreme.

Hinge Relocation Kit (PN98202)

Some installation layouts require hinge locations that are not included on the standard rail and stringer kits as they are manufactured. The addition of custom hinge locations may be easily accomplished by ordering hinge relocation kits and then performing the modifications on-site.

Wheel Kit.

The addition of wheels can simplify off-season dock removal and storage. Wheels also help to protect the dock while beaching.

Anchor Plates (PN98020)

In most situations, floating docks will require anchoring. Anchor Plates allow chain length changes to be made as required. Chains pass through anchor plates then criss cross underneath the dock and attach to anchors below the water. Anchors themselves can be purchased through some retailers, or made by yourself, using a form and mixed cement.

Anchor Forms (PN01046)

Forms which you fill with cement to form anchors. See video online (http://vimeo.com/107637201)

11.0 Dock Installation and Removal

Removing one's floating dock system from the water during the off season is the best way to protect it from ice damage. Docks stored on shore must be set and blocked in as many points as possible so that the combined weight of the dock and snow load are evenly distributed.

While it is generally recommended that floating docks are removed from the water for off season storage, there are some instances when floating docks can be left in the water over the winter. The ice that forms around the dock will not damage it, "ice movement" in the spring, as the ice begins to melt, is what causes the damage. In most cases small lakes and calm sheltered bays are where the "ice movement" is minimal, and therefore the risk of damage is also minimized. If you choose to leave your dock in the water in these circumstances, the dock **must be disconnected from shore** and tie off.

A good understanding of your waterfront and of how the ice typically melts/moves helps in your decision making, along with understanding that winds can change the "ice movement" from to year to year.

Once floating docks are removed from the water for winter, they should be "blocked" so the floats are elevated off the ground for the winter, to prevent damage to the floats due to weight loads of snow and ice.

12.0 Fendock's Guarantee & Warranty Registration

Fendock is proud to offer a 5 year warranty, which is testimony to the quality workmanship and materials used in the manufacturing of our products. This warranty is valid only upon normal use and under normal conditions. Our detailed warranty is available upon request.

Improper assembly of the dock, and / or improper assembly of decking panels including the materials used to assemble panels, may affect warranty.

Any damage to the dock as a result of removing or installing with a motorized vehicle will not be covered under warranty.

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FLOATING DOCK INSTRUCTIONS