

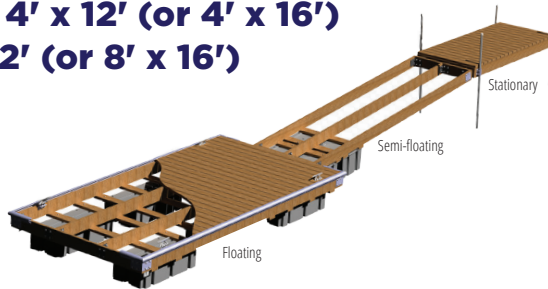


HOW TO BUILD A WOODEN DOCK

Sturdy 3-section wooden dock

- **Stationary section - 4' x 8'**
- **Semi-floating section - 4' x 12' (or 4' x 16')**
- **Floating section - 8' x 12' (or 8' x 16')**

- › **Hot-dip galvanized steel hardware**
- › **Hollow or foam-filled floats in various sizes**



MATERIAL LIST

FLOATS

Your use of the dock and your boats will guide you in choosing the float model you need:

- For swimming, pedal boating, canoeing or kayaking: low free-board
- For a pontoon or large motorized boat: high free-board

To calculate the amount of floats needed (for residential use) :

- › Multiply the dock area (length x width) by 25 (for 25 lbs buoyancy per square foot).
- › Divide this amount by the buoyancy capacity of the chosen float (ex. float R-750 has a capacity of 750 lbs) then round to the nearest even number.

Examples:

low free-board $8' \times 12' = 96 \text{ pi}^2$ $96 \times 25 = 2400 \text{ lbs}$ $2400 \div 370 = 6,4 \text{ floats}$ so 6x the R-370 model
 high free-board $8' \times 12' = 96 \text{ pi}^2$ $96 \times 25 = 2400 \text{ lbs}$ $2400 \div 750 = 3,2 \text{ floats}$ so 4x the R-750 model

- › Make sure you have enough space to install all floats under the dock.

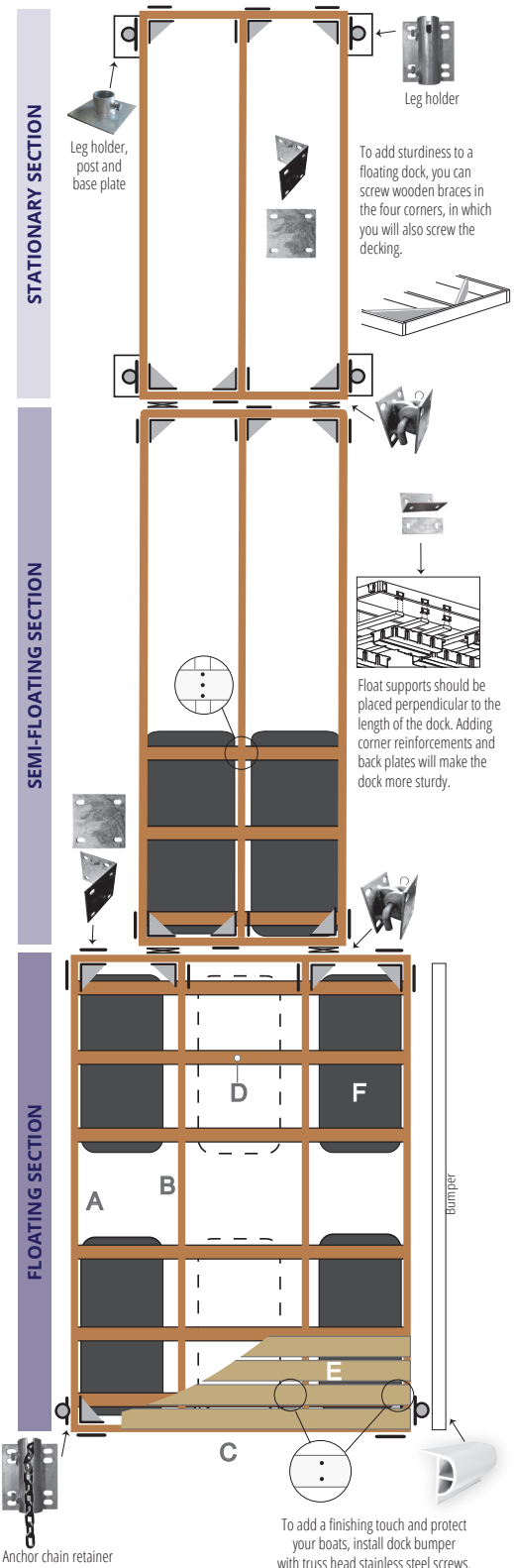
LUMBER

See the table below for suggestions of materials and required quantities.

A	Side pieces	Desired dock length
B	Inside joists	Dock length minus 3-1/4"
C	End pieces	Desired dock width, minus 3-1/4"
D	Float supports	Desired dock width
E	Decking boards	Desired dock width

COMPLEMENTARY ACCESSORIES TO A COMPLETE DOCK SYSTEM:

- Bumpers and fenders
- Mooring cleats and lines
- Swimming ladders
- and more!



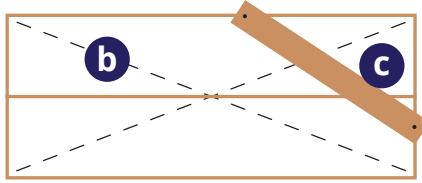
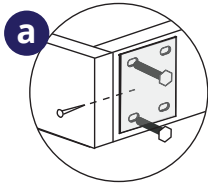
EXAMPLES OF NECESSARY MATERIALS	FORMAT	4' X 8' STATIONARY		4' X 12' SEMI-FLOATING OR 4' X 16' SEMI-FLOATING		8' X 12' FLOATING OR 8' X 16' FLOATING	
		QTY	SIZE	QTY	SIZE	QTY	SIZE
A Side pieces	2" x 6" (or 2" x 8")	2	96"	2	144"	2	192"
B Inside joists	2" x 6" (or 2" x 8")	1	92-3/4"	1	140-3/4"	2	188-3/4"
C End pieces	2" x 6" (or 2" x 8")	2	44-3/4"	2	44-3/4"	2	92-3/4"
D Float supports	2" x 6" (or 2" x 8")			3	48"	3	48"
E Decking boards	2" x 6"	16	48"	25	48"	33	48"
F Floats (or posts)	24" x 60" (8" or 16" height)	4 posts and 4 base plates		1 or 2		1 or 2	
Wood screws	#10 x 3-1/2"	170		190		220	
Bolts, nuts and lock washers	1/2" x 3"	48		48		48	
Lag screws and washers	3/8" x 4-1/2"			12		12	
						24 or 36	
							24 or 36

* A float can be installed with only 4 lag screws however the addition of a 3rd float support adds strength to the structure.

HOW TO BUILD A WOODEN DOCK IN 4 STEPS

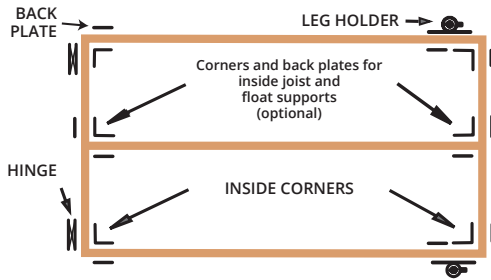
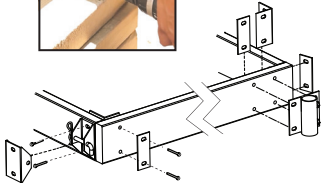
1

For a floating dock, start assembling the dock upside down so you can easily install the floats in step 3. Arrange the sides and ends of the base structure (and the interior reinforcements if necessary) and screw them in place. The screws should not be aligned with the holes you will make for the hardware **a**. Check the squareness by measuring the 2 diagonals. They must be within $\frac{1}{8}$ " of difference in length **b**. Secure in position by temporarily screwing a board on the structure **c**.



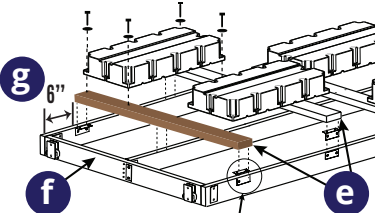
2

Starting with corners, align the parts, mark the holes with a pencil **d**, drill and install the hardware with the bolts. Note that parts may vary from the drawing. For a stationary dock, continue with step 4-B.



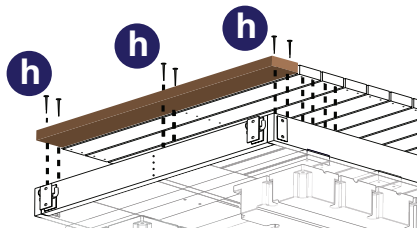
3

Arrange the float supports (2" x 6" boards) **e** and floats on the structure **f** to determine their positions. Leave +/- 6" of spacing with the main structure to allow further manipulations **g**. Mark the locations of the float brackets on the structure and those of the floats on the supports. Remove the floats, bolt the float supports with brackets and secure the floats using lag screws and large flat washers. You can also use bolts with lock and flat washers.



4

A For a floating dock, before installing the decking, you will need help to flip the structure over, carefully, without hurting yourself.
B Reconfirm squareness (see step 1). Screw the decking starting at one end of the dock section and cutting the second to last board width according to the remaining space. Screw the planks into the outer and inner beams **h**.



HOW TO ANCHOR YOUR DOCK (STATIONARY OR FLOATING)

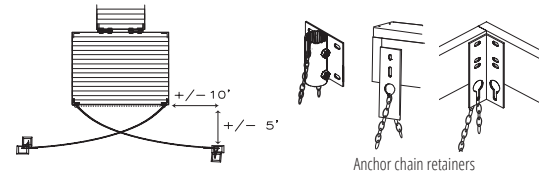
> STATIONARY DOCK

There is no need to anchor a stationary dock unless you are in an area with strong waves. Posts driven into the ground alone will ensure stability. You should, however, anchor your boat so that it can not hit the docks. Some prefer the installation of a boat lift. In difficult conditions, you can add one or more diagonal brace between the posts.

> FLOATING DOCK

A floating dock system absolutely requires an anchoring system at the end of the dock and every ~30 feet. It is the anchor blocks that will keep the docks in place in waves and water movements as there are no posts. Anchoring chain retainers are required at each anchor point. To install the anchor weights, place them on the floating dock section (we suggest you put a thick cardboard or piece of wood under the blocks to protect your decking), group the appropriate amount of blocks for each corner. Attach the chain with a shackle to the block group required for a corner. Move the dock over the desired anchor area and then tilt the blocks into the water holding the end of the chain that will attach to the dock. Keep some tension on the chain, attach it to your chain retainer in the opposite corner and cut it off with 2 extra feet for adjustments during the season. Do the same steps on the opposite side.

For the length of the chain, calculate about 4 times the depth to create the "X" shape.



EVALUATE POSITIONING TO AVOID INTERFERING WITH BERTHING OR SWIMMING

ANCHORING EXAMPLES IN CALM WATER AREAS:

- Small crafts, less than 15': minimum of +/- 200 lbs per chain, on each side.
- Pleasure crafts, less than 19' (or approx. 2500 lbs): minimum of +/- 350 lbs per chain, on each side.
- Pleasure crafts, less than +/- 23' or +/- 4000 lbs (for ski or wakeboard boats): minimum of +/- 500 lbs per chain, on each side.
- Pontoon boat with camper roof, (that can catch in the wind): minimum of +/- 650 lbs per chain, on each side.



Make sure you always wear and use the proper protective equipment to work safely. Always use cordless power tools near water. At least 2 adults are required to build and move your dock sections.



Multinautic building a floating dock |



These examples are intended to guide you as much as possible in planning your project. However, some regions may require more anchors or a different method; we can not list everything here. We can not be held responsible for any incidents or damages that may occur as a result of putting into practice the techniques presented in this document, our fact sheets or on our website. These technical drawings, illustrations and/or information are not to be substituted, in whole or in part, for certified engineered drawings and are intended as general guidelines only.



1 800 585-1237
MULTINAUTIC.COM