



Marine Projects Guide

Complete Project Support



Introduction

To support your boat improvement purchase, TACO has created this instructional guide with suggestions for installation and project ideas.

Included in this guide are tips and techniques for projects to improve these components of your boat:

- Rub Rail Projects
- Hatch, Door & Window Projects
- Dock Bumper Installation
- Projects with Marine Lumber
- Rail & Top Projects
- Sportfishing Equipment Installation
- Leaning Post Installation
- Seat & Pedestal Installation
- Plus many Care & Maintenance Tips!

Introducing HANDY HANK



Handy Hank is your “go to” guy for any questions, comments or concerns you may have regarding TACO products, projects and technical support. Let Handy Hank be your guide and help you with your boat improvement project!

Look for Handy Hank’s tips throughout this booklet. That’s where you will find important time-saving tips that will make your project easier! Contact Handy Hank at 800-653-8567 Monday-Friday, 8am-5pm EST or send an email to handyhank@TACOMarine.com

RUB RAIL SELECTION GUIDE

In addition to protecting your boat from docks, pilings and other boats, rub rail offers aesthetic and styling functions as well. With TACO rub rail, you can easily restore and protect your boat using the original rub rail your boat manufacturer installed, or select another style to give your boat a new look. TACO’s Original Factory Rub Rail Replacement Guide makes it easy to find the rub rail you need. This handy guide cross-references the original factory rub rail used by over 80 of the leading boat manufacturers since 1993. Look for TACO’s Original Factory Rub Rail Replacement Guide at your favorite marine retail store today or request one on our web site tacomarine.com. Here is how to get started:



RUB RAIL SELECTION TIPS

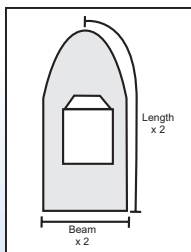
You can replace your rub rail with a factory replacement style or a completely different look. Regardless of the material originally installed by the builder of your boat, feel free to choose the material and style you desire.



- Rub rail is easier to install if you remember to choose a rub rail that is at least the same height as original
- Flexible vinyl rub rail is the easiest to bend and provides a cushioning effect against normal bumps from pilings and docks
- Rigid vinyl and aluminum rub rail with flexible vinyl insert perform well, last longer and are easy to install straight
- Rigid vinyl rub rail with stainless steel overlap provides the best protection and the longest useful life
- TACO rub rail samples are available upon request
- To determine the best rub rail for your boat please refer to the "TACO Original Factory Rub Rail Replacement Guide" or visit tacomarine.com.

RUB RAIL INSTALLATION BEFORE YOU BEGIN

- Ensure the length of the rub rail is sufficient for your boat. It is always better to buy more than you need
- Make sure to purchase all the materials needed (rub rail, insert, fasteners, end caps, splice caps, etc.) to complete the job
- Carefully read all the instructions before beginning and/or watch the TACO Rub Rail Installation DVD



MEASURING YOUR BOAT

- 1) Measure the length and width of your boat
- 2) Add them together and multiply by two
- 3) The total will give you the minimum length of rub rail required for your boat in feet

TOOLS & SUPPLIES NEEDED

- TACO rub rail and insert
- Measuring tape
- Safety goggles
- Two cordless drills (one for a screwdriver bit and one for a drill bit)
- Putty knife or scraper
- Caulking gun with silicone sealant or a tube of 3M 5200
- Metal file
- Heat gun (for rigid vinyl rub rail and flexible inserts)
- Garden shears (for cutting flexible vinyl rub rail and inserts) or hacksaw/power saw & cutoff wheel (for cutting stainless steel overlaps)
- Miter box (for metal and rigid vinyl rub rail)
- Rubber mallet
- TACO Rub Rail Installation DVD
- Fasteners

Rub Rail

REMOVAL OF OLD RUB RAIL & HULL PREPARATION

- 1) Remove the end caps
- 2) Remove the insert and the stiffening strip if there is one
- 3) Remove the screws or rivets that attach the rub rail to the hull. If the rub rail is fastened with pop rivets, drill out the rivet head and push the shaft in, to prevent rattling
- 4) Remove the rub rail
- 5) Use a putty knife to scrape off any old sealant, being careful not to scratch the gelcoat (it is unnecessary to remove *all* the old sealant, just the excess)
- 6) Fill all holes with sealant/3M 5200 (you will be drilling new holes for the new rub rail)
- 7) Let the sealant cure according to the manufacturers suggestions



Step 1



Step 2



Step 3



Step 4



Step 5



Step 6

INSTALLING FLEXIBLE VINYL RUB RAIL

The most popular rub rails are available in a complete kit. They come in 50', 70' and 100' kits which include the rub rail, insert, truss head or oval head screws, and end caps.



INSTALLATION

- 1) Place masking tape above or below where the rub rail will go. Mark where the new holes are going to be located. Be sure to avoid the old filled holes. Space the holes a maximum of 6" apart.

Note: this should be the first step in all rub rail installations.

- 2) Mark the midpoint of the rub rail with a piece of tape and soak the flexible rub rail in a tub of hot water (maximum 120°F) or outside in the sun on the grass or pavement. Avoid sliding or dragging the rub rail on the pavement, as it will scratch. Either process should take at least 20 minutes to properly heat the rub rail.

- 3) While it is warm, lay out the rub rail (following the gunwale of the boat) with the mark at the bow.

- 4) Drill 2 holes through the rub rail about 2" apart on one side of the bow and install the truss-head screws. Use silicone on the threads to create a water tight seal.

- 5) With the two fasteners installed at the bow, go to the stern and stretch the rub rail by pulling it from the bow, towards the stern. Drill and install two screws at the stern position (this must be done while the rub rail remains warm and pliable).

- 6) Quickly do the same stretching and fastening procedure on the opposite side.

- 7) Install the rub rail along the transom and install a screw 1" back from the center line. Trim off the excess. Repeat the process on the other side (use a heatgun to bend on tight corners).

- 8) Go back to the bow and begin drilling the holes according to the marks you made on the masking tape. Put silicone on the threads and install the screws.

- 9) Repeat the process until the entire rub rail has been installed.

- 10) To install the insert and end caps, see the following sections in this brochure.



HANDY HANKS' TIPS:

To ensure a straight and consistent installation when installing flexible vinyl rub rail, it is best to stretch the rub rail during the installation process. Two people make this job much easier!

With flexible vinyl rub rail, the opening for the insert and fasteners may be narrower than the screw head. During installation, have something handy that can spread the opening until the screw head has passed the front opening.

Use caution- the drill chuck can damage the rub rail if it touches during drilling of the holes.



Step 4



Step 5



Step 8

HANDY HANKS' TIP: Be careful not to over-tighten the screws or the rub rail will pucker (wrinkle).

Rub Rail

INSTALLING INSERTS

There are three types of inserts. As indicated below, the first two must be heated in order to be installed. Install inserts beginning either at an end cap or at the transom.

HANDY HANKS' TIP: To avoid insert shrinkage, always screw down each end of flexible insert. The screws will be hidden from view once you install the end caps.

TUBULAR INSERT

V12-0810, V12-0003, V12-0005

- 1) Using a heat gun, heat approx. 3' of insert until it compresses with a pinch.
- 2) Flatten the insert between your fingers and insert it into the rub rail until the heated section has been installed.
- 3) Repeat in maximum 3' increments until the entire insert has been installed.

V12-0303 INSERT

- 1) Using a heat gun, heat approx. 2' of insert until it is hot to the touch.
- 2) Insert a few inches of the top leg into the rub rail.
- 3) Using a stiff putty knife, poke the bottom leg into the channel.
- 4) Repeat steps 2 & 3 until the heated section has been installed.
- 5) Heat the next 2' and repeat steps 2 through 4 until the entire insert has been installed.

SOFT FLEXIBLE INSERTS

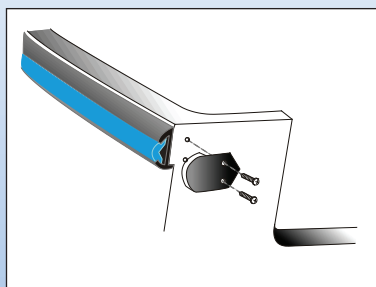
V12-0317, V12-0334, V12-0338, V12-0342, V12-0347, V12-0426, V12-1069, V12-2207, V12-4018, V12-4144 & V12-5818

- 1) These inserts can be installed at room temperature.
- 2) Squeeze the insert between your fingers and insert it into the channel of the rub rail until the entire insert has been installed.
- 3) Tapping it with a rubber mallet will help set the insert. Inserts V12-0317 & V12-0334 need to be set by tapping it with a rubber mallet.

INSTALLING END CAPS

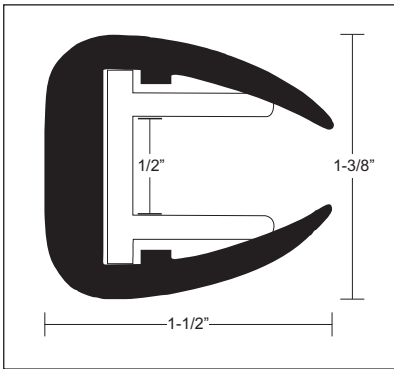
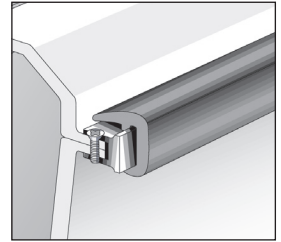
There are two types of end caps:

- 1) In-line end caps are installed on the same surface as the rub rail.
- 2) Corner end caps are used when a rub rail ends at the transom. Corner end caps are installed on the transom with the cap extending out the side to cap the rub rail.

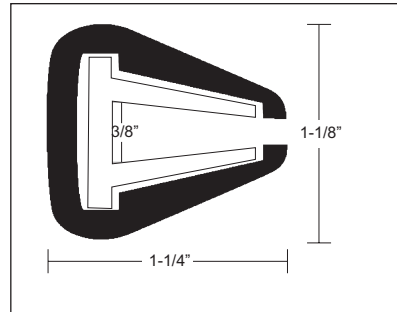


"SANDWICH" STYLE RUB RAIL INSTALLATION

TACO offers two sizes of rub rail that are usable with a horizontal flange type of hull to deck joint.



V11-0232



V11-3161

- 1) Cut a 2" piece of rub rail and a 3" piece of insert and put together.
- 2) Place sample on the flange of your boat until it touches the hull.
- 3) While holding a pencil on the end of the insert legs, slide the sample along the flange keeping it against the hull. This will give you a reference line for installing the insert.
- 4) Find the center of one piece of insert and soften it with a heat gun and bend it to conform to the shape of the bow. If you have a sharp bow; you may make a relief cut in the legs of the insert.
- 5) Line up the insert with the reference line and drill a pilot hole for the small flathead screw and countersink the insert. The point of the screw must not come out the other side of the flange.
- 6) Put 3M 5200 on the screw threads and install the screw.
- 7) Repeat steps 5 and 6 until all the insert has been installed.
- 8) Starting at the transom, snap the rub rail over the insert, heating it with a hot air gun to soften it as it goes around corners.

Rub Rail

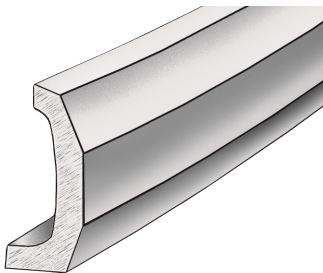
SEMI-RIGID VINYL RUB RAIL

This rub rail comes in complete 30' kits which include end caps, screws and is predrilled. The average boat requires two kits. When cutting, use a miter box to insure the rub rail you are installing has a straight end.



INSTALLATION

To take the curve out of the coiled rub rail, hold the coil in one hand and unroll several feet. Warm it up with a heat gun and straighten it out.



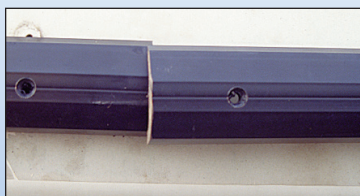
- 1) Place masking tape above or below where the rub rail will go and mark for the new holes. Note: When a screw is properly installed into the hole, the screw head should sit just below the surface.

TIP: Once the rub rail comes in contact with the hull stop tightening the screw!

- 2) Start in the middle of the transom, or if you are not going around the transom, start at the corner of the transom. Have a helper unroll about 4' of rub rail and take the curve out of it.
- 3) Starting 12" from the end, drill through the predrilled rub rail holes into the boat, or drill and countersink the rub rail. Coat the screw threads with Silicone or 3M 5200 and install the screw.
- 4) Continue uncoiling, straightening and drilling or drilling and countersinking. Coat the threads and work in one direction around the boat until you have installed the first coil. Leave the last 12" unfastened. We will finish this in step 8.
- 5) When you have to bend the rub rail around a corner, move the heat gun back and forth to prevent overheating the rub rail.
- 6) Straighten out about 4' of the next coil. Overlap the end of the last coil by 1/8" and attach the first screw approximately 12" from the end. Leave these two ends loose for now.



Step 5

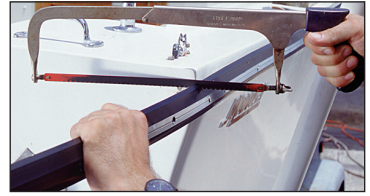


Step 6

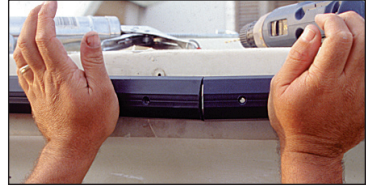
- 7) Continue installing the rub rail until you come to where you started at the transom or at the corner of the transom leaving the last 12" unfastened. If you are ending the rub rail at the corner of the transom or motor well, you can now install the corner end caps.

HANDY HANKS' TIP: When making splices, make sure the ends are cut straight and smooth.

- 8) To make splices, pull the two sections towards you until they meet and push in until they snap into place. Drill through the rub rail and install a screw 1" & 6" from each end.



Step 7



Step 8

RIGID RUB RAIL

CAUTION: If your rub rail comes coiled; stand in the center of the coil when cutting the straps so it unwinds away from you without inflicting injury.

INSTALLATION

- 1) Place masking tape above or below where the rub rail will go and mark where the new holes should go.
- 2) Place the center of the first length at the bow. If there is a screw hole at the center, offset it 4" to one side. Check to see if any of the holes line up with a filled hole, slide the rub rail a couple of inches until all rub rail holes are clear of previous gunwale holes.
- 3) Press the rub rail against the hull and go back to one end. Leave the first two holes undrilled. Drill through the third pre-drilled hole. Coat the screw threads with Silicone or 3M 5200 and install the screw. Repeat this process until you reach the bow.
- 4) Bend the rub rail around the bow using a heat gun, moving it back and forth to prevent overheating or burning the rub rail.
- 5) Continue installing screws until you get to the other end of the rub rail. Leave the last two holes undrilled.
- 6) Start the next length by overlapping the previously installed length by 1/8" and begin attaching it leaving the first two holes undrilled. *See Step 6 on page 9*
- 7) Complete installing this length leaving the last two holes undrilled.
- 8) Continue installing all the lengths until you reach the unfastened end of the first piece you installed at the bow, cutting it so it overlaps that piece by 1/8". Leave the last two holes undrilled. *See Step 8 on page 9*
- 9) Splices are made by pulling out on the two ends until they touch and pushing in so they snap into place, then install the screws. When installing heavier rub rail (like the V21-1025 or V21-1039) the ends are simply butted together without overlapping. *See Figure 3 on page 9*
- 10) To install flexible vinyl inserts see the insert section on page 6.

Rub Rail

HANDY HANKS' TIPS: Have one person heat the rail and the other slowly bend it around and avoid forcing the material due to inadequate heat.

Before installing the rest of the rub rail, put it up in position and check to see if any pre-drilled holes line up with filled holes. You will be able to adjust the hole location by cutting off several inches from the end that butts up to the previously installed piece.

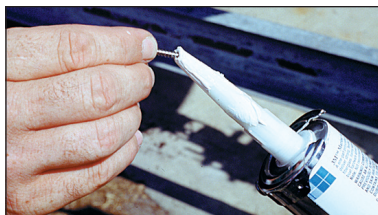


ALUMINUM RUB RAIL

Available in 12' and 20' lengths with holes pre-drilled every 6". Some aluminum rub rails incorporate vinyl inserts, while others do not.

INSTALLATION

- 1) Place masking tape above or below where the rub rail will go and mark where the new holes should go.
- 2) Place the center of the first length on the bow. If a mounting hole is already there, move it to one side 3".
- 3) Press the rub rail against the hull until you come back to one end.
- 4) If any of the holes line up with the filled holes, try adjusting the rub rail a few inches one way or the other. Avoid a hole within two inches of either side of the bow.
- 5) Drill through the pre-drilled holes with a drill bit smaller than the screw.
- 6) Coat the threads with Silicone or 3M 5200 and install the screw.
- 7) Continue this process up to the bend at the bow.
- 8) Bend the rub rail around the bow by applying steady pressure with one hand while you lightly tap the rub rail with a rubber mallet where you want it to bend. Once bent remove insert and install screws.

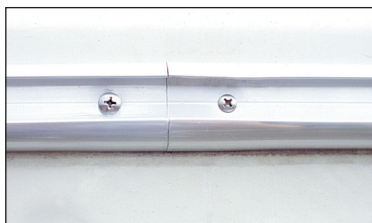


HANDY HANKS' TIP: Before bending, if the rub rail takes an insert, install about 6" of insert into the bend site to keep the channel from collapsing or losing shape during bending but do not cut it off the roll.

- 9) Complete the installation of the rest of the rub rail.
- 10) Butt the next length up against the previously installed length. If a hole lines up with a filled hole, cut a few inches off the end in a miter box. This will change the location of the holes.

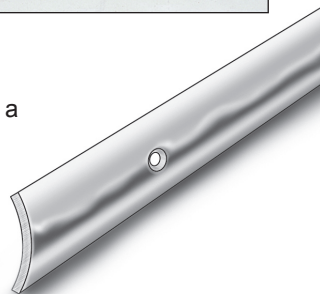


- 11) Continue this process until you come back to the other end of the length you installed at the bow. Measure the last length carefully so that it fits tightly and install the screws.
- 12) Install the insert according to the instructions on pages 5 & 6.



STAINLESS STEEL RUB RAIL & OVERLAPS

Stainless Steel offers the maximum durability, while maintaining a classic style. Stainless Steel rub rail is available in 304 and 316 grade in widths from 1/2" to 2" and in solid back and hollow back. All stainless steel rub rail is pre-drilled and countersunk. Depending on the style, these rub rails can be installed directly on the boat as a rub rail or as an overlap on rigid vinyl rub rail.



HANDY HANKS' TIP: Thoroughly clean both sides of the stainless steel rub rail. Do not use cleaners with abrasives. Be careful edges may be sharp!

INSTALLATION

Follow the same instructions for aluminum with the following exceptions:

- 1) When bending it around corners, use a rubber mallet to ensure a tight bend. stainless steel requires a lot more force to bend than aluminum.
- 2) Cutting the stainless steel rub rail is best done with a cut off wheel. If discoloration appears, polish it out with some rouge and a polishing wheel.
- 3) When used as an overlap, the mounting holes should be between the mounting screws of the rigid vinyl rub rail. When mounting to rigid vinyl rub rail, use short screws that do not penetrate the hull.

STAINLESS STEEL RAIL ENDS

Stainless steel rail ends add a finished appearance to the ends of stainless steel rub rail. The rail end has a square cut edge designed to line up perfectly with the terminating end of the stainless steel rub rail, while the other end has a tapered finished look. Available in 3/4" and 1" width, pre-drilled and countersunk screw holes.



Rail Ends

STAINLESS STEEL RUB STRAKES

Stainless steel are designed to screw down to the deck to prevent chafing of lines from anchors, dock fenders and mooring lines. These are the very attractive and functional accessories and available in multiple widths and lengths from 8"-24".

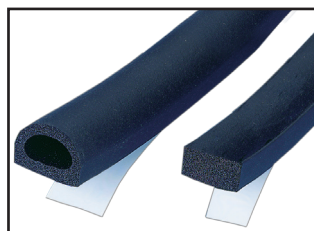


Rub Strakes

Hatch, Door & Window

WEATHER SEAL & HATCH TAPE

Weather Seal is made of a durable sponge rubber compound specifically designed for the harsh marine environment. This material offers excellent resistance to water absorption, sunlight and extreme temperature (between -20°F to +150°F). For best performance, the maximum compression recommended is 25% of the actual size.



Hollow Style

Solid Style

Weather Seal can be used to repair leaky, squeaky hatches as well as for the following applications:

- Live Wells
- Electronic Boxes
- Exterior Doors
- Instrument Covers
- Skylights
- Tool Boxes
- Windows
- Cabinets
- Campers
- Storage Compartments

SIZES AVAILABLE

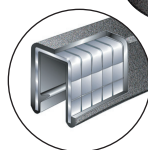
Part #	Color	Height	Width	Length	Style
V30-0109B10-1	Black	3/8"	5/8"	10'	Hollow
V30-0113B10-1	Black	3/16"	3/8"	10'	Solid
V30-0202B10-1	Black	1/2"	1/2"	10'	Hollow
V30-1333B10-1	Black	1/4"	3/8"	10'	Hollow
V30-0744B8-2	Black	1/8"	3/4"	8'	Solid
V30-0748B8-2	Black	1/4"	3/4"	8'	Solid

PREPARATION & INSTALLATION TIPS

- Clean area of all contaminants
- Peel off the release liner carefully. Make sure it does not remove the adhesive with it
- Avoid stretching during installation
- Recommended application temp. is between 60°F & 100°F
- Press down firmly to assure a strong bond
- To clean, use a mild solution of soap and water with Armor-All,[®] periodically to keep pliable

UNIVERSAL TRIM

TACO's Universal Flex Trim is a flexible PVC with internal aluminum clips that provide a lifetime of secure grip. Trims is available to fit most edge thicknesses. Universal Flex Trim will provide protection from sharp edges and produce a finished look that conforms to almost any shape.



Applications for TACO's Flex Trim include:

- Hatches
- Moulded Seats
- Cabinets
- Lockers
- Baitwells
- Storage Areas
- Rod Racks
- Consoles, etc...



PRODUCT SELECTION

Part #	Color	Opening	Width	Length
V30-1005B25-1	Black	3/16"	9/16"	25'
V30-1005W25-1	White	3/16"	9/16"	25'
V30-1008B25-1	Black	1/4"	1/2"	25'
V30-1008W25-1	White	1/4"	1/2"	25'
V30-1312B25-1	Black	3/8"	5/8"	25'
V30-1312W25-1	White	3/8"	3/8"	25'
V30-1316B25-1	Black	1/2"	5/8"	25'
V30-1316W25-1	White	1/2"	5/8"	25'

PREPARATION & INSTALLATION TIPS

- Clean the surface of all contaminants
- Push on until it bottoms out
- Cut off excess with shears or razor knife
- If a more secure installation is desired, place a small bead of silicone along the edge to be covered before installation
- Clean with mild soap and water
- Apply Armor-All® periodically to keep pliable

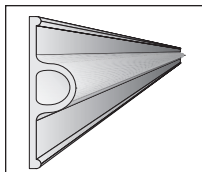
Dock Bumper

DOCK BUMPER

Made of white flexible vinyl containing U.V. protectants

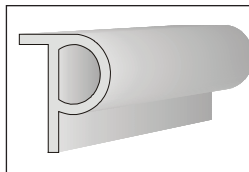
Flat Back

For use on dock edges or pilings, Horizontal or Vertical applications



Angle Back

Great for top edge of docks



Part

Flat Back

Part #	Opening	Width	Length
V11-0948WHA6-1	3-3/8"	1-1/2"	6'
V11-0948WHA25-1	3-3/8"	1-1/2"	25'
V11-4142WHA6-1	2-1/2"	1-1/8"	6'
V11-4142WHA25-1	2-1/2"	1-1/8"	25'

Angle Back

V11-0961WHA6-1	2-1/4"	1-7/8"	6'
V11-0961WHA25-1	2-1/4"	1-7/8"	25'
V11-0962WHA6-1	1-3/4"	1-1/2"	6'
V11-0962WHA25-1	1-3/4"	1-1/2"	25'



TOOLS & SUPPLIES NEEDED

- TACO Dock Bumper
- Goggles
- Drill
- Stainless steel pan head screws
- Garden pruning shears

INSTALLATION

- 1) Clean the dock surface area so you have a smooth, even surface
- 2) Secure the Dock Bumper to the dock by attaching stainless steel screws every 4"-6" apart on both sides of the bulb of the Dock Bumper
- 3) Use pruning shears to cut Dock Bumper to the desired length
- 4) Clean with mild soap and water or boat wash and a synthetic steel wool pad
- 5) Use a marine-grade vinyl cleaner & protector for extended life

TUBE SIZE AND LENGTH SELECTION

Aluminum Drawn Tube

Bright Anodized, Alloy 6063, Temper 832



Part #	Outside Diameter	Wall Thickness	Available Lengths
A23-3458BLY6-1	3/4"	.058"	6'
A23-3458BLY20-1	3/4"	.058"	20'
A23-7858BLY6-1	7/8"	.058"	6'
A23-7858BLY12-1	7/8"	.058"	12'
A23-7858BLY20-1	7/8"	.058"	20'

Stainless Steel Tube

Type 304 Polished

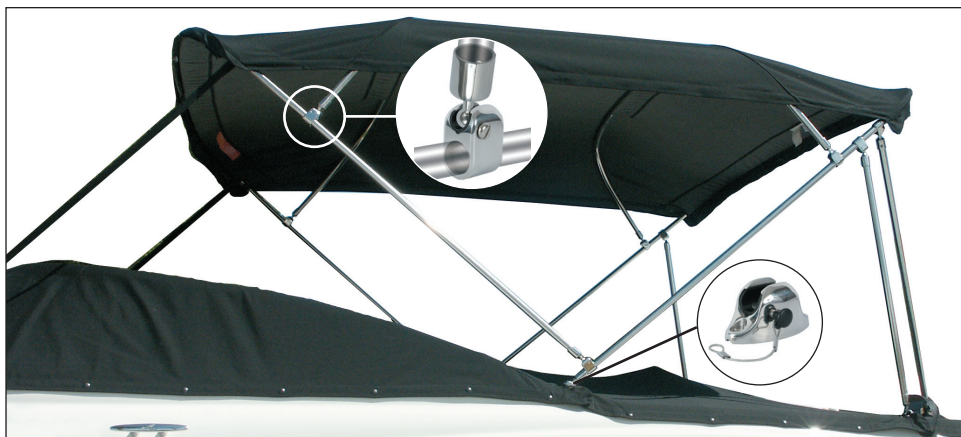
Part #	Outside Diameter	Wall Thickness	Available Lengths
S14-7849P6-1	7/8"	.049"	6'
S14-7849P12-1	7/8"	.049"	12'
S14-7849P20-1	7/8"	.049"	20'
S14-7865P20-1	7/8"	.065"	20'
S14-1049P6-1	1"	.049"	6'
S14-1049P12-1	1"	.049"	12'
S14-1049P20-1	1"	.049"	20'
S14-1065P20-1	1"	.065"	20'

Other sizes and lengths available

TOOLS & SUPPLIES NEEDED

- Screwdriver or Reversible drill
- Goggles
- Allen wrench
- Spray lubricant
- Hacksaw (for cutting aluminum tube)
- Band Saw with S.S. blade or cut-off wheel (for cutting S.S.)
- Metal file
- TACO replacement tube sections (pre-cut & pre-bent)
- Silicone sealant or 3M 5200
- Replacement fittings
- Stainless steel screws
- Loc-Tite™

BALL & SOCKET TOP FITTINGS



Top Cap



90° Top Cap



Square Eye End



Jaw Slide



Deck Hinge



Flat Deck Hinge



Concave Deck Hinge

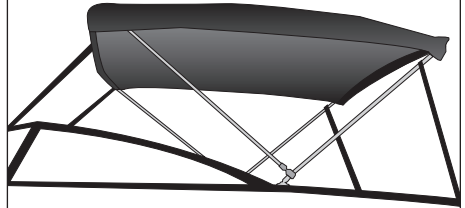


Upgrade your top with TACO's Ball & Socket Top Fittings. Made of Marine Grade 316 Stainless Steel, Ball & Socket top fittings are designed to fit 7/8" and 1" tube, standards for canvas tops. The unique ball & socket design and Delrin insert provides smooth operation, and a tight, rattle-free fit.

TACO Ball & Socket top fittings are designed to be universal, and will fit existing side curtains, canvas and tube – Great for retrofits!



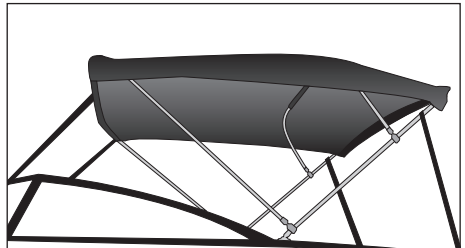
2 Bow Kit • F11-1102-1



2 Bow



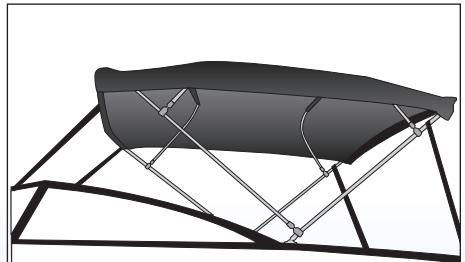
3 Bow Kit • F11-1103-1



3 Bow



4 Bow Kit • F11-1104-1



4 Bow

Now upgrading your Bimini top fittings is even easier! TACO offers, in one convenient package, all of the Ball & Socket deck hinges, top caps, jaw slides and mounting screws needed to upgrade your 2-bow, 3-bow or 4-bow canvas top.

Top Hardware

PREPARATION

Follow these steps for repairing a Bimini Top:

- Remove your Bimini Top from your boat
- Remove the damaged fittings & tube sections using a screwdriver or drill, allen wrench & spray lubricant
- Measure the fittings & tube you removed and refer to the product selection portion on page 20 to help determine which part is best for your replacement
- Clean the gelcoat and fill all holes with silicone sealant or 3M 5200
- Measure the old tubing. Cut the lengths of tubing you need, removing any burrs with a metal file
- If you are replacing stainless steel tube with a bend in it, we recommend you take the old piece and the new tubing to a local Marine Bimini Top Professional, Electrician or Plumber. They have the bending equipment to make the right bend for you

INSTALLATION

- 1) Secure any fittings to be attached to the deck using stainless steel screws and a screwdriver or drill
- 2) Attach all slide-on fittings onto the tube and secure the set screws if provided. You may need to refer back to the set screw punctures on the old tube to determine where the new fittings should be located, especially if the tube is new
- 3) Attach all remaining end fittings and secure them with the set screws if provided
- 4) Re-install your canvas top

CARE AND MAINTENANCE

- Wash with soap & water and avoid chemicals, especially bleach
- Apply a polish coating regularly for added protection and beauty
- Never use coarse abrasives like sandpaper or steel wool
- Remove stain spots as soon as possible with a brass, silver or chrome cleaner



HANDY HANKS' TIPS:
Stainless Steel Tubing requires special cutting blades. Your local Marine Bimini Top Professional usually has appropriate cutting tools if they are unavailable to you.

Apply silicone sealant or 3M 5200 to the screw threads when you're securing fittings to the deck of the boat. This will help seal the holes. Apply Loc-Tite to all set screws before tightening to prevent them from loosening in rough waters.

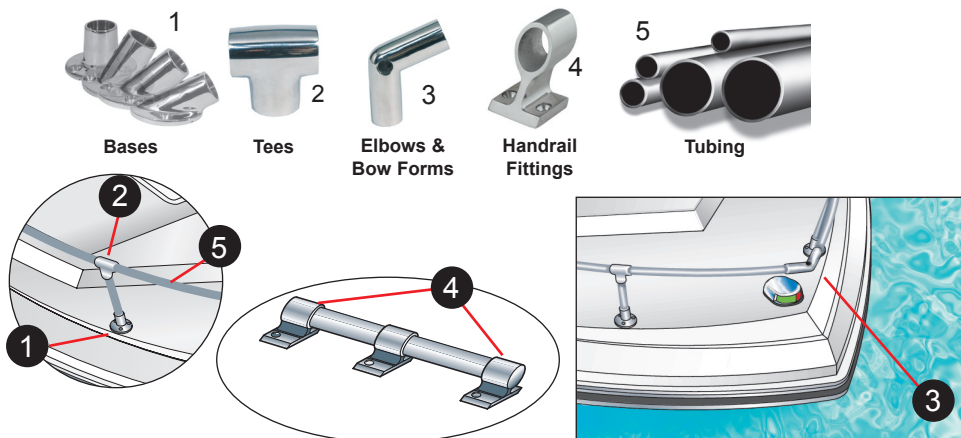
Polish your tube & fittings before you install them for added protection! Water can collect between the tube and fittings and hold in moisture, salt & other residue.

Bends must be made with fittings in place.

RAIL HARDWARE INSTALLATION

For Handrails, Bow Rails and Stern Rails

Your Complete Replacement Hardware Source for 7/8" and 1" O.D. Tubing



HANDY HANKS' TIPS:

Aluminum tubing with Chrome Zamak or Nylon fittings are used for fresh water applications only.

Stainless steel tubing with stainless steel fittings can be used for both fresh water and salt water applications.

Stainless steel fittings used with aluminum tubing will cause corrosion. You should never use this combination.

TUBE SIZE AND LENGTHS AVAILABLE

Aluminum Drawn Tube

Bright Anodized, Alloy 6063, Temper 832

Part #	Outside Diameter	Wall Thickness	Available Lengths
A23-7858BLY6-1	7/8"	.058"	6'
A23-7858BLY12-1	7/8"	.058"	12'
A23-7858BLY20-1	7/8"	.058"	20'

Stainless Steel Tube

Type 304 Polished

Part #	Outside Diameter	Wall Thickness	Available Lengths
S14-7849P6-1	7/8"	.049"	6'
S14-7849P12-1	7/8"	.049"	12'
S14-7849P20-1	7/8"	.049"	20'
S14-7865P20-1	7/8"	.065"	20'
S14-1049P6-1	1"	.049"	6'
S14-1049P12-1	1"	.049"	12'
S14-1049P20-1	1"	.049"	20'
S14-1065P20-1	1"	.065"	20'

.065" wall thickness is recommended when bending tubing

Rail Hardware

PREPARATION

- Remove the damaged fittings & tube sections using a screwdriver or drill, allen wrench and spray lubricant
- Measure the fittings & tube you removed and refer to the product Selection portion on pages 23 & 24 to help you determine which part is best for your replacement
- Prepare the surface of the boat by cleaning the gelcoat thoroughly and filling all holes with silicone sealant or 3M 5200
- Measure the length of the tube sections to be replaced and cut the tube to the appropriate lengths. File the edges smooth with a metal file
- If you're replacing a bend in your tube, it is recommended you take your broken tube along with the new tube and fittings to a local Marine Bimini Top Professional, Electrician or Plumber. They have the bending equipment to ensure the right bend for you. Bends must be made with the fittings in place.

HANDY HANK'S TIP: Polish your tube & fittings before you install them for added corrosion protection. Water can collect between the tube and fittings and hold in moisture, salt & other residue.

INSTALLATION

- 1) Place the bent tube, such as bow rails with fittings attached in position, along with the tubing it attaches to.
- 2) Attach all additional slide-on fittings onto the tube and secure with the provided set screws. You may need to refer back to set screw punctures on the old tube to determine where the new fittings should be located, especially if the tube is new
- 3) Secure any fittings to be attached to the deck using stainless steel screws and a screwdriver or drill

CARE AND MAINTENANCE

- Wash with soap & water and avoid harsh chemicals, especially bleach
- Apply a polish coating regularly for added protection and beauty
- Never use course abrasives like sandpaper or steel wool
- Remove stain spots as soon as possible with a brass, silver or chrome cleaner

HANDY HANKS' TIPS: Apply silicone sealant or 3M 5200 to the screw threads when you're securing fittings to the deck of the boat. This will help seal the holes.

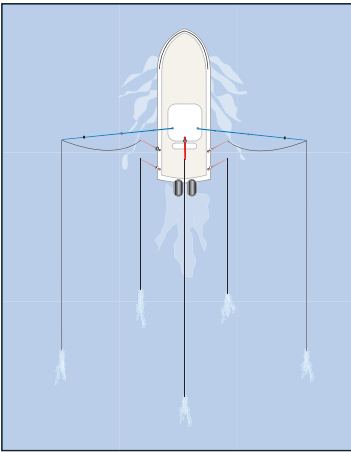
Once all the tubing and fittings have been installed, back out the set screws and apply Loc-Tite to all set screws and re-tighten to prevent them from loosening in rough waters.

Sportfishing Equipment

TELE-OUTRIGGER TIPS AND BUYING RECOMMENDATIONS

THE ORIGINAL

TACO Sport Fishing's Tele-Outriggers are the original telescoping outriggers. They are made from the highest quality materials and have the only three year warranty in the industry!



WHAT IS TROLLING? HOW DO I USE MY OUTRIGGERS?

When trolling with outriggers you can troll with more lines in the water, thus pulling more bait which simulates a school of fish. Outriggers will eliminate tangled lines. Each outrigger can accommodate one or two lines from your rods and reels. The line is used with a release clip that extends to the end of your outrigger. When a fish strikes your bait, the release clip will allow your fishing line to come free of the outrigger so you can reel in the fish.

Look for color coded stickers to match outriggers with the correct bases.
Yellow for 1-1/2"
Blue for 1-1/8"



RECOMMENDED SIZES:

BOAT SIZE	OUTRIGGER SIZE
20' & under	12'
21' to 26'	15'
27' to 34'	18'



Sportfishing Equipment

TACO TELESCOPING OUTRIGGER BENEFITS

- Telescope down to less than 6' for storage, going under bridges and reduced stress on your gunnel
- Components such as drawn anodized aluminum, durable Delrin bushings, and a stainless steel tension spring are all designed so TACO Tele-Outriggers will meet the rigors of offshore fishing
- Outriggers are featured in black or silver. Both pole colors are complemented with gold or silver rings and tips



To prevent potential damage to your outriggers, it is not advisable to run at high speeds with poles extended!

SPECIAL ORDER TELE-OUTRIGGERS

HANDY HANKS' TIP: TACO Tele-outriggers can be special ordered to accommodate the following outrigger holders: E-TEC®, Lee's Sidewinder, Wishbone, and flush mount, Perko® & Rupp®. Please indicate which base you are trying to fit when ordering.

HOW DO I RIG MY OUTRIGGERS?

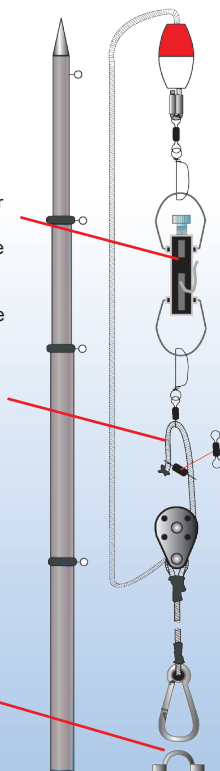
TACO RIGGING KITS contain a detailed instruction sheet and a diagram like the one on the right, with all the hardware needed to rig two outriggers.



Release Clip Warning

Once you set your bait gradually tighten the release clip to minimum release tension needed to hold the line in place

Loop must be 18"-24"



The pad eyes that the bungee hooks to on the gunwale is usually installed about 6"-12" toward the stern between the outrigger and the rod holder. On hardtops the pad eye is installed on the outer edge between the outrigger and the rod holder. On soft tops the pad eyes are not needed, just pass the bungee cord swivel snap through the canvas lacing and snap it back on itself.

T-TOP MOUNTS

Grand Slam 270 & 350 Top Mounts

Grand Slam 270 & 350 outrigger mounts work easily while standing at the console. The pull down rotator handle swings the outriggers into position and operates from under the top. The Grand Slam 270 & 350 can be mounted through an existing plate or to a newly installed plate.

- 1) The existing plate must be at least 4-1/2" x 5-1/2" x 3/8".
- 2) Drill a 3" center hole and 3/8" through bolt holes.

If new mounting plates are needed, TACO has two types of plates. Both plates are pre-drilled for Grand Slam installation:



Grand Slam
GS-270

- 1) TACO's specially designed aluminum plate with mounting clamps has been designed to enable the easiest installation (GSE-1002-1).

- 2) The second option is TACO's weld on mounting plate (GSE-1939BLS30-1 or GSE-1940BSA30-1).

When installing the Grand Slam through the canvas:

- 1) Simply cut an "X" over the 3" hole.
- 2) Install and bolt down the Grand Slam then trim off the excess canvas.

When installing a Grand Slam through a hard top frame:

- 1) TACO backing plates should be used for extra support.
- 2) When mounting through a core or foam filled top, spacers should be used in the bolt holes to prevent compression of the top when bolting. TACO does not recommend mounting to a hard top that is

hollow, contact the boat manufacturer if the structural integrity of the top is questionable.

- 3) The maximum thickness allowable for the hard top is 2-7/8" for the GS-270 model.

The GS-350 is available in a hard top version which is 1-3/4" longer than the soft top model. Special configurations of the Grand Slam for unusual mounting, including a bent handle, are available. Call Handy Hank for details.



Grand Slam
GS-350

HANDY HANKS' TIP: For the GS-270 the center of the 3" hole should be at least 7-1/2" from the tubing of the canvas top frame, or any other object that may come in contact with the handle. For the GS-350 the center of the 3" hole should be at least 10" from the tubing of the canvas top frame, or any other object that may come in contact with the handle. Wedge plates are also available in 7°, 9°, and 11° for tops that have an arch. For convenience purposes, a template is available online at tacomarine.com to assist in the installation process.

Sport Slam Top Mounts

The affordable Sport Slam is easy to install and use. A simple pull of the button swings the outrigger into fishing positions and also features a lay down arm for bridges and storage. The Sport Slam can be mounted through an existing Grand Slam plate; a hard top that is a minimum 1/4" thick and is 4-1/2" in width and 5-1/2" in length; or on a TACO Clamp-On mounting plate. The Sport Slam only requires drilling the 4 bolt holes and uses 5/16" bolt, nuts and washers.

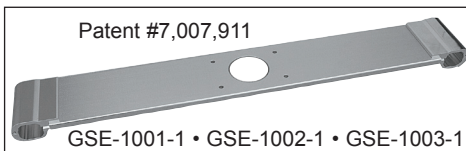


Sport Slam
GS-100A

Sportfishing Equipment

TACO CLAMP-ON MOUNTING PLATE

If your top does not already have a mounting plate, TACO's new Clamp-On Mounting Plate is an easy addition to add outriggers, antennas, lights and radar. The clamps capture both the plate and the top's pipe. Inserts are included to fit 3/4" and 1" round pipe and oval pipe. The plate comes in standard 30" length and can be cut to length required. TACO's Clamp-On Mounting Plate is available pre-drilled to accept the Grand Slams or the Sport Slam.



STRIKER BASES

The Striker gunwale mount is usually positioned toward the bow of the boat at least one foot in front of the last rod holder. You will need to cut a hole for installation. Visit tacomarine.com for drilling template. Use a 1-1/2" or 2" hole saw & cut a 45° angle, then file to get a perfect fit. Use a sealant such as 3M 5200 under the plate for a watertight seal. The gunwale mount comes in two sizes: 1-1/8" ID and 1-1/2" ID Backing Plates should be used on gunwales 3/4" or less in thickness. Striker Bases are also available in a T-Top model with 90° swept back arms

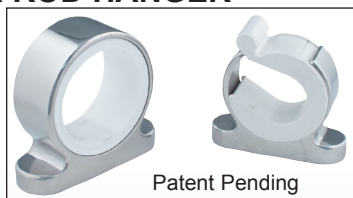
Patent #5,921,196



Striker Base
F16-0212-F
F16-0150-F
F16-0212-T

TACO'S STAINLESS STEEL SNAP-LOCK ROD HANGER

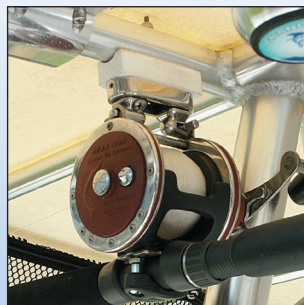
- 1) Lay rods in holder on deck for proper mounting positioning
- 2) Fasten mounting piece to surface using #10 stainless steel self-tapping screws
- 3) Place TACO rod hanger onto mounting piece and screw in set screw until tight
- 4) Slide butt end of rod holder into the closed ring then insert tip in the snap lock ring



Snap-Lock Rod Hangers
w/ Stainless Steel Spring
F16-2700-1

STAINLESS STEEL REEL HANGERS

- 1) Lay rods in holder on deck for proper mounting positioning
- 2) Fasten mounting piece to surface using #10 stainless steel self-tapping screws (not included) if mounting to a round surface, you will need to fabricate a spacer as shown in photo on right, to the outside diameter of the pipe
- 3) Place TACO reel hangers onto mounting piece and screw in set screw until tight
- 4) Slide the tip into the rod holder
- 5) Insert reel into holder by compressing the spring pins



Snap-Lock Reel Hangers
F16-2810 • F16-2820

WHAT IS A CENTER RIGGER?



A center rigger will allow an extra line off the center of your boat that is high and will put the bait far out off the back of your boat. TACO's Clamp-On Center Rigger clamps to 1" round pipe. An anti-rotation pin is placed in the pipe by drilling with a 1/4" drill bit, then the pin captures the clamp to provide stability.

Clamp-On Center Rigger

F16-0311C-1

SPORT SLAM CENTER RIGGER

The Sport Slam is easy to install and use. A simple pull of the button swings the outrigger into fishing positions and also features a lay down arm for bridges and storage. The Sport Slam can be mounted through an existing plate; a hard top that is a minimum 1/4" thick and is 4-1/2" in width and 5-1/2" in length; or on a TACO Clamp-On mounting plate. The Sport Slam center rigger only requires drilling the 4 bolt holes and uses 5/16" bolt, nut and washer.



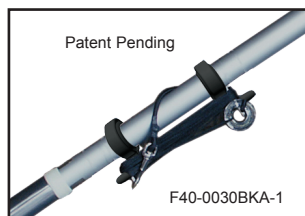
Sport Slam
Center Rigger
GS-100A-2

OUTRIGGER LINE CADDY

TACO's Outrigger Line Caddy is designed to eliminate tangled rigging. The Outrigger Caddy fits 1-1/2" and 1-1/8" poles.

To install on 1-1/2" poles:

- 1) Place the rings over the outrigger pole with the bottom clamp 6" above the outrigger mount with the wrapping pin facing the outrigger butt.
- 2) Place the second ring approximately 12" up the pole with the wrapping pin pointing toward the outrigger tip and tighten the mounting bolts.
- 3) To install on 1-1/8" poles install the rubber inserts provided and proceed as above.



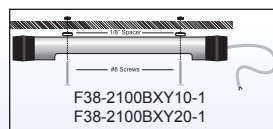
Patent Pending

F40-0030BKA-1

T-TOP LIGHT

To install your new TACO T-top Light (10" or 20"):

- 1) Unpack the T-Top Light and choose a location that will allow the cord to reach your source of power, such as a switch in your instrument panel. Consider running the wire along the pipe of your T-Top using small cable ties (not supplied).
- 2) The black wire connects to your (-) negative or common terminal. The white wire will connect to your 12V positive terminal through a switch.
- 3) Grasp the two rubber ends, one in each hand, and remove the rubber end without the wire by pulling and twisting. Slide the anodized aluminum housing off of the plastic tube (make note which end of the housing the wired end goes in).
- 4) Place the aluminum housing in position under the T-Top pipe you are mounting it to and mark the pipe through the pre-drilled holes.
- 5) Using a center punch, make a starting indent in the pipe at the center of each mark. Using a 1/8" drill bit, make two holes in the pipe as marked (if there are wires running through the pipe drill in short bursts and stop immediately when it goes through or remove the wires before drilling).
- 6) Install a #8 Oval Head Stainless Steel Screws through the housing, slide the plastic spacer over the screw and tighten it enough to get the screw started. Do the same with the other screw then tighten both screws to attach the housing to the pipe. Slide the light tube into the end and install the other rubber end. Make sure the light is facing the opening. Pull the wire tight, cable ties (not included) can be used to keep the wires tight against the pipe.



F38-2100BXY10-1
F38-2100BXY20-1

* An alternate method, or for temporary installation, is to attach the light to the T- Top pipe with cable ties (not included).

Sportfishing Equipment

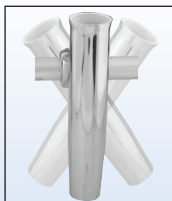
TACO CLAMP-ON ROD HOLDER SELECTION GUIDE

Location	Pipe O.D.	I.P.S. Pipe*	Rod Holder	Description
T-Tops				
Outer Ring	1-1/16" & 1-5/16"	3 /4" - 1" IPS pipe	F16-2650POL-1	Stainless Steel Drop Down Rod Holder
			F16-2620	Adj., Stainless Steel, Clamp-on Rod Holder
			F31-2620	Adjustable, Aluminum Clamp-on Rod Holder
			F41-2620	Adj., Aluminum/Plastic Clamp-on Rod Holder
Legs	1-11/16" & 1-15/16"	1-1/4" - 1-1/2" IPS pipe	F16-2630	Adj., Stainless Steel, Clamp-on Rod Holder
			F31-2630	Adjustable, Aluminum Clamp-on Rod Holder
Leaning Posts				
Grab Rail	1-1/16" & 1-5/16"	3 /4" - 1" IPS pipe	F16-2620	Adj., Stainless Steel, Clamp-on Rod Holder
			F31-2620	Adjustable, Aluminum Clamp-on Rod Holder
			F41-2620	Adj., Aluminum/Plastic Clamp-on Rod Holder
Legs	1-11/16" & 1-15/16"	1-1/4" - 1-1/2" IPS pipe	F16-2630	Adj., Stainless Steel, Clamp-on Rod Holder
			F31-2630	Adjustable, Aluminum Clamp-on Rod Holder
Poling Platforms				
Rungs	1-1/16" & 1-5/16"	3 /4" - 1" IPS pipe	F16-2620	Adj., Stainless Steel, Clamp-on Rod Holder
			F31-2620	Adjustable, Aluminum Clamp-on Rod Holder
			F41-2620	Adj., Aluminum/Plastic Clamp-on Rod Holder
Legs	1-11/16" & 1-15/16"	1-1/4" - 1-1/2" IPS pipe	F16-2630	Adj., Stainless Steel, Clamp-on Rod Holder
			F31-2630	Adjustable, Aluminum Clamp-on Rod Holder
Railing				
Bow Rails	7/8" & 1"	7/8" - 1" Tubing	F16-2600	Adj. Stainless Steel Clamp-on Rod Holder
			F41-2600	Adj. Aluminum/Plastic Clamp-on Rod Holder

* International Pipe Standard

ADJUSTABLE STAINLESS STEEL ROD HOLDER

TACO adjustable stainless steel rod holders clamp on 7/8" and 1" O.D. tube. This is ideal for bow rails and grab rails. Fast and easy to install with no fabrication or welding necessary. Rod holder also clamps to 1-1/16" and 1-5/16" O.D. pipe on T-tops, leaning posts, arches and rocket launchers, available in 1-11/16" O.D. and 1-15/16" O.D. for legs of towers, poling platforms and T-tops. TACO adjustable rod holders rotate and lock every 18° for optimum fishing positions. TACO adjustable rod holders are also available in anodized aluminum to match weld-ons.



Rotates and locks every 18°



DROP DOWN STAINLESS STEEL ROD HOLDER

Easy rod access on the tallest T-top. TACO's patented, drop down feature lowers 35° for easy rod access. Turns and locks in place every 18° for desired fishing angle. Marine grade 316 stainless steel, clamp-on rod holder fits 1-1/16" & 1-5/16" diameter (3/4" & 1" IPS) pipe found on most T-top outer rings.



Patent #6,381,897
F16-2650POL-1

ZWAARDVIS POSEIDON SEAT COLUMN ASSEMBLY INSTALLATION

TOOLS AND SUPPLIES NEEDED:

- Lead pencil
- Electric or battery powered drill
- 3/8" Drill Bit
- 5/16" T-nuts

Both the Powermatic and Fixed seat column assemblies come completely assembled and ready to be attached to the deck. The seat slide assembly has mounting slots to bolt it to the seat and comes with four stainless steel 1/4" hex head x 5/16" x 1" cap bolts with stainless steel washers.



- 1) You should have access to the underside of the deck where you are going to mount the seat column. If you have access to this area through a hatch you do not need to drill an access hole. You then have the option of using a backing plate, which you can make from Marine Lumber or a piece of 1/4" anodized aluminum plate. If you do not have access, drill about a 4" hole in the deck directly under the center of the column to access the 6 mounting holes. The hole should be large enough for you to reach in and install locking T-nuts under each mounting hole (Figure 2). Or make 3 strips from Marine Lumber 2" x 8" and drill 2 holes 5-5/16" apart. Each will span 2 holes.

Caution: Before drilling holes in the deck, make certain there are no electrical wires, gas lines or gas tank directly below the area. TACO recommends the use of Z100-1169 deck mounting base



Figure 1

- 2) Once you know the thickness of the deck and backing plate, together with the thickness of the nuts you are going to use, you can purchase the six 5/16" stainless steel flat head machine screws, stainless steel washers and stainless steel locking T-nuts that you will use to secure the seat base to the deck. These are not provided since the length will be different for each installation. If you are using a metal backing plate replace the T-nuts with locknuts.
- 3) TACO recommends using a backing plate or a deck plate to insure the utmost stability in your mount. Using the seat base as a template, make sure the seat is facing in the right direction and mark all six hole locations (Figure 1), and using the recommended drill bit for your T-nuts, drill the clearance holes for the mounting screws. If you are going to use a deck plate, use the holes in the deck plate as a template to mark and drill the mounting holes.
- 4) To set the T-nuts in place, install a machine screw with a washer through one of the holes in the deck. Through the access hole, place the T-nut on the screw and tighten the screw until the teeth of the T-nut dig into the underside of the Marine Lumber backing plate or strips (Figure 2), then remove the screw. Repeat until all six T-nuts are set in place.
- 5) Place the column so that the base holes line up with the holes in the deck and install the six mounting screws without the washers, into the six T-nuts, placing some anti-seize under the head of each screw before tightening. If you are using a deck plate, install the screws through the deck plate into the T-nuts and use the machine screws that come with the deck plate to attach the seat pedestal to the deck plate. If you are using a full backing plate underneath the deck, install the backing plate onto the screws coming through the deck. While someone holds the locknuts with a wrench, tighten the screws or vice versa (Figure 3).
- 6) Move the seat slide all the way forward and using two of the four hex head cap bolts and install them into the seat (Figure 4). Move the seat slide all the way back and do the same with the other two hex head cap bolts to complete the seat installation. If you do not have a Zwaardvis seat, you may have to use different bolts and nuts to install your seat.



Figure 2

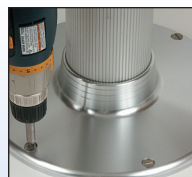


Figure 3



Figure 4

Leaning Posts

LEANING POST

TOOLS AND SUPPLIES NEEDED:

- Phillips head screwdriver or a screw gun
- Adjustable wrench
- Wax pencil and a lead pencil
- Electric or battery powered drill
- Jig Saw
- 5/32" Hex wrench (Included with Leaning Post)
- 24" x 54" sheet of white marine lumber (P10-5024WHA54-1)

INSTALLATION:

- 1) Before assembling the Leaning Post, check the footprint dimensions and mark the approx. locations of the mounting holes with a wax pencil.
- 2) Check underneath the deck to make sure that any gas tanks, gas lines, electrical wires, etc. are far enough below the deck so they will not be damaged when drilling or through bolting the Leaning Post to the deck. (Caution, if you do not know what is directly underneath your mounting location ask your boat manufacturer, a qualified boat mechanic, or use a flashlight to view the area through an existing access hole or make a hole in an area that you can properly seal and cover afterwards.).
- 3) Assemble the Leaning Post according to the Assembly Instructions provided.
- 4) Using the footprint of your Leaning Post, make backing plates out of a piece of 1/2" Marine Lumber. Make sure you leave enough material for a cover plate (Step 14).
- 5) If the area underneath is acceptable, place the Leaning Post in the desired location. (About 12" from the console).
- 6) Make sure that your Leaning Post is straight and parallel with your console.
- 7) Mark the hole locations through the mounting holes in each mounting flange, making sure that the Leaning Post does not move.
- 8) Install a 3/16" drill bit into your drill and put a piece of tape on the drill bit 1" from the tip so you will know when to stop and do not drill too deep.
- 9) Drill the mounting holes.
- 10) Put the Leaning Post back in place to make sure that all the holes line up. Enlarge holes if necessary.
- 11) If you do not have an access hatch to the underside of the deck you will have to cut an access hole between the two mounting locations on each side of the leaning post big enough so you can reach inside and install a backing plate and locknuts or T-nuts on the mounting screws. Make sure that the access hole is completely within the mounting feet of the leaning post so that you can seal and cover it up with a piece of Marine Lumber after the installation.
- 12) Put sealant on the threads of each of the 1/4" mounting bolts and insert them into the holes.
- 13) Install the backing plates and locknuts or T-nuts on the mounting bolts through the access holes and tighten them securely.
- 14) Using a piece of 24" x 54" Marine Lumber (P10-5024WHA54-1) cut the cover plate to fit within the footprint of your Leaning Post.
- 15) Drill clearance holes in the Marine Lumber for the mounting screws.
- 16) Using the clearance holes mark the deck and drill pilot holes so the screws can thread into the deck.
- 17) Place Silicone sealant around each of the access holes and line up the holes in the Marine Lumber cover plate with the pilot holes, put sealant on the screw threads and install the screw to secure the cover plate to the deck
- 18) Install the optional cooler and adjust the straps



MARINE LUMBER

Marine Lumber is a UV-stable marine grade polymer with excellent resistance to sun and saltwater. It is an ideal material for adding accessories or replacing wood, laminates or plastic products on boats.

MARINE LUMBER FEATURES

- It will not rot, delaminate, swell or splinter
- The matte texture requires no painting, finishing, or maintenance
- It will last the lifetime of your boat
- Marine Lumber can be easily cut, routed, shaped and drilled with standard woodworking tools

PROJECT IDEAS

- Electronics boxes
- Ski Locker lids
- Shelves
- Chartholders
- Table tops
- Bait boards
- Ladder treads
- Sink covers
- Transom doors
- Trim
- Sliding Door / Track
- Arm rests
- Counter tops
- Backsplash
- Rod Holder racks
- Cabinets
- Hatches and doors
- Instrument panel
- Tool holders
- Consoles
- Leaning posts
- Bait Wells & covers
- Shower floors

Visit tacomarine.com for downloadable templates for Marine Lumber projects to personalize your boat.

TOOLS & SUPPLIES NEEDED

- TACO Marine Lumber Sheets
- Drill & Drill bits
- Screws, Nuts & Bolts
- Tape measure
- Carbide tipped table or Circular Saw with 50-70 teeth
- Clamps
- Wax pencil
- Posterboard or other pattern material
- Jigsaw for curved cuts
- Hole saw bits
- Countersink bit
- Screwdriver or Screw gun
- Router bit with ½" carbide bit with at least 2 flutes
- Silicone or 3M 5200
- Sander with 120 grit sandpaper
- Rubber mallet
- Goggles



Marine Lumber
"Hands On - How To" Video
TACO # X50-0003



This "How To" DVD reviews the basics of using TACO Marine Lumber, project ideas, tips and tricks for cutting, drilling, bending and installing your completed TACO Marine Lumber Project.

Marine Lumber

CHOOSE YOUR PROJECTS

Projects using Marine Lumber range from replacing damaged wood, laminates and plastics, to adding personalized accessories (see Project Ideas on page 15).

To Replace Worn or Damaged Wood- Remove the old part. Use the old part as a template by clamping it to Marine Lumber.

To Add New Accessories- Choose the accessories you would like to make. Determine where they will be located on the boat and create a pattern if you don't have one, including the location of the attachment holes. You can also visit TACO's web site tacomarine.com for downloadable templates of Marine Lumber projects.



PLAN YOUR PROJECT

- 1) Calculate the size of the Marine Lumber Sheet you will need by laying out your patterns.
- 2) Read the "Create Your Accessory" section of the brochure carefully and if you have any questions about your project, **call Handy Hank at: 800-653-8567 or visit TACO's Web site TACOMarine.com**
- 3) Choose the tools & hardware you will use for each project including screws, nuts & bolts needed for attachment, screwdrivers, saws, drill bits, countersink or counterbore tools, hole saw blades, etc...

HANDY HANKS' TIP: Draw out the size of the Marine Lumber you are going to use on poster board. Map out multiple projects on the poster board first to ensure that all the components will fit. If not, go to the next available size of Marine lumber.

- 4) Purchase the appropriate size Marine lumber sheet at your local marine store.

IMPORTANT NOTICE

Marine Lumber is not a structural material. The framing or structure it is attached to must be able to withstand any stress or load it may be subject to. It should be supported by a sub surface or a load bearing framework every 15" in both directions. Use wood or TACO's tubing in large spanning applications.

CREATE YOUR ACCESSORY

- 1) Clamp your old part to the Marine Lumber, or tape your template to it with scotch tape and make an outline using a **WAX PENCIL**.
- 2) Cut the outlines of the wax pencil using a table or circular saw for straight cuts, a jigsaw for curved cuts and a drill with hole saw blades for large holes.

HANDY HANKS' TIPS: Never use lead pencil, ink pen, magic marker, etc. on the unprotected surface of Marine Lumber. These items will permanently stain the marine lumber. Cut holes and notches in the components first before cutting them out of the Marine Lumber sheet. All cutting tools should be carbide tipped if possible. Circular blades should have 50-70 teeth and run at approximately 1200 rpm. When drilling, Marine Lumber gets hot. Stop frequently to let it cool down.



3) Finish all edges using a router with a 1/2" carbide bit with at least 2 flutes or an orbital sander with 120 grit sandpaper.

4) If you are bending the Marine Lumber to create a corner, you can place it on top of a piece of plywood so that the bend line is just past the edge. Heat it with a heat gun across the bend line allowing the part extended over the edge to bend downward. If you are bending it in place, secure with clamps and apply heat with a heat gun. Start at the clamped end, gradually apply pressure and work in one direction.

HANDY HANKS' TIP: If you want to create sharp corners, you can make a V shaped notch on the inside of the bend line with a router before bending.

Drill the attachment holes in the Marine Lumber using a drill bit slightly larger than the mounting screws or bolts will allow for expansion and contraction of the Marine Lumber. Marine lumber contracts and expands at the rate of (6×10^{-5}) in/in/°F changing approximately 1/32" for every linear foot of length or width, over a 40° temperature range. For best results, use a sharp, high-speed drill bit. Countersink the holes with a countersink bit to allow the screw heads to be flush with the surface of the Marine Lumber. If you are going to counterbore the holes, it should be no deeper than 1/3 of the thickness of the Marine Lumber.

INSTALLATION

- 1) Hold your accessory in position and drill through the mounting holes into the surface you are mounting it to. Make sure the drill bit is smaller than the mounting screws or bolts so the threads will grip, unless you are through-bolting.
- 2) Install your accessory using fasteners. Coat the threads with a silicone sealant or 3M 5200 before installing them to create a watertight seal.

HANDY HANKS' TIP: Most sealants and adhesives will not adhere to Marine Lumber. 3M makes one that will work. It is called Scotch-Weld DP-8005. If you are bolting Marine lumber to another surface and need to make a water-tight seal, you can use 3M 5200 or one of TACO's weather seals. Both will act as sealants only, not adhesives.

CARE AND MAINTENANCE

- Clean Marine Lumber with a mild solution of liquid soap or boat wash and water, and a synthetic/nylon "scrub" brush
- Remove stains with Citrus Cleaner, Mineral Spirits, or Alcohol
- Avoid contact with chemicals such as Teak Oil, which can cause permanent stains
- Lead pencil, Ink pen, or permanent markers will stain Marine Lumber
- Furniture polish or products such as Armor-All® can add an attractive luster to the finish

TACO LUMBER LITE SHEETS

Lumber Lite is a cellular marine grade utility sheet designed to withstand harsh marine environments. 40% lighter than Marine Lumber sheets, Lumber Lite is an ideal product to replace wood. Can be used as upholstery backing.

Aluminum Care Tips

WHAT YOU SHOULD KNOW

Preventative Maintenance For Your Boat

ANODIZED ALUMINUM

The aluminum on your boat has been anodized. This creates a very hard protective seal on the surface of the aluminum to protect it as much as possible from pitting. When the anodized coating is broken and raw aluminum is exposed, corrosion will take place. Damage from chemicals, knives, gaffs, or other abrasive impacts can break the anodized coating.



AVOIDABLE CORROSIVES

- Strong acidic solutions found in cleaners, paint remover, degreasers, etc...
- Concentrated alkaline based solutions. Many concentrated soaps fall into this category
- Chlorine, sulfurs, solvents, and ammonia based products

UNAVOIDABLE CORROSIVES

- Saltwater (comes with the territory)
- Airborne pollution, particles from local sources: Vehicles, incinerators, paper mills, chemical plants, power plants, harsh chemicals from work performed at local shipyards and dry docks. Be aware of local sources that can expose your new boat to corrosive chemicals

HOW TO PROPERLY CLEAN

Always use a mild, non abrasive soap and lots of fresh water. Thoroughly wash the aluminum with a soft towel or sponge utilizing lots of soap and water to remove all dried salt crystals and other contaminants. Rinse completely with direct water pressure. The important point is to clean and rinse it well!

SAFE CLEANERS:

Mild Dishwashing Liquid

Specialty Marine Cleaners:

- Sea Safe Boat Wash
- Boatwash Concentrate
- Super Suds

HARMFUL CLEANERS:

Bleach (Clorox, etc.)

Mild Abrasive Cleaners (Ajax, Comet, Soft Scrub, Rubbing Compounds, etc.)

Strong Cleaners (409, Engine Degreasers, etc.)



There are many different products available to protect aluminum. Here are a few: Aluma Guard, Boeshield T-9, Premier Polish, and Corrosion Block