



Gemini Marine Canvas & Marine Products

Custom canvas • DrillSteady • Gemlock struts & hinges

Simply elegant. Simply effective. Simply better.

Grab rail installation guide

This guide will help you install:

- Solid grab rails on the sides of dodger or bimini frames
- Folding grab rails
- Solid grab rails on or under dodger or bimini roofs

Pro tip: Choose carefully!

While our grab rails can be placed on tubing just about anywhere, care is needed in choosing the right rail mounts for the job:

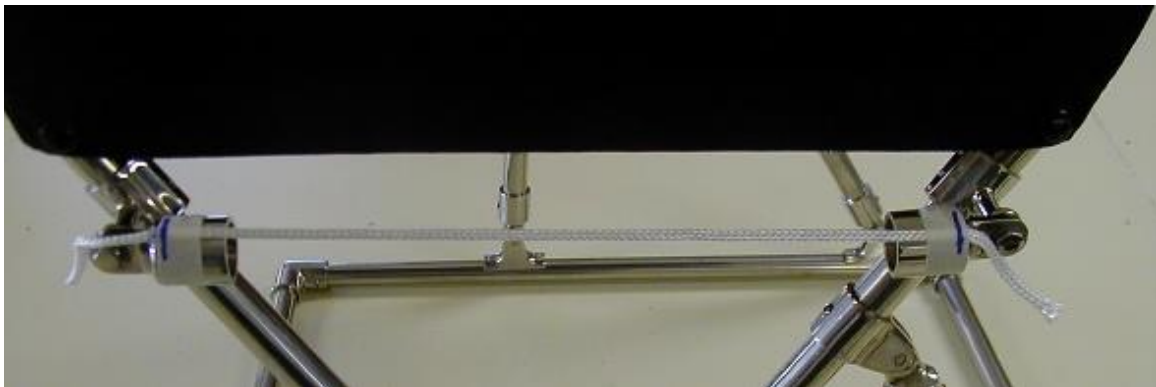
- *Sliding side mounts* **WILL NOT** slip around bends in tubing. If either end of the grab rail is inside a bend, please choose a kit with split mounts.
- For grab rails installed either on top of a canvas roof or overhead under canvas, please choose a kit with concave post mounts.

Grab rails can be installed inboard or outboard of frame/tubing, as well as either over or under canvas (by making a hole to feed post through, which can be reinforced with leather or vinyl).

A. Installing SOLID grab rails

Materials required:

- Grab rail kit with either sliding or split side mounts
- Some or all of: Tubing cutter, string equal to length of strut, masking tape, 1/8" Allen wrench/key, Phillips head screwdriver, permanent marker



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Step 1 – Measuring and cutting to length (if necessary)

It may not be necessary to cut the tubing. For placement in locations shorter than the tubing supplied with the kit, set up the frame and tension canvas if applicable. Secure side mounts in place using an Allen wrench/key in the set screws provided. Install an eye end to each post, turn them to face each other as shown above (usually parallel to any fabric) and secure in place with a Phillips head screwdriver. Measure the distance between the bases of the eye ends where the tubing will end in the socket, using a piece of string if desired, and cut grab rail tubing to length.

Step 2 – Install grab rail

Loosen at least one eye end, slip the tubing into place and tighten all components firmly.

B. Installing FOLDING grab rails

Folding grab used to increase storage options when grabs and/or frames are *removed from the boat* can be installed following the instructions above for solid grabs. **Pro tip:** Split mounts are far easier to remove than accessing the ends of your frame tubing to remove sliding mounts.

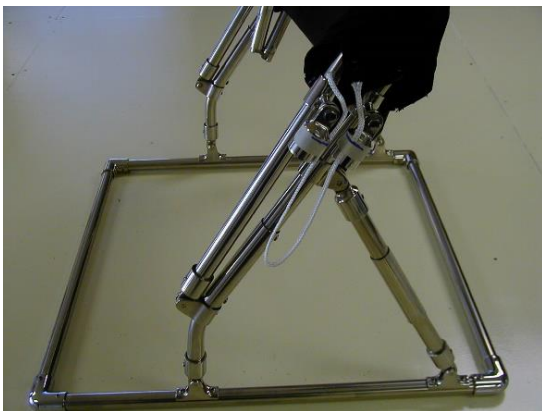
Grab rails on dodger/bimini frames that fold up *while still in place on board* require a slightly different approach.

Materials required:

- Grab rail kit with either sliding or split side mounts
- Masking tape, string equal to length of struts, permanent marker, tubing cutter, 1/8" Allen wrench/key, Phillips head screwdriver

Step 1 – Measuring strut length

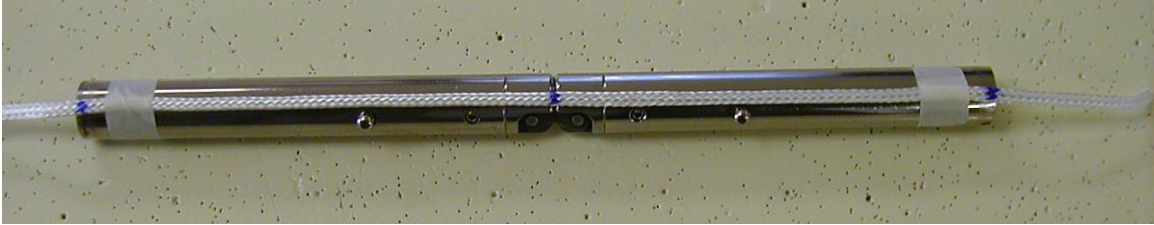
Set up frame and tension canvas, place mounts and eye end, and measure strut length as for SOLID grab rails above, using a piece of string firmly taped in place as shown. **Pro tip:** *Mark forward/aft ends (also port/starboard needed). Leave marking line taped in place.*



Step 2 – Locate hinge center placement

Fold the frame back into its closed position *without removing taped string*. For boats with a backstay passing through bimini fabric, fold all bimini frames up to the backstay and secure. Pull

the slack patterning line down alongside the folded frame and use a marker to mark the very bottom. *Incorrect hinge placement will result in a folded strut that binds up or folds out of position.*



Step 3 – Cut struts to length

Remove the patterning string and tape from eye ends and place on a fully extended strut with the hinge mark from Step 3 at the center of the hinge. Mark the strut tubing at the end marks on the string. Cut the tubing at the marks with a tubing cutter. *Be sure to mark port/starboard and forward/aft ends of the strut from Step 2.*



Step 4 – Install struts

Install struts into the eye ends ensuring the hinge folds up into a V shape (the link in the hinges should face up) and secure in place using an Allen wrench/key in the set screws. Grab rail unfolds when canvas is unfolded and is secured in place by sliding the locking sleeve over the hinge between the two springballs. Sliding the side mounts downward on the frame legs can make limited adjustment to the tension but moving them too far will affect the storage position of the folded struts.



C. Installing a grab over or under canvas roof

For *grab rails on top of canvas roofs*, using a concave post mount screwed through canvas to frame tubing avoids having to larger cut holes in canvas in awkward places (like through zip pockets) to accommodate side mounts. It also prevents side mounts making lumps in canvas. Concave post mounts on canvas roofs can be installed under canvas and fed through a small hole punched in the canvas, but below are simpler instructions for installing through canvas.

Grabs *overhead under canvas structures* are installed on concave mounts screwed directly to frame tubing. You may not need to remove canvas to install this type of grab.

Materials required:

- Grab rail kit with concave post mounts
- Some or all of: Tubing cutter, #10 hole tap, DrillSteady, 4 x screws size 10 x 24, drill, string equal to length of strut, masking tape, Phillips head screwdriver, permanent marker or automatic center punch, small patches of leather or vinyl if desired

Step 1 – Install concave mounts

Set up the frame and tension canvas. Place concave post mounts on rails to locate ends of grab rail and mark the screw holes on the frame tubing with a marker, a drill bit scratch or an automatic center punch. This may require cutting small holes through canvas at screw points to access tubing.



Remove canvas from frame and tap holes at marks with #10 hole tap. Reinstall canvas, place concave post mounts and screw into place using 10 x 24 screws. Place a patch of leather or vinyl under rail mount if desired for tighter fit. **Pro tip:** We *strongly* recommend using our DrillSteady tool (pictured above – available from geminiproducts.net) accurately-placed holes and no gouged tubing.

Step 2 – Measuring and cutting for length (if necessary)

For grabs in locations shorter than the tubing supplied with the kit, install the concave mounts as in Step 1 above and follow guide for measuring and cutting tubing as for solid grabs above.

Step 3 – Install grab rail

Loosen one eye end sufficiently to enable grab tubing to be inserted and tighten Phillips head screw and set screws once grab rail is placed.

