



## GENERAL GUIDELINES FOR INSTALLATION OF PRO-SERIES OUTRIGGERS

All the collars (the connection points to the main tube) should be kept as high as possible.

The brace pipes are threaded internally six inches from each end. This allows the braces, in most cases, to be shortened by three inches at each end without re-tapping. A more radical change of brace length requires tapping with a 7/8-14 inch machine tap, which is also conveniently used for thread cleaning.

Use a Teflon based grease (e.g. Tef-Gel®) on all threaded, slip-fit and all moving surfaces.

### MOUNTING STEPS

1. Determine the angle at which you wish to mount the main tube. An angle meter is useful for selecting an angle that complements the lines of your boat, such as the angle of your windshield, fly bridge or tower leg. It also helps to match the angle of one outrigger to the other.

The recommended angle is 35 degrees off the vertical. If you angle the outrigger too far back, it will decrease the amount of height and spread you will have in the fishing position. Rake-back angles greater than 45 degrees are not recommended. If you choose to angle the outriggers beyond 40 degrees, you can partially compensate for the loss of spread by mounting the base of the *back-brace* lower than the base of the main tube. This will cause the outrigger to swing forward slightly when lowered to the fishing position. This does not compensate for the loss of height.

When mounting the main tube the general rule of thumb for a sportfishing yacht is to have the tips of the outriggers even with or slightly overhanging the stern. The approximate location forward of the stern, for a rake-back angle of 35 degrees, is found by dividing the overall length of the outrigger by two and adding 15% of this number. For example, for an overall length of 30 feet the position of the base would be 15 plus 2.25 feet forward. The upper portion of the main tube should be in a position where the captain will have easy access to it because this is where the *standoff* will usually be mounted. When you are sure the outrigger is at the proper angle, in the position where it will operate properly and not interfere with anything, then mount the base of the main tube. The base should be mounted on the cabin wall or it can be mounted on the gunnels. Make sure that the bolt in the base is horizontal.

2. There are three collars that attach the outrigger braces to the main tube. Two standard collars for the **back-brace** and the **hinge-brace** and a special collar called the **latch-collar** for the **standoff**. Normally the collar for the **back-brace** is mounted to the main tube just below the top of the tube. The collar for the **hinge-brace** is mounted below the first collar. The **latch-collar** and the **standoff** are always the last items installed during an installation. Under most conditions, the **latch-collar** is normally mounted to the main tube but, if appropriate, may be mounted to the first section of the outrigger above the lower spreader cross. This is not an exact science so the initial collar positions may end up being adjusted later on.

3. Mounting the base of **back-brace**:

After the main tube or the complete outrigger is attached to its mounting base, secure the outrigger with a line to the side of boat at the approximate mounting angle. Snap a horizontal line from the base of the main tube through the area where the base of the **back-brace** will be mounted. Connect the **back-brace** to the main tube. Hold in position to determine the mounting position for the base of the **back-brace**. Ideally the base of the main tube and the **back-brace** should be on same horizontal line with the long attachment bolts inline. Adjust the length of the **back-brace** as needed. If the **back-brace** is too short for its base to align with the base of the main tube, lower the collar on the main tube until the bases line up. The **back-brace** is usually mounted parallel to some feature on the yacht for aesthetic reasons, but this is not a requirement.

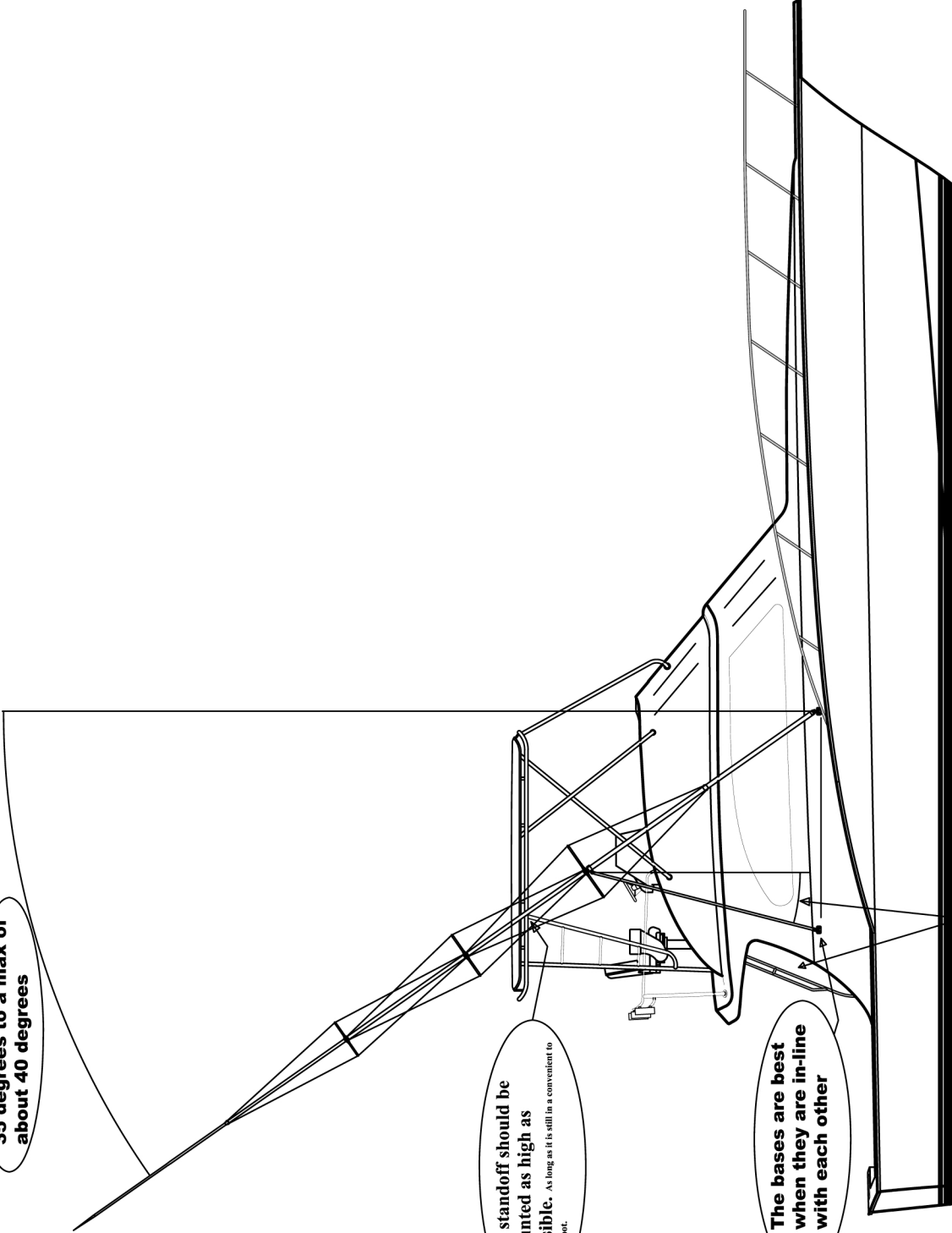
4. Mounting the **hinge-brace**:

Attach the **hinge-brace** to its collar on the main tube. The base of the **hinge-brace** mounts inboard of the main tube and usually in a position that is approximately 2/3 up the tube from the base of the main tube. The short leg of the **hinge-brace** attaches to the collar on the main tube and the long leg attaches to the rectangular base mounted to the side of the yacht. The bolt in that base should be horizontal. When the outrigger is in the fishing position and the **hinge-brace** is fully deployed it should be relatively horizontal, not angled up or down at some radical angle. The proper installation of the **hinge-brace** is the most difficult task for a novice installer to do correctly. See diagram on final page. **Note: the clevis on the end of the short leg must remain one-half turn loose, as it needs to rotate freely as the outrigger is deployed and retrieved.**

5. Mounting the **standoff**:

The **standoff** attaches to the main tube at an offset angle. This is usually the case because as the **hinge-brace** folds up inboard of the main tube it would be in the way. However, the more perpendicular the **standoff** arm is to the main tube the better. Make sure you provide some clearance between the **hinge-brace** and the **standoff** to prevent them from touching.

**35 degrees to a max of about 40 degrees**



**The standoff should be mounted as high as possible.** As long as it is still in a convenient to reach spot.

**The bases are best when they are in-line with each other**

**At least 10 degrees:** If there are some lines on the boat to follow, like a ladder or a tower leg it will improve the look

