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N2 Custom Wakeboard Tower



Installation Manual

Congratulations on your purchase of one of the finest wakeboard towers in the industry! This tower is designed to provide you years of service and satisfaction with the proper care and installation. Please read these instructions carefully. They will guide you through the process and provide simple time-saving tips. If at any time you have a question about the tower or installation, please call (800) 284-6615 and ask for technical assistance.

Contents:

1. Safety Guidelines and warnings
2. Unpack, check and identify parts
3. Tools and installation tips
4. Pre assembly
5. Assembly
6. Preparing boat for installation
7. Sizing check
8. Drill holes for mounting
9. Mounting tower to boat
10. Tightening hardware
11. Accessories
12. Care and maintenance
13. Warranty

*******Important Safety Precautions*******
Please Read

- This tower is designed to tow one wakeboarder or skier (one person only)
- Do not tow water toys including inflatables (kites, tubes, barrels, etc), multiple riders, parasails or other airborne apparatus
- Do not tow other watercraft
- Do not use tower for anchoring or mooring
- Do not allow passengers to sit underneath or behind the rope attachment point when the tower is in use
- Do not operate or tow boat when tower is collapsed
- Ensure all bolts and hardware are tightened before each use
- Do not use tower if hardware is missing or broken or if the tower shows any type of stress (cracks, broken welds, etc)
- When operating or towing boat with tower be aware of low bridges and waterways, powerlines, trees, or other low objects that may come into contact with tower
- Do not exceed 50 lbs. of weight mounted on tower (speakers, racks, lights, etc.) Exceeding this weight limit will void warranty and may cause stress to tower
- Do not allow passengers to sit on, climb on, jump off, or otherwise use tower other than for designed purpose
- Failure to adhere to these safety warnings and guidelines will void warranty and may cause personal injury or death

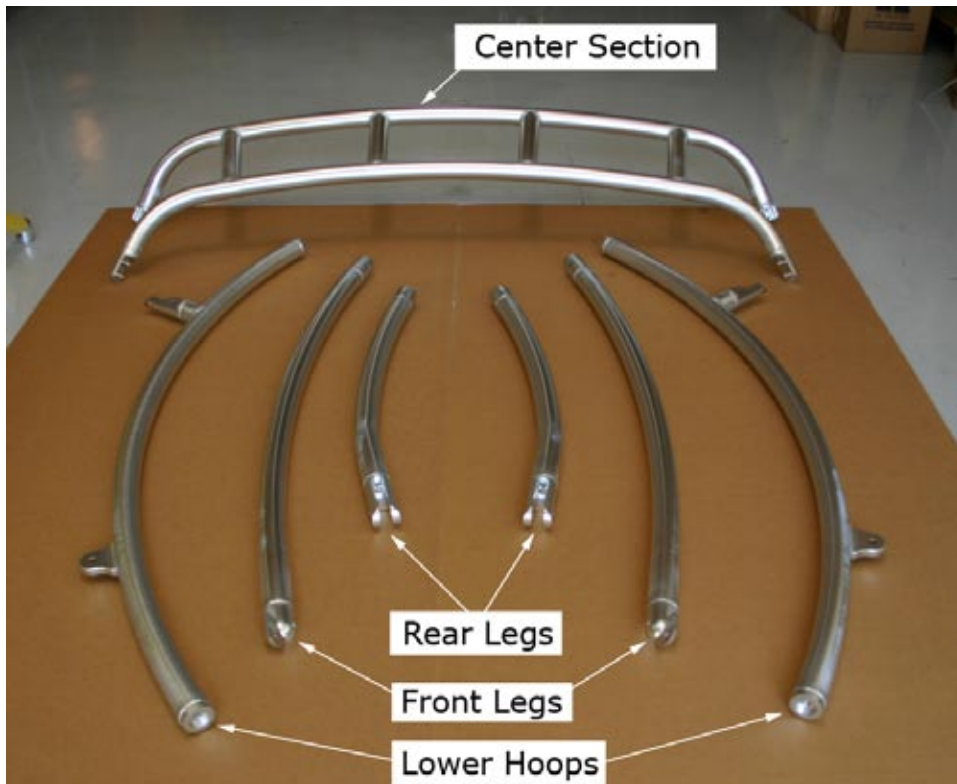
Unpack Contents:

Carefully unpack contents of boxes. Find a suitable area to lay the parts out and assemble (garage floor, driveway, etc.). Place cardboard or a sheet over the assembly area to protect the tower from damage.

NOTE: leave protective sleeves on tubes intact. This will protect tower and parts against scratches during the installation process. Please identify parts using the list below. Now is a good time to inspect parts for damage from shipping.

Parts List:

- | | | |
|----------------------------|--------------------------------|------------------------------------|
| 1. Center Section (1) | 10. 1/2" nylon washers (8) | |
| 2. Front Legs (2) | 11. 1/2" x 2" hinge bolts (4) | |
| 3. Rear Legs (2) | 12. Rubber Pads (4) | 19. 1/2" x 1-3/4" swivel bolts (4) |
| 4. Lower Hoops (2) | 13. Backing Plates (4) | 20. Foot Pads (4) |
| 5. Tow Spools (2) | 14. 1/2" brass lock nuts (4) | 21. intentionally left blank |
| 6. 3/8" x 1-1/2" bolts (2) | 15. 1/2" stainless washers (4) | 22. 1/4" x 1/2" Set Screws (8) |
| 7. 3/8" x 1-1/2" bolts (4) | 16. 1/2" x 2-1/2" bolts (4) | 23. 1/2" x 1" swivel bolts (4) |
| 8. Hand knobs (4) | 17. Swivel female (4) | |
| 9. Retainer clips (4) | 18. Swivel male (4) | |



Tools:

1. Electric drill
2. 1/2" drill bit, 3/8" pilot drill bit (optional)
3. Allen keys (range of sizes)
4. Wrench (size)
5. Non-permanent marker or grease pencil
6. Countersink bit (optional--see picture)
7. Grease (optional)



Tips:

1. To help prevent corrosion and squeaks, coat all threads and joints with grease, corrosion inhibitors, or thread lubricants (Do not use WD40). Uncoated parts can be exposed to water and hard minerals causing them to become difficult to remove or tighten. Don't worry about the grease since it can be wiped and cleaned easily after installation.

2. When drilling holes into the fiberglass of your boat, there are precautions you can take to reduce the chances of gel coat chipping and stress cracks. First, use the optional 3/8" pilot drill bit (or smaller) to start the larger 1/2" hole. Run the bit in reverse until it breaks through the top layer of the gel coat (1/16"-1/8"). Then drill in the forward direction until hole is complete. Repeat the last two steps for the 1/2" drill bit. Next, use the optional countersink bit to chamfer the outside edge of hole. Chamfering relieves the edge of the fiberglass and gel coat to help prevent future stress cracks and chips.

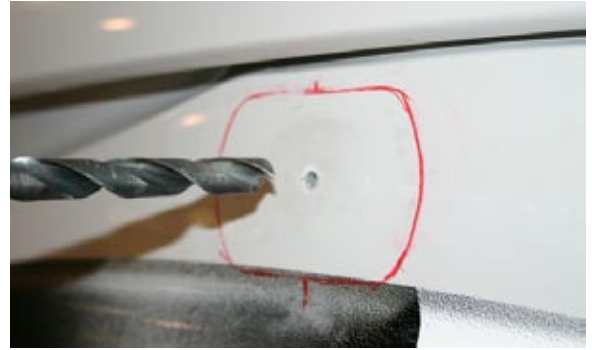
3. Before drilling any holes, please be sure to inspect areas behind the mounting locations for ease of access. Also check to ensure that the area is clear of wires or other hardware.

4. Not all applications need backing plates. Occasionally, there may be insufficient room for the backing plates. If this is the case, modify the backing plate for a custom fit or use the supplied fender washers in place of the backing plate. If the fiberglass is less than 3/8" thick, you may want to consider building up the fiberglass around the backside of the mounting area. There are several ways to do this including using marine plywood, fiberglass and resin, metal plates, etc. Building up the area behind the mounting locations will help distribute the stresses on the mounting locations and lessen the chances for stress cracks in the gel coat.

5. Do not over tighten the mounting bolts between the feet and fiberglass. This will cause the fiberglass and gel coat to fatigue and cause future damage.

6. To help prevent any scratches to your boat while installing the tower, tape off large areas around the mounting location with a clear plastic tape (packing tape, etc). Remove the tape before final installation.

7. Occasionally, there will be an Anal Awareness Note in the instructions. These are simple tips for the people, well...you know.



Tower Assembly:

Now it's time to get to the goods! If you are like everyone else, you probably haven't read through the tips in the previous section. Please do so, they can be helpful.

Foot and Lower Hoop Assembly:

Step 1: Locate male swivel (part #18). If assembled to female swivel then disassemble. Attach to lower hoop (part #4) using the smallest 1/2" x 1" bolt (part #23) and set screw (part #22). Use grease on all threads. Do not tighten. Your lower hoop should look like this: See **Fig-1** and **Fig-2**.

Step 2: Assemble female swivel (part #17) using 1/2" x 1-3/4" (#19) stainless bolts. Again, it is a good idea to use grease or other suitable thread lubricant in this step (read tips section). Attach foot pad* (#7) to swivel assembly using the set screw (#22). Carefully attach rubber pad (10) to bottom of foot pad. Do not tighten anything at this point. Repeat for all remaining feet. See **Fig-3**, **Fig-4**, **Fig-5**.



Fig-1



Fig-2



Fig-3

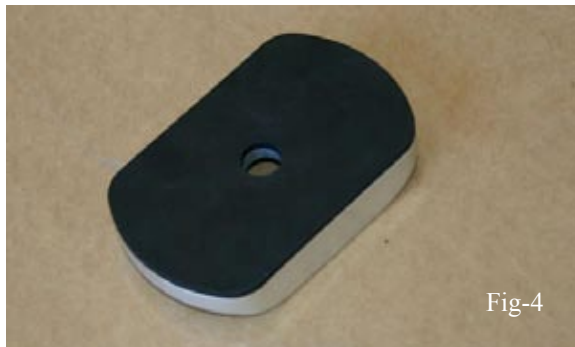


Fig-4



Fig-5

***Anal Awareness Note:** notice which side of the swivel (male or female) attaches to the foot pad and repeat for remaining assemblies. Structurally, it doesn't matter...it's more cosmetic so everything looks uniform.

Step 3: Lay lower hoops out, left and right. Since this is a custom tower, each part is unique. Each tubular component of your tower should be stamped on each end. It is important to take notice of the markings and match them to the corresponding part in the next few steps. See **Fig-6**.



Fig-6

Step 4: If the hand knobs are already installed on the lower hoops, please skip this step. Insert hand knob (part #4) into bushing as shown on lower hoop assembly. Make sure the knob side is on the rounded edge of the hinge so the knob will work properly. Install stainless retainer clip (part #9) into groove on end of brass shaft. Installing this retainer clip will prevent loss of the knob when loosened. **See Fig-7 and Fig-8.**



Fig-7



Fig-8

Center Section Assembly:

Step 1: Locate the center section (part #1). If the tow spools are already installed, please skip this step. Install both tow spools (part #5) using the supplied 3/8" x 1-1/2" stainless socket head cap screws (part #6) to the center tab welded on the center section. **See Fig-9.**



Fig-9

Step 2: Place the center section out on a flat surface. Take notice of the stamped markings on the connecting ends. Locate the rear legs (parts #3) and attach them to the center section using the stainless 3/8" socket head cap screws (part# 7). Make sure the stamped markings on the connecting ends match the markings stamped on the center section. **See Fig-10.**



Fig-10

Final Assembly:

Step 1: Attach the two lower hoops to the partially assembled center section. It may help to use the help of another person since this task can be difficult to align and hold in place. The parts attach at the rear collapsing hinge (the hinge with the hand knob). Each hinge is designed to have a nylon washer (part #10) on each side of the hinge pin. It is important to install the washers correctly to insure proper and smooth operation. Use the 1/2" stainless socket head cap screw (part #11). The nylon washers may be difficult to align with the holes and stainless screws so please be patient. It may help to use a thin tool to help position the washers. **WARNING--Do not overtighten hinge**



Fig-11

bolt as to prevent hinge from motion. See **Fig-11.**

Step 2: Attach front legs (part #2) to lower hoops (part #4). Each leg is unique (right and left). Take notice of the stampings on the legs and compare with the stampings on the center section. Use the 1/2" stainless screws (part #11) and nylon washers (part #10). Again, nylon washer is placed on both sides of the hinge pins. **WARNING--Do not overtighten hinge bolts as to prevent hinge from motion.** See **Fig-12.**

Step 3: Attach knobs (part #8) to the upper joints on each leg using same technique in previous steps. Install stainless retainer clip (part #9) into groove on end of brass shaft. Installing this retainer clip will prevent loss of the knob when loosened. Make sure the knob is on the curved side of the leg joints. See **Fig-13** and **Fig-14.**

Step 4: Erect tower by raising the rear hoop and locking the hinges with knobs. Once the rear hoop is secured, lock in the front legs one at a time. To lock the front legs to the center section, align the pins with their respective bushings and push joints together. Tighten with hand knob to fully seat joints together. Now the tower should be complete and ready to install. See **Fig-15.**

Boat Preparation

This is the most important step in installing your new tower. Careful preparation will ensure proper alignment and function of your new tower.

Step 1: By now you probably have an idea of where your new tower will be mounted on your boat. If you provided your own measurements for a custom tower, please use those as a guide. If the tower was built from an existing template at our factory, then try to position the tower where it fits best. Typically, the tower will straddle the windshield with the front feet just in front of the windshield. Side mount towers will



Fig-12



Fig-13



Fig-14



Fig-15



Fig-16

vary in placement. Now is a good time to prep the general mounting areas with clear removable tape to protect the boat surface.

Step 2: Lift the tower over the boat and position the rubber pads of the feet so they come to rest near the desired mounting locations. The feet will have to be adjusted to match the contours of the mounting surfaces. If the tower fits correctly, there should be minimal space between the mounting surfaces and the tower feet. You may need to reposition the tower to get the best fit. Do not be alarmed if there is gaps, however, large gaps are not advised since they may affect how the tower will collapse. See **Fig-16**.

Step 3: Once the tower is in the desired location, check that the tower is "squared up" on the boat*. The tow spool should be aligned in regards to the left and right of the boat. Also, the tower should be level with boat. Adjust tower if necessary. Mark all locations of feet. At this point, it may help to tighten the set screws on the feet (2 on each foot). See **Fig-17**.

***Anal awareness note:** Do not use the windshield or other features on the boat to base measurements. It is common for these features to vary in location from left and right sides of the boat. Instead, pick a centerpoint on the nose of the boat and triangulate back from that point. See **Fig-16**.

Step 4: Remove the tower from the boat. Mark the holes for drilling by using one of the feet as a template. Now is a good time to do a final inspection of underside of the mounting areas. They should be free and clear of wires, hoses, cables, etc. See **Fig-18**.



Fig-17



Fig-18



Fig-19

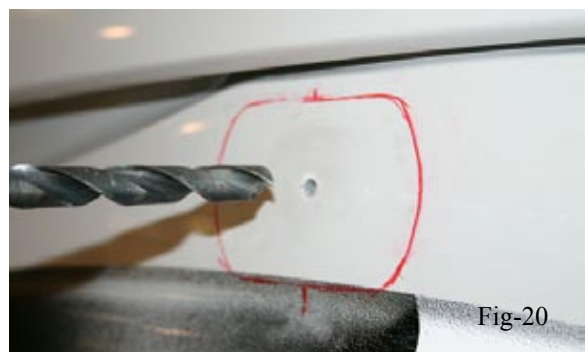


Fig-20



Fig-21

Mounting Tower

Step 1: Use a pilot bit to drill all four holes. See above "tips" section for helpful ideas and proper techniques for drilling fiberglass. Follow pilot holes with 1/2" bit using same techniques. See **Fig-19** and **Fig-20**.

Optional Step: You may follow each hole with a larger bit (9/16" or 5/8"). This will make it easier to install 1/2" screws later. We also recommend using a countersink bit to chamfer the 1/2" hole. This relieves the stress on the gel coat around the bolt hole. See **Fig-21**.

Step 2: Remove the swivel bolts from the feet observing the position of the feet in relation to the tower. Mount each foot with rubber pad to the drilled holes on the boat*. Use the supplied 1/2" stainless screws, brass nuts, backing plates, and washers (parts #16, 14, 13, and 15). The backing plates can be modified to fit by machining, sanding, bending, etc. If the backing plates don't fit the underside of the mounting location (e.g. top mounting on narrow

gunnels), just use the supplied washers. Do not tighten.

***Anal awareness note:** it may help to position the set screws on the feet to an upward position or any position that allows easy access for future adjustment.

Step 3: Lift tower back onto boat and position for mounting. Replace each swivel bolt taken out on the last step. Do not tighten at this point. Once all bolts are in place, adjust all feet and swivels to maximize surface contact between the rubber pads and the surface of the boat. The lower hoops should fall into a natural position on the boat and with the swivel assemblies. Do not force or try to manipulate the lower hoops to fit boat. This will affect the folding of the tower. Tighten all set screws at this point.

Step 4: This is the last step! Remove the swivel bolts again on the front of the tower. Have a helper pivot the tower rearward and hold (it may be helpful to prop up the tower at this point). Tighten all 1/2" screws on both the surface mounts and the inside of the swivel where it attaches to the tower. Lower front of tower and reinstall the 1/2" swivel bolts. Repeat procedure for the rear. At this point, all bolts should be tight.

Collapsing tower and Adjustments

Step 1: Locate front knobs and loosen one at a time. Separate front leg from top of tower and lower. These parts may be difficult at first. As the tower wears, this step should become easier. Keeping the locating pins lubricated with grease will also help. Repeat for other side. Note: it may help to loosen all hand knobs 1-2 turns (this loosens all the joints).

Step 2: Loosen one rear knob. NOTE: Make sure the tower is supported before loosening the last knob. Once this knob is loosened, the tower will collapse rearward. Do not stand underneath tower during this process! Have a helper hold the tower upright and loosen final knob. Slowly lower tower rearward until it comes to rest. Reverse these steps for raising tower.

Anal Awareness Note: It may be necessary to prop the tower parts off the boat while collapsed. All boats are different and it is impossible for us to foresee these issues.

Adjustments: it may be necessary to adjust your tower for easier collapsing. All hinge bolts may be adjusted as to tighten or loosen the hinge depending on preference. If the upper joints don't function easily, the lower hoops may need to be adjusted. If so, please refer to steps 3 and 4 in the previous section "mounting tower."



Care and Maintenance

Periodic maintenance: Tighten all bolts on a regular basis. Do not use tower if any components are damaged, missing, or broken. Inspect welds for cracks. Lubricate threads and hardware with anti-seize compound and/or a corrosion inhibitor. Lubricate hinges and joints for prolonged service.

Powder coated towers: Can be cleaned and treated the same as your boats exterior. Wax on a regular basis to help fight oxidation. Cover tower if exposed to long term sun (dry storage e.g.).

Polished/brushed towers: Wipe down with clean damp cloth. Wax may be used. WD40 or other inhibitors may be used on surface of tower for shine and protection. Avoid using any chemicals or cleaners on welds since they may damage and remove protective paint.

Warranty Information

Fluid Concepts L.L.C. (Fluid) warrants to the original purchaser that this product will be free from defects in material and workmanship under normal use for a period of one (1) year from date of original purchase from an authorized Fluid dealer. Should repair be necessary under this warranty for any reason due to a manufacturing defect or malfunction during the warranty period, Fluid will repair or replace (at its discretion) the defective product with equivalent product at no charge. Discontinued products may be replaced with equivalent products. Any applicable implied warranties are limited in duration to a period of the express warranty as provided herein beginning with the date of the original purchase at retail, and no warranties, whether express or implied, shall apply to this product thereafter. This warranty is limited to defects in material and workmanship, and it does not apply to loss of damage due to accident, misuse or negligence, or any cause occurring after delivery to the original purchaser.

Warranty Claims

Defective merchandise must be returned to your local authorized Fluid Dealer for warranty issues. To locate an Authorized Dealer please write or call Fluid direct. If the return of defective merchandise is necessary, call the Fluid Customer Service Department at (800)284-6615 to obtain a Return Authorization (RA) number. Package all defective items in the original container or in a suitable package that will prevent shipping damage, and return to:

Fluid Concepts
6142 W. Detroit St. #3
Chandler, AZ 85226

Include a dated proof-of-purchase from an Authorized Dealer. Warranty expiration on items returned without proof-of-purchase will be determined from the manufacturing date code. Freight must be prepaid; items received freight collect will be refused. Failure to follow these steps may void your warranty. Non-defective items received will be returned freight collect. Any questions can be directed to the Fluid Concepts Customer Service Department at (800) 284-6615.

Warranty Exclusions:

This warranty is valid only if the product is used for the purpose for which it was designed.

It does not cover:

- Damage resulting from negligence, misuse, or accident
- Items physically damaged due to abuse
- Freight damage or mishandling
- Items previously repaired by any unauthorized repair facility
- Speakers with silicon caulking or tape used for gasket/sealing material
- Items returned by unauthorized individuals or dealers
- Return shipping of non-defective items
- Speakers damaged due to amplifier clipping or distortion or incorrect signals
- The cost of shipping product to Fluid Concepts
- Installation slips including screwdriver holes in speaker surrounds and scratched surfaces
- Damage caused by exposure to water and/or excessive heat
- Items damaged from cross-threading and/or faulty fasteners
- Damage resulting from items coming into contact with objects such as bridges, other boats, etc.