

Four Leg Windmill

Instructions



Tower Assembly

Refer to pictures indicated and also see two tower drawings.

Important Note: Do not tighten any bolts until tower is fully assembled!

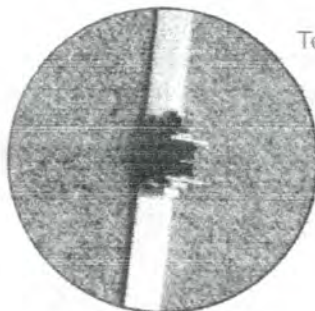
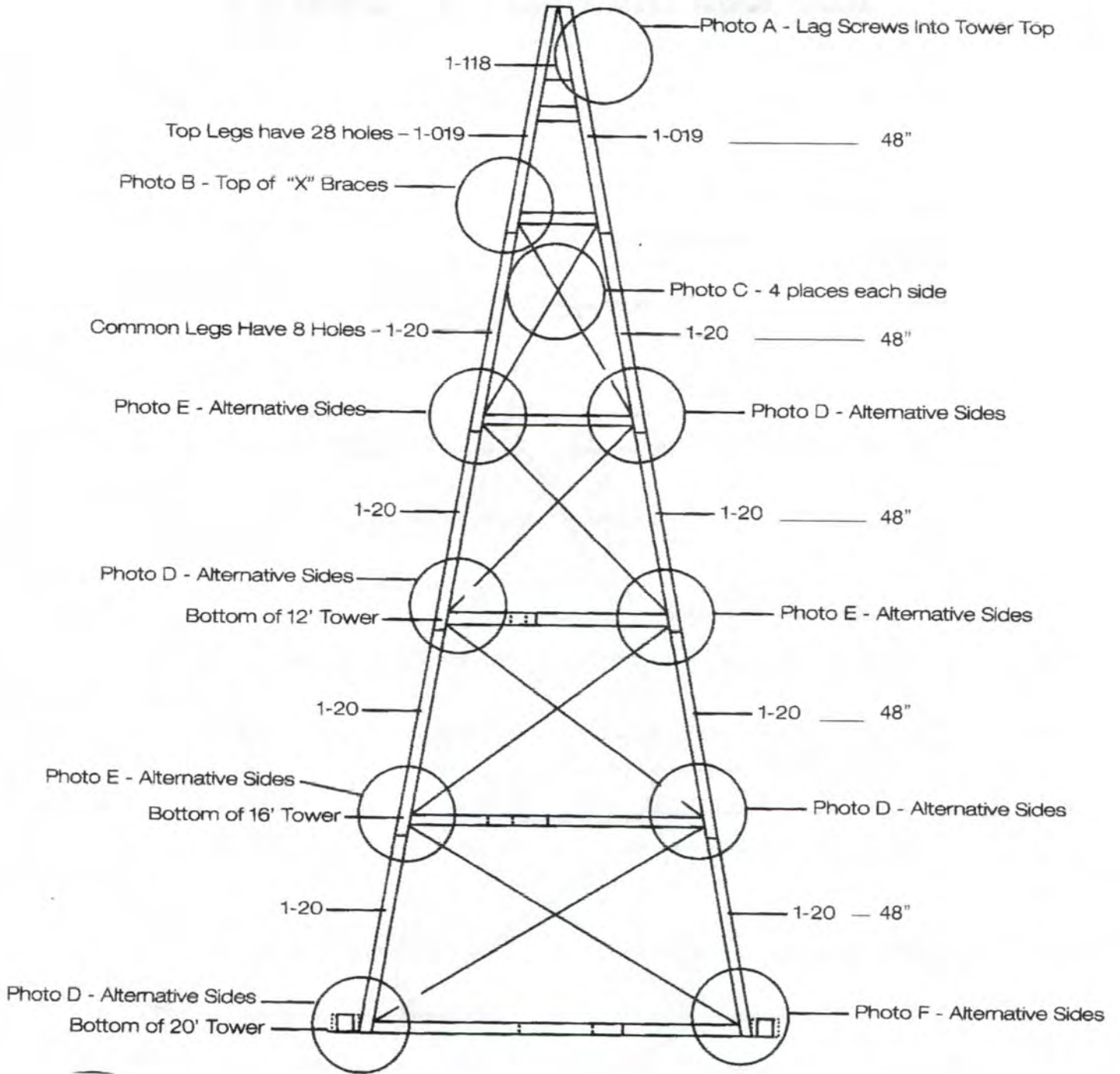
1. Begin the tower assembly at the top. Take all four top leg sections (item #1-019) and fasten them to the black plastic tower top (item #1-118) with 8 lag screws per leg. Tighten lag screws snug, but be careful not to strip the threads. (See photo A).
2. After top legs are fastened to the plastic tower top, install horizontal brace (item #1-006). Place nuts toward inside of tower, and washers under the head of the bolt.
3. Hold the next set of tower legs (item #1-020) to the back of the first set of legs (items #1-019) (See photo B) You also have to hold up (item #1-008) (See photo B) to the back of the leg sections and run a 5/16 x 3/4" bolt through the top hole of all items. Don't put bolts through the bottom holes yet as the "x" braces will have to be added. Place all nuts toward the inside of the tower with washers under the head of the bolt. Remember- do not tighten bolts yet.
4. Now look at the tower drawings. You need 8 pieces of (item #1-011). Place a 5/16 x 3/4" bolt and washer through one end, and then put the bolt through the remaining hole in the legs and through the horizontal piece, (item #1-008). Put the nut on the inside of the tower, and the washer under the bolt head.
5. Now place one of (item #1-012), and one of (item #1-043) as shown in (See photo C) onto the backside of the bottom ends of the upper "x" braces. Item #1-043 has a bend on one end, this goes toward the inside of the tower, and at the lower end so that it can become part of the tightener system (item #1-047).
6. Now look at (See photo D). You will be putting 5/16 x 3/4" bolts through four parts at the same time. Start on the right side of each tower side. Place a bolt with washer through the straight end of (item #1-047) (See photo D) and then through the top hole on the lower end of leg section (item #1-020) already in place, and then through the top hole of the next leg section (item #1-020). "Upper legs lap over lower legs". Now place (item #1-009) behind both legs. The top hole in (item #1-009) goes over the bolt. Place a nut on the bolt. Do this on all four sides, then connect opposite "x brace" to top hole on opposite corner with 5/16 x 3/4" bolt, washer and nut. Place a 5/16 x 1-1/4" bolt with one washer through the angled end of the opposite "x" brace. Add 2 thick rubber grommets to 1-1/4" bolt. Put the bolt through the angled end of item 1-047. Now add a washer and lock nut to the end of the bolt. Do not tighten these bolts until all assembly is done. Please note that the tensioning straps (item #1-047) and whatever opposite "x brace" is being used on that section, need only be drawn up snug. Please refer to detail photos.

7. The next section of the tower will be about the same as the last section except that you will bolt two parts together to make up the horizontal brace, and the (item #1-047) tensioner will go on the left side opposite the one in the section above (See photo E), and vertical legs and details page.
8. For all remaining sections, the same applies. Look at the tower drawing pertaining to the section you are working on for the correct part numbers for "x braces" and horizontal braces. Horizontal braces may be two parts bolted together. Remember to alternate (item #1-047) from right to left. They will always be opposite of the one above. **Don't forget to add anchor stake clamps at the bottom of your tower.**

Adding anchor stake clamps: Refer to (photo F). Notice that the angle of the holes in the clamps, match the angle of the tower leg. The clamps are rights and lefts to correctly fit the tower

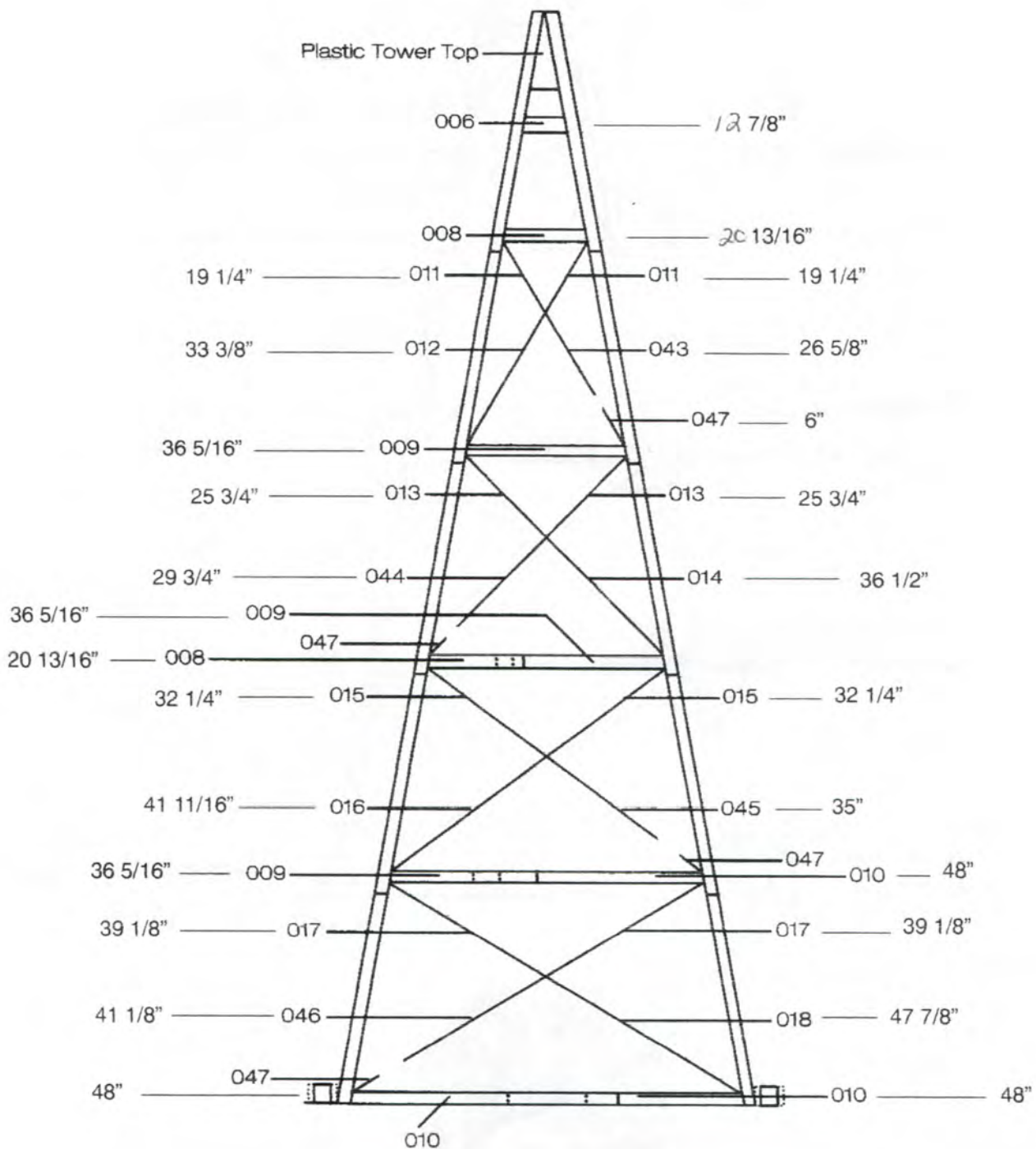
Tightening tower bolts: It is best to draw the "x" braces up fairly snug first (on the entire tower) (if you over tighten "x" braces you can pull the legs out of a straight line), and then tighten all other bolts on tower legs and horizontal braces at overlaps. Now re-adjust "x" braces (again, they need to be only snug). After all "x" braces are adjusted tighten the bolts at the center of "x" braces where all for pieces join. **After 4-6 months, re-check bolts to make sure all bolts are still tight.**

VERTICAL LEGS AND DETAILS



Tentioner - Close Up View

HORIZONTAL AND "X" BRACES



TOWER

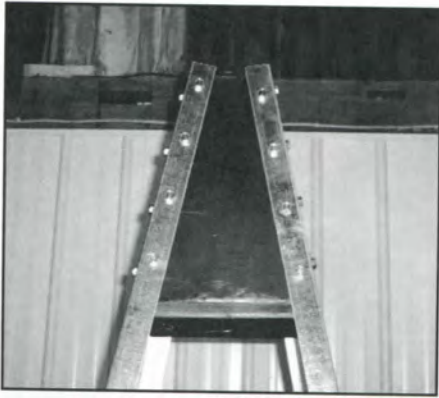
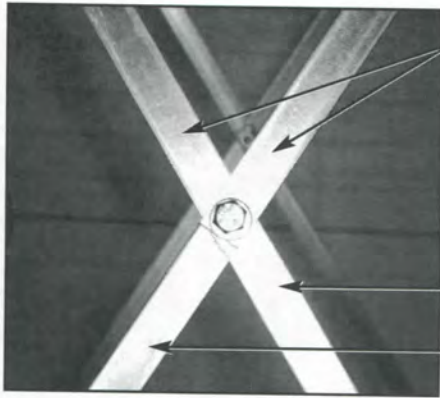


Photo A



Item 1-011

Photo C

Item 1-043

Item 1-012

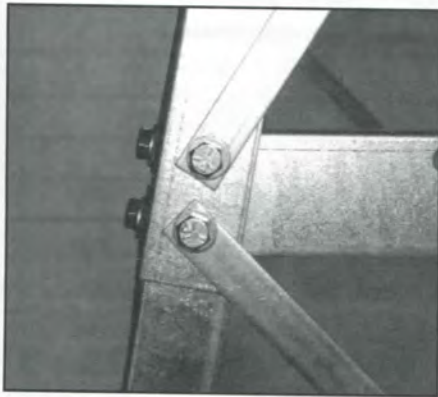


Photo E

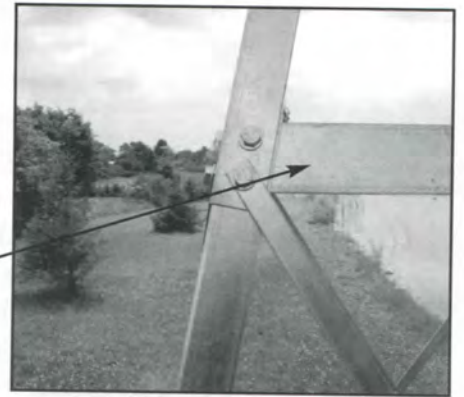


Photo B

Item 1-008



Photo D

Item 1-047

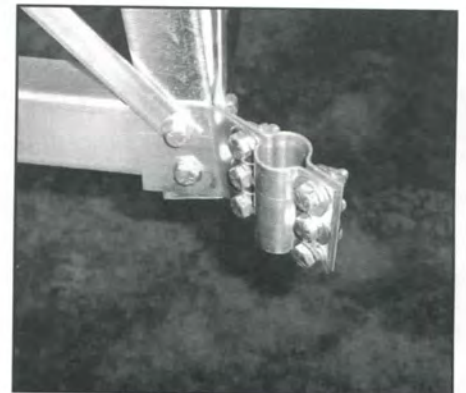


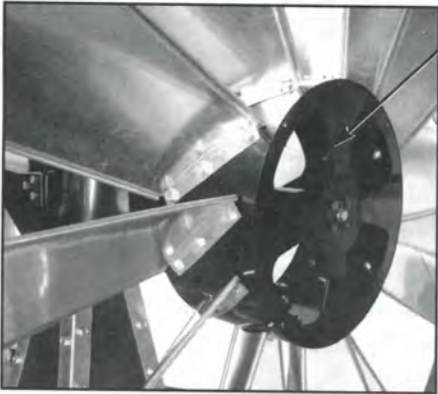
Photo F

Head unit assembly and set up instructions

1. Lay down the hub (item #1-114) in an area large enough for entire blade assembly.
2. Attach blades (item #1-005) by lining up the three bolt holes in the bottom of the blade with the three diagonal holes on the outside diameter of the hub (item #1-114) See photo G.
The blades will have to turn clockwise; this means the concave side of the blade will face toward front.
3. Secure blades to center hub with $5/16 \times 3/4$ bolts, washers and nuts. Tighten these bolts as you put them in. (Put washers on top of the blade flange and under nut)
4. Next, fasten the blade spacers (item #1-028) between blades with $5/16 \times 3/4$ bolts, washers and nuts. The washer goes under the nut. Note: Leave these bolts very loose until all blade spacers are installed - then tighten them. (You may need a "drift" or Phillips screwdriver to align the holes on the last pair of bolts).
5. Now get the pivot tube, item# 029 or #027 and place the short end through the hole in the bottom of the can and bolt the flange on the pivot tube to the bottom of the can, using $5/16 \times 1$ " bolts, with thick washers and lock nuts. See Photo K
6. Next, move to the tail assembly. Line up the four pairs of holes in the tail fins (item #1-026). Bolt together all four pairs of holes using $5/16 \times 3/4$ " bolts with 2 washers each and a nut.
7. Now see photos I and J. The tail fin is in between two $3/8$ " thick plexiglass spacers. The tail arms are mounted to the outside of the spacers. Now bolt through all parts using 3- $5/16 \times 1 1/2$ " bolts, 2 washers each, and nuts. Then attach the other end to the tail arm supports on the back side of the compressor can, using $5/16 \times 3/4$ " bolts, nuts and washers.
(See photo L)
8. Next slide hub (See photo G) (item #1-114) over shaft and tighten the set screws inside of the hub tightly to the shaft. (Note: If you purchased a windmill with an aeration pump-line up the set screws with the flat spots on the shaft.) Next, place a $5/16 \times 1$ " bolt and small washer into the end of the shaft- through the small hole in the hub, now install the dome (item #1-129) to hub (item #1-114) using four sheet metal screws.
9. The head unit is now ready to mount onto the tower top. ~~Slide one $3/8$ " thick plexiglass washer with 5 holes, and two white plastic washers onto the pivot tube. The one with 5 holes goes on first.~~ (These washers never need lubrication.) You are now ready to slide the pivot tube into the top of the tower. See set up instructions.

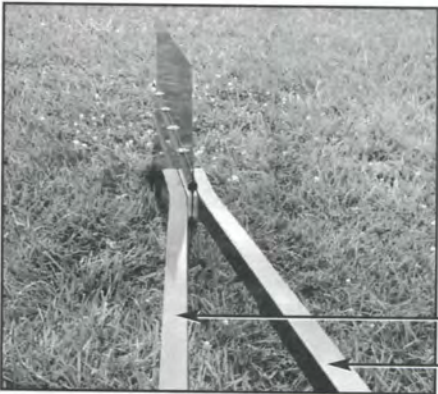
3 WHITE WASHERS

Head Assembly



Item 1-114

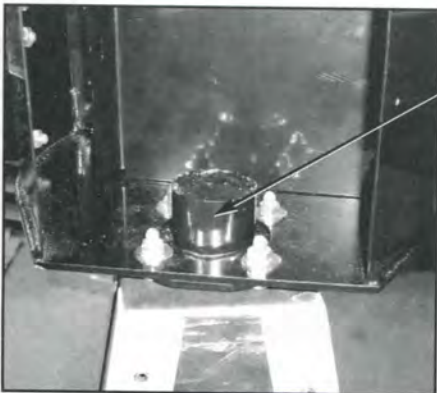
Hub With Blades
Photo G



Inside Look
of Tail Fin
Photo I

Item 1-032

Item 1-031



Item 029 or 027

Pivot Tube
with Four Bolts
Photo K

Tail Arm Connecting
to Compress
Photo L



Item 1-005

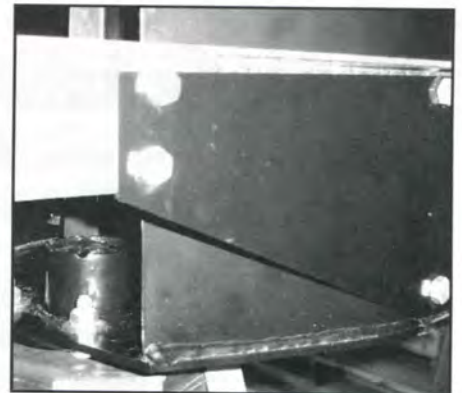
Blades/Blade
Spacers
Photo H

Item 1-028



Tail
Photo J

Item 1-026



Set up Instructions:

Place the bottom end of two tower legs where you want the tower to stand. I recommend that you drive two 24" approx. stakes into the ground just behind the bottom horizontal piece. These will help keep the bottom of the tower from sliding as you raise the tower. Now place a sawhorse under top end of the tower. Keep the sawhorse down from the top far enough to allow room for the blade assembly. Pick up the head assembly and slide the pivot tube (item #1-113) into the tower top. You are now ready to stand the tower.

Anchoring System:

The standard anchoring system supplied is four 1" x 48" steel tubes wedged on both ends, with one end welded. Drive these stakes into the ground through the anchor stake clamps at the bottom of each tower leg. "The welded end goes up." The stakes should be driven down as far as possible. It is best to drive in the stake on the highest corner "elevation" first, to arrive at the height of the other stakes. Then using your level you can level your tower and tighten the anchor stake clamps. This anchoring system works well in most areas, but you must use your own discretion. A newly placed mound, such as pond banks, or sandy soil may not hold, if you think your ground will not hold, you can do other types of anchoring.

Please note:

This windmill has been designed by a professional design engineer for maximum strength, however it is possible that a severe storm may damage or destroy it. Due to this, the windmill should be covered by your own insurance.

Safety Precautions

- 1. The tower was not designed to climb, use a ladder**
- 2. Never attempt to work on the windmill without first tying the wheel so it cannot turn**
- 3. Never stand near the windmill during stormy weather**

3 Year Limited Warranty

Warranty covers material and workmanship for a period of three years from date of purchase. Warranty does not cover damage caused by nature, such as fading paint or dulling of galvanized steel or rust. Manufacturer will repair or replace any part deemed to be defective by Manufacturer. The product must be returned to Manufacturer freight prepaid and product will be sent back freight collect. Warranty does not cover anything that has been tampered with or abused.

If you live in an area where freezing weather occurs it is very important that you use our Freeze Control. A Freeze Control will keep the airline from becoming blocked with ice, and causing damage in the compressor. **When a Freeze Control has not been used damage can be caused to the compressor and may not be covered under warranty.**

Proof of Purchase will be needed for warranty work. If you have questions concerning the warranty, you may call your dealer. Our goal is to give you a product that will service your needs for many years.

Be sure to follow assembly instructions carefully as this can also affect your warranty. After assembly and set up are completed you should once again look over everything to make sure all bolts and nuts are place and tight. Re-check bolts and nuts a few times in the following few months.

Thank you for your purchase!