

**INSTALLATION INSTRUCTIONS**  
**INTERNAL HALYARD 50' – 100'**  
**GROUND SET FLAGPOLE**  
**(MODEL # 50I, 60I, 70I, 80I, 90I, 100I)**

**IMPORTANT**

- Please read and understand these instructions before installing your flagpole.
- It is important to select a location for your pole where it cannot be struck by automobiles, bicycles, lawn mowers, or any object that can damage it.
- It is most important to avoid any overhead obstructions. **AVOID ANY LOCATION IN THE VICINITY OF POWER LINES.**
- It is most important that you are aware of any gas or power lines or any type of obstruction below ground. Always contact your local “Dig Safe” service before digging or excavating the area.
- **DO NOT** allow the pole to lie around a job site. Keep the pole straight and dry during storage and erect as soon as possible after delivery.
- **DO NOT** allow children to operate a flagpole unattended.
- **DO NOT** climb flagpoles and **DO NOT** lean ladders against flagpoles.

**PARTS LIST**

- |   |                                     |
|---|-------------------------------------|
| 1. Flagpole Shaft in sections                 | g. Vinyl-covered Counterweight      |
| 2. Ground Sleeve                              | h. Door and Keys (attached to pole) |
| 3. 13' Butt Extension (for 80' pole only)     | i. Flag Arrangement                 |
| 4. FLAGPOLE FITTINGS:                         | j. Crank Handle & Winch             |
| a. Gold Ball (1)                              | k. Brake Cleaner for Winch          |
| b. Flag Snaps (2)                             | l. Touch up paint                   |
| c. Truck (pulley assembly) with Halyard Cable | 5. GROUND FITTINGS:                 |
| d. Tube of Loctite (1)                        | a. Grounding Rod                    |
| e. Decorative Flash Collar                    | b. Clamp                            |
| f. Polyester Retaining Ring                   | c. Grounding Cable                  |

**TOOLS & ACCESSORIES REQUIRED** (Items not supplied by manufacturer).

- |                |                 |                             |               |
|----------------|-----------------|-----------------------------|---------------|
| 1. Level       | 4. Cedar Wedges | 7. Excavating Tools & Crane | 10. 4"x4" x3' |
| 2. Pliers      | 5. Dry Sand     | 8. Crushed Stone            | Block of Wood |
| 3. Screwdriver | 6. Cement       | 9. Sledgehammer             |               |

**FOUNDATION**

The foundation requirements depend on the height of the pole, the butt diameter, and most importantly the type of ground content, i.e., gravel, dirt, sand, etc.

1. Dig a hole 3 to 4 times the diameter of the pole and deep enough for the ground sleeve to be flush with the surface. (If the ground is soft or sandy, increase the diameter of the hole.)
2. Place the grounding rod in the center of the ground sleeve and drive it into the ground **AT LEAST 2** feet.
3. Using the clamp, attach the grounding cable to the grounding rod. Other end will attach to winch (see #8 under Flagpole and Fittings Assembly).
4. Center the ground sleeve in the hole and fill about 2" of crushed stone in and around the ground sleeve for drainage.
5. Fill around the ground sleeve with cement. When the hole is about ½ full, plumb the sleeve by placing a level into the sleeve at 2 points 90 degrees apart. As you continue adding cement, be sure the sleeve remains plumb.

**FLAGPOLE AND FITTINGS ASSEMBLY**

1. Remove the sections of the flagpole shaft from the shipping tubes, but leave the plastic wrap on the pole for protection. The sections are marked 1-4 for the 100' and 1-2 for the 80' pole.

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**FLAGPOLE AND FITTINGS ASSEMBLY** - (continued)

2. Cut the shipping tubes into 3' or 4' sections and place them under the pole sections as rollers. Line up the two sections for the 80' or the top two sections for the 100' using the guide lines on the poles.
3. Take the end of the halyard cable which comes through the base of the truck and thread it down through the top pole section.
4. Have someone hold the top section. Place the splice in the end of the upper section and insert it as far as possible. Be sure the halyard cable does not get caught. Make sure the splice and the inside of pole are clean. The splice has been pre-sized for a tight fit. To get the splice completely into the top section, use a 4 X 4 or 6 X 6 as a buffer and strike the bottom of the butt section with a sledgehammer. DO NOT hammer the top of the pole and NEVER hit the pole directly.
5. If installing an 80' pole, the extension is to be installed at this time. It is designed to protrude 8' from the end of the pole. It becomes the part of the pole that goes into the ground sleeve so the entire finished part of the pole shows above grade. Insert the extension into the butt end of the pole, making sure both the inside and outside of the pole are free of sand/debris. The extension is marked, showing which end goes into the pole. Using a 4 X 4 as a buffer, strike the end of the extension with a sledgehammer, to ensure a snug fit. The extension should NOT show above grade. If the extension is too long, cut off the excess amount with a hacksaw.

**INSTRUCTIONS FOR EPOXY INJECTION (for 50' and above)**

6. After assembling the flagpole (top two sections of 100') and while it is still on the ground, the process of injecting the epoxy needs to take place.
  - a) Make sure the pole is unwrapped above the two (80') or three (100') splice sections for at least 6 feet. This will expose the predrilled holes for injecting.
  - b) On the 100' pole put the top two sections together first and then repeat the procedure for the other two sections. The sections are marked. #1 is the top, #2 is the upper middle, #3 is the lower middle and #4 is the bottom or butt section. 1 & 2 get assembled first, 3 is added next and finally the bottom section gets installed.
  - c) Unscrew the cap on the epoxy cartridge. Save the plugs which will come out and the metal washer.
  - d) Place the orange colored mixing tube over the end of the cartridge and screw the plastic cap back on.
  - e) Place the cartridge into the gun so that the smaller tube lines up with the smaller plunger and squeeze trigger until some pressure is applied.
  - f) Keeping some masking tape handy, pump the gun until epoxy comes to the tip of the nozzle. Place nozzle tip into the predrilled holes and pull trigger **AT LEAST** 25-30 times.
  - g) After releasing pressure on dispenser remove from hole and cover hole with tape. Move on to the next hole and repeat until all of the holes are injected.
  - h) After injecting adhesive into all of the holes let the pole set for about one hour or until adhesive cures (hard to the touch). The warmer the ambient temperature the quicker it cures.
  - i) Remove tape and sand smooth if needed, then use provided touch up paint to cover the adhesive.
  - j) Continue on with installation of pole.

**FLAGPOLE AND FITTINGS ASSEMBLY** - (continued)

7. Slip the flash collar over the bottom of the pole, if supplied.
8. Snake the grounding cable up through the bottom of the pole and out through the hand hole.
9. To attach the halyard cable to the winch, place copper cable top in slot in barrel. Tighten cap screw. Take up several turns of slack on the winch to secure.
10. Insert the winch in the access door hole and place it on the screws which have been pre-installed. Secure it with lock washers and nuts provided.

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- 11 After the winch is put in place and before it is bolted down, wrap the grounding cable around the winch bolt and tighten the nut.
- 12 To attach the counterweight to the flag arrangement, slip the eye bolt on top of the counterweight into the connecting link. Close and tighten the link nut. Take the retaining ring and loop it around the butt end of the pole. Attach the retaining ring to the lower eye bolt on the counterweight using the connecting link. Again, close and tighten the link nut.
- 13 Apply Loctite to the threads of the gold ball and screw into the truck. DO NOT apply turning force on the ball. Use pliers on the spindle to tighten. Tighten the lock nut securely.
14. Screw the truck/ball assembly into the top of the pole. Use a wrench to tighten securely.

**FLAGPOLE INSTALLATION**

1. When the cement is firmly set, remove the upper 2/3 of the plastic wrap from the pole, raise the pole upright, and lower into the sleeve. Advise the rigger who is erecting the pole that the lifting line should be placed just above the center of balance. The flagpole should be raised as smoothly as possible without interfering with the grounding rod and grounding cable.
2. Cut strips lengthwise from a cedar shingle (wedges) and push them part way down between the pole and sleeve in 3 or 4 places. Double the shims, if necessary, to keep them from dropping in the space. The shims can be used to plumb the pole by sliding opposite shims up or down as necessary. Use a level to plumb the pole. Be aware, the pole is tapered and the bubble will not indicate on center but should remain in the same relative position as it's placed against the pole on all sides.
3. When the plumb is established, pack the area between the pole and the sleeve with dry sand and tamp it firmly. Break off the shims level with the sleeve.
4. Remove the rest of the plastic wrap.

**OPERATION AND MAINTENANCE OF THE WINCH**

While at rest, the winch reel is kept from turning because brake shoes press on the brake drum. When applying a torsional force to the inner barrel by turning the crank causes the brake shoes to retract slightly, allowing the winch barrel to turn as long as force is applied. Stop cranking allows the brake shoes to move against the brake drum and hold the reel steady. With use over time, the build-up of friction by-products in the reel may prevent the shoes from moving. If they are held against the drum, it will become difficult to operate the winch. If they are held slightly off the drum, the winch will begin to slip a little.

To eliminate either problem, the winch must be cleaned periodically with the brake cleaner supplied with the flagpole. Spray the cleaner into the crack between the barrel and the flanged brake drum while vigorously cranking the winch back and forth in short turns. The spray cleaner will tend to blow and wash out built-up debris around the brake shoe linkage, restoring smooth operation. The winch should be cleaned one a month, or whenever its operation begins to become erratic.

**CARING FOR YOUR FIBERGLASS FLAGPOLE**

1. Wipe off dirt marks with soap and water using a sponge. With white poles, stains or old dirt can often be removed with a mild bleach solution. DO NOT use sandpaper or any abrasive material on the surface. The pole can be polished with a non-abrasive cleaning compound recommended for fiberglass surfaces.
2. Proper flag etiquette precludes flying the flag in inclement weather. Furthermore, the flag should not be flown in high winds. It can damage the pole and place unnecessary wear on the flag.