



INSTALLATION INSTRUCTIONS

Internal Halyard Cable Based Winch System Flagpole Ground Set



Read and understand all instructions before using this product. Save these instructions for later use and follow all warnings and instructions.

WARNING: INSTALLERS TAKE NOTICE!!

Overhead electrical lines, buried utility cables and natural gas lines pose serious situations that require **EXTREME CARE DURING INSTALLATION** of foundations and flagpoles. Contact your local utility company to confirm that it is safe to work in and around the installation area.

Parts List

- Neoprene Ball *
- Stainless Steel Swivel *
- S.S. Quick Links *
- Snap Hooks *
- Stainless Steel Cable
- Plastic Bead Retaining Loop *
- Neoprene Coated Counterweight *
- Removable Crank Handle
- Cylinder Lock (Factory Installed)
- Set of Keys
- Winch (Mounted Inside Pole)
- Cast Aluminum Revolving Truck
- Spun Aluminum Flash Collar
- Flag Arrangement

* Attached to cable at factory, prior to shipping

IMPORTANT:

To prevent staining, the flagpole must be stored in a dry place. Remove all packaging materials, unwrap pole(s) and store off ground. The wrapping paper, like all papers, contains chemicals that will discolor satin brush aluminum flagpoles. This type of staining occurs when the wrapping paper becomes wet or damp and is allowed to then dry on the flagpole surface.

Cleaning

Dirt, oil, fingerprints, etc. can be removed using detergent and water.

Special Instructions

Upon receipt immediately unpack all cartons and packages and inspect all contents for concealed damage and/or shortages.

Note any problems, exceptions, shortages and/or damages prior to installation. Pole-Tech Co. will assume no responsibility for missing or damaged components once installation has started and at that point will consider all products received in good condition.

All claims must be submitted in writing to Pole-Tech immediately. Provide a brief description and digital photos of any damages or discrepancies.

No material returns are permitted without prior approval.

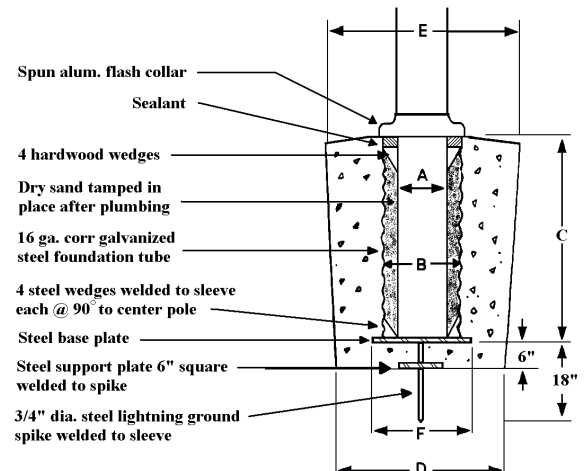
FOUNDATION & GROUND SLEEVE INSTALLATION

Material: Concrete 3000 psi, unless otherwise specified.

- Step 1: Select flagpole location. Mark out any underground sprinklers, water lines, gas lines and/or electrical lines. Make sure to look above and ensure your flag will have clearance to fly in all directions once flagpole is erected. Remember to call 811 at least a few days before you start any digging project.
- Step 2: Reference the chart below for the suggested minimum foundation requirements in accordance with NAAMM’s Metal Flagpole Manual. **Soil conditions vary and the below dimensions are considered minimum dimensions for foundations in firm, dry soil. Exact foundation requirements should be verified by a Structural Engineer with knowledge of soil conditions in your area.**
- Step 3: Prepare and dig hole.
- Step 4: Place ground sleeve in center of hole and drive lightning ground spike into ground until steel support plate is resting against bottom of hole. Be sure to leave top edge of ground sleeve slightly above finished grade level (1-2 inches) to prevent concrete and water from flowing inside.
- Step 5: Slowly pour concrete around outside of ground sleeve while periodically stopping to plumb. Be sure to support the ground sleeve to prevent shifting during pouring of concrete.
- Step 6: Cover sleeve opening to prevent accumulation of debris and water.
- Step 7: Concrete typically cures in 24-48 hrs. Refer to the concrete specifications.

STANDARD FOUNDATION DETAIL

FLAGPOLE		A	B	C	D	E	F
Exposed Height	Overall Height	Pole Butt	Sleeve Diameter	Sleeve Length	Foundation Base	Foundation Top	Sleeve Base Plate
20'	22'	5"	8"	24"	24"	30"	12"
25'	28'	5"/6"	8"/10"	36"	24"/30"	34"	12"
30'	33'	5"/6"	8"/10"	36"	30"	36"	12"
35'	38 1/2'	6"/7"	10"	42"	30"	36"	14"
40'	44'	7"/8"	10"/12"	48"	36"	42"	14"/16"
45'	49 1/2'	8"/10"	12"/15"	48"	36"	42"	16"/18"
50'	55'	8"/10"	12"/15"	60"	42"	48"	16"/18"
60'	66'	10"/12"	15"	72"	42"	48"	18"
70'	77'	12"	15"	84"	48"	60"	20"
80'	88'	12"	15"	96"	54"	72"	20"
90'	99'	14"	18"	108"	60"	72"	24"
100'	110'	16"	21"	120"	60"	72"	24"



NOTE: Soil conditions vary and the above dimensions are considered minimum dimensions for foundations in firm dry soil. Exact foundation requirements should be verified by a Structural Engineer with knowledge of soil conditions in your area.

ASSEMBLY OF MULTIPLE SECTIONED POLES

- NOTE:** Flagpoles with two or more sections, will have each section of the pole marked. Assemble only top and bottom sections that have matching dash numbers.
- Step 1: Elevate the bottom section of the flagpole horizontally off the ground and place it on suitable supports being sure to protect the flagpole finish.
- Step 2: For your convenience a tag line has been installed in each pole section. Carefully tie the tag line sections together and tuck any excess line into the pole so that it is not pinched when the pole sections are joined.
- Step 3: Attempt a trial fit of the top section to the bottom section of the pole by lining up marks on the bottom section with the matching marks of the next section.
- At this stage of the assembly procedure, do not force the pole sections together. If the fit is too tight, remove the top section and carefully grind the welds on the bottom section sleeve until suitable fit is achieved. Be careful not to remove too much material as this will result in a loose fit. Repeat this procedure several times if necessary.
- Step 4: When joining pole sections protect both ends of the pole with heavy planking. Place the pole bottom against a rigid support and hammer or push from the top (with planking as protection) until the pole sections come together.



FINIAL ASSEMBLY

- Step 1: If a ball, eagle, or any other type of finial is included with your equipment apply epoxy to threaded end of the finial rod. (**Do not apply epoxy to the spindle of the truck**)
- Step 2: Screw the threaded end of the finial rod into the top of the truck by attaching a pipe wrench to the solid rod portion of the finial. Do not overtighten. (**Never tighten by grasping the finial**)

CABLE, SLING & WEIGHT ASSEMBLY

- Step 1: Carefully uncoil cable and straighten (check for any kinks or frays).
- Step 2: Locate the end of the cable with the eyelet and run end of cable through sheaves in truck, then through spindle (see diagram 1.1). Tie or tape the cable to the tag line at the top of the pole.
- Step 3: Apply epoxy to threaded end of the truck and screw into the coupling at the pole top using a wrench.
- Step 4: Open the access door at the base of the pole and gently pull the tag line through the inside of the pole. Attach the eyelet to the winch with the screw located in the winch drum tab.
- Step 5: With the door still open, insert the winch handle and wind up the excess cable on to the winch drum while someone is maintaining tension on the cable at the pole top. Be sure to spool the cable evenly across the winch. This will ensure a tight well-nested cable layout on the winch. Close and lock the access door.
- Step 6: Attach the cast aluminum hood to the truck with the hex head screws provided.
- Step 7: Make sure the retaining loop and flag cable, with weight attached, rests on the pole surface.

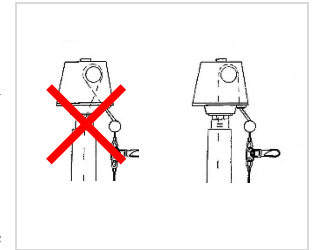


Diagram 1.1

Attaching 2nd Flag Rigging: Loosen lower S.S. Quick link, remove weight & sling. Add 2nd flag rigging then reattach weight and sling to lower eyelet on the new flag rigging.

POLE INSTALLATION

- NOTE:** *Before lifting pole, slide flash collar, if supplied, up from bottom and hold in place at door location by tying off to the pole with a section of tag line.*
- Step 1: **By Hand:** Insert assembled pole in ground sleeve by laying pole flat on ground with base at the edge of the sleeve. Have one person firmly hold the base of the pole, use caution and guide it into the hole. At the same time, another person starts at the top of the pole and gradually walks the pole upward until it slides down into the sleeve.
- By Crane:** Use only an experienced flagpole crew and crane operator to lift the flagpole into a vertical position and insert it into the foundation tube.
- Step 2: After inserting into sleeve, center pole in base of sleeve and plumb pole with wooden wedges (supplied by others).
- Step 3: Fill space between sleeve and pole with screened dry sand. Tamp down tight every six- (6) inches and check vertical alignment with a 5' carpenters level.
- Step 4: Slide collar down into position and caulk around top.
- Step 5: Check winch operation by first opening access door. Using the winch handle lower the weight and sling assembly to door level and then back to the pole top. Make sure that the cable flows smoothly from left to right and right to left evenly across the winch.

OPERATING INSTRUCTIONS FOR INTERNAL WINCH SYSTEM

- Step 1: Open the winch access door and insert the winch handle into the hole adjacent to the access door.
- Step 2: Slowly and evenly lower the retaining sling and weight to a location just above the collar.
- Step 3: Attach the flag to the snap hooks at each quick link location and raise flag to pole top.
- Step 4: When the neoprene ball stop reaches the top of the pole remove the winch handle, close and lock the access door.

CAUTION: Raise and lower flag at a slow even pace always keeping tension on the cable and watching the spooling of the cable off and onto the winch drum. Make sure that the cable flows smoothly from left to right and right to left evenly across the winch.

It is important that the access door be opened every time the flag is raised or lowered. The operator should constantly monitor the cable as it is drawn onto or drained from the winch drum. The internal halyard winch system only works when there is constant tension on the stainless steel aircraft cable (produced by the flag counterweight). If the flag counterweight touches the ground or if the retaining sling is allowed to hang on the winch handle or door, the cable will go slack and become tangled and nested on the winch drum.

If the cable is tangled on the winch drum, the cable must be untangled, inspected and then rewound on the winch drum if not kinked or damaged. If the cable is damaged, it will need to be replaced. The cost for all material and labor is not included in our warranty for this type of repair.

WINCH REMOVAL AND REPLACEMENT INSTRUCTIONS

Materials Required:

- S.S. Manually Operated Reel Winch
- Stainless Steel Hex Bolts (2)

Tools Required:

- Socket Set with Extension to Reach Inside Pole
- Duct Tape or Electrical Tape
- Philips Head Screwdriver

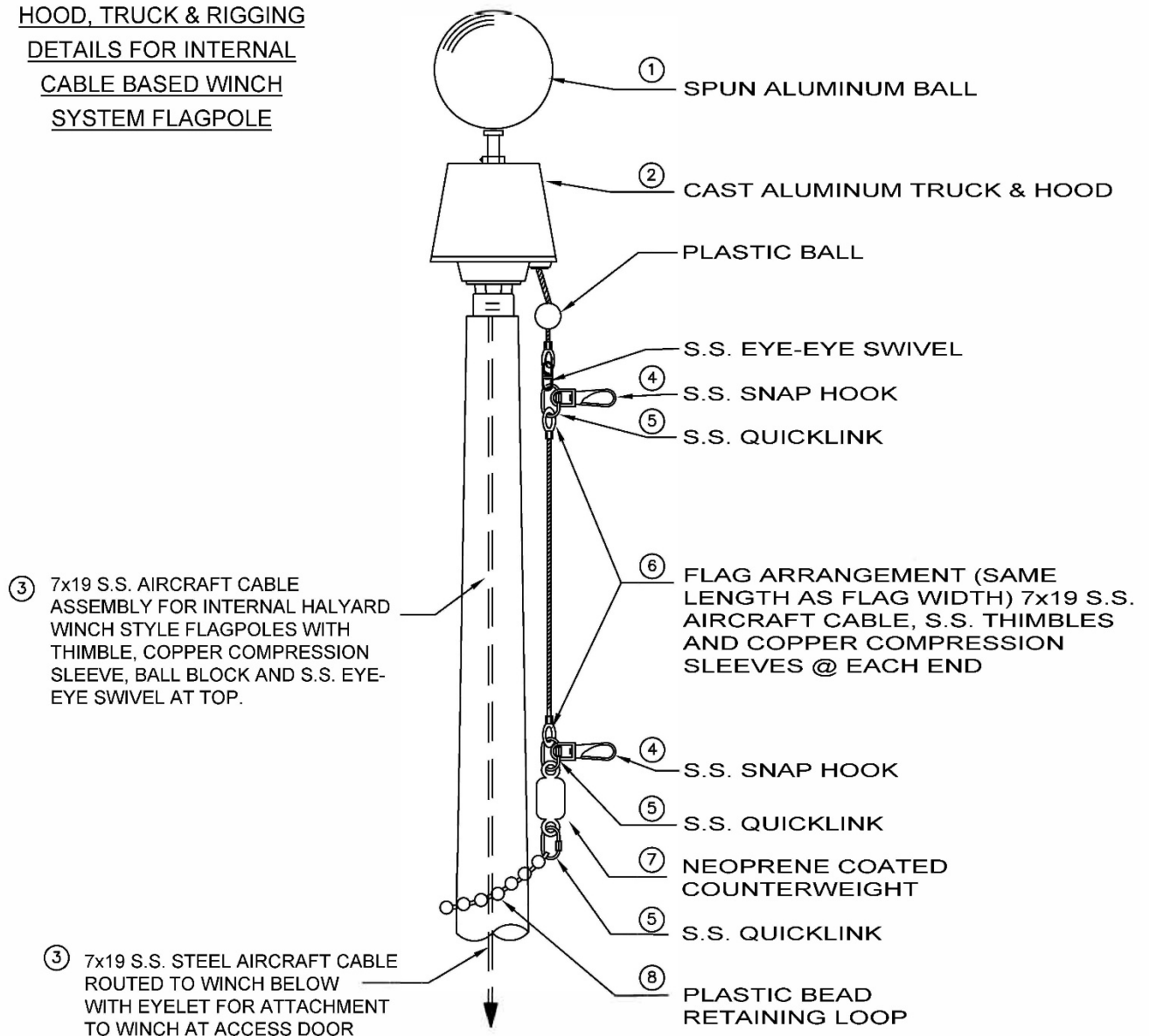
Winch Removal Procedure

- Step 1: Open the winch access door, insert the operating handle and carefully lower the cable to the ground, uncoiling cable from the winch, while always maintaining tension on the cable especially once the weight is on the ground.
- Step 2: Unscrew the cable from the winch body while holding the cable so it can be safely pulled out of the flagpole shaft for reattachment to the replacement winch once the it has been installed.
- Step 3: Use the socket to remove the winch attachment bolts. Duct tape (the sticky side) inside the socket will help keep the removed bolt from dropping inside the pole shaft. Grasp the winch and remove it and the final bolt from the pole interior.

Winch Installation Procedure

- Step 1: Attach the new winch with the bolts provided and attach the cable to the winch with the screw located in the winch drum tab.
- Step 2: With the access door open and while maintaining tension on the cable, insert the new winch handle into the winch and carefully spool the cable onto the winch. Always maintain cable tension and watch for smooth, even spooling of the cable onto the winch. This will ensure a tight well-nested cable layout on the winch.
- Step 3: Attach the flag top when the first snap hook is at eye level and then spool more cable onto the winch until the second snap hook can be attached to the bottom of the flag.
- Step 4: Make sure the retaining loop and flag cable with the weight attached, and all of the attachment hardware are in the proper positions and in good working condition. (see attached rigging scheme)
- Step 5: Raise the flag to the top of the flagpole. Close and lock the access door.

HOOD, TRUCK & RIGGING
DETAILS FOR INTERNAL
CABLE BASED WINCH
SYSTEM FLAGPOLE



PART DESCRIPTION	
①	BALL FINIAL: GOLD, CLEAR OR PAINTED
②	CAST ALUMINUM REVOLVING TRUCK
③	S.S. AIRCRAFT CABLE ASSEMBLY
④	STAINLESS STEEL SWIVEL SNAP HOOK
⑤	STAINLESS STEEL QUICKLINK (CARBINER)
⑥	CABLE ASSEMBLY FOR FLAG 3' THRU 20'
⑦	NEOPRENE COATED WEIGHT: 3.5", 7", 14"
⑧	PLASTIC BEAD RETAINING SLING

