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Aluminum Conical Tapered Flagpole Installation

Internal Cam Cleat Systems

1. Dig foundation as, detailed, set sleeve in center of hole with top 2" above grade. Plumb, brace, pour concrete; trowel to desired finish. Keep inside of sleeve dry and free of debris by covering opening. Allow concrete to cure for 48 hours.
2. Remove shaft from shipping tube, lay on sawhorses. Unwrap paper from around the very top, bottom, and around the access door. If there is any suspicion of damage to the finish, completely unwrap and inspect all shaft sections prior to assembly. Rewrap to protect the finish during assembly and installation.
3. Stationary Truck: Locate the truck and halyard in the parts box. Thread the loose end of the halyard over the outside sheave and over the inside sheave. Drop the halyard down inside the shaft from the top. You may want to attach a small weight to the halyard to help drop it down the shaft when the shaft is installed. By hand only, screw the threaded ball-stem into the top of the truck. Use Loc-tite or similar stud cement if available. Tighten until the stem will no longer turn. CAUTION: Over tightening may cause the inner sheave to dislodge! Use a wrench to securely tighten down the jam nut against the truck. Carefully place the truck on top of the shaft, taking care not to pinch the halyard. Align the halyard where desired. Secure the truck by tightening the set screws. Insure the halyard is not caught somewhere.
4. Remove the door from access hole with key supplied. Fish the halyard down inside the pole. Remove any weight attached once the halyard is to the access door. Thread the halyard end through the cam-cleat and tie a large knot at the end of the rope below the cam-cleat to prevent the halyard from pulling back through.
5. On the outside of the halyard, with the quick-link, attach the counterweight to the yoke end of the halyard. Run the retainer ring around the shaft and place both ends of the retainer ring into the quick-link. Tape the counterweight temporarily to the shaft near the access door. Slip the flash collar up from the bottom end. Tape that in place above the tarred portion of the shaft.
6. Using a nylon sling, carefully pick up the assembled shaft. Orient the access door in the desired direction, and set the shaft vertically into the foundation sleeve. If the shaft is a multi-piece shaft, a nylon choker must be used to insure the sections do not separate when lifted.
7. Plumb the shaft upright. Insert wood wedges (not furnished) between the shaft and the sleeve to temporarily keep the shaft in place and plumb. Pour in, and tamp firmly, dry sand between shaft and the sleeve. Make certain it is well compacted. Leave a (1"-2" void)at the top for sealer (not provided). Remove the wood wedges. Fill the void with waterproof cement or any weatherproof sealant. Untape the collar and slip down the shaft. Caulk the collar into place at the concrete and shaft joint to prevent water from entering.
8. Attach the flag snaps to the halyard. The lower flag snap will be just above the yoke. Separate the flag snaps to match the upper and lower grommets' of the flag to be flown. To attach the flag snaps: pass a loop of halyard through the swivel –eye of the flag snap. Pass the loop over the flag snap and pull the halyard taut. For two flags, attach second set of flag snaps above the first. Attach the flag. With the top fastenings for the flag within reach, retie the knot at the inside end of the halyard just below the cam-cleat. Cut off any excess halyard. Fuse the cut end of the halyard with a flame to prevent fraying.
9. Remove remaining paper wrapping. Pull the flag to the peak and secure the halyard behind the cam-cleat. Drop excess halyard into the shaft bottom. Fit the door into the opening and secure with a key. Provide keys to the owner

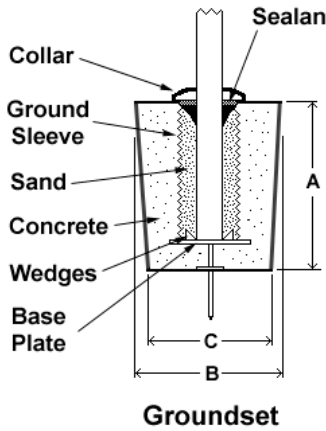
Ground mounted installation

Ground Mount

The embedded, or Groundset, mount is the method of choice for mounting aluminum flagpoles at grade. Flagpole shafts so mounted have a higher wind speed rating than the same shafts base-plate mounted.

Specifications:

2.3 A FOUNDATION TUBE: Fabricated from 16 ga. galvanized steel, with a steel base plate whose square dimension is at least the internal diameter of the sleeve plus 4". A setting plate 6" square shall be securely welded to the ground spike at least 6" below the base plate. The ground spike shall be 3/4" diameter, not less than 18" long.



Groundset

Ground Sleeve Specifications					
Shaft Foundation Dimensions					
HEIGHT	BUTT DIAMETER	SLEEVE DIAMETER	DEPTH A	DEPTH B	DEPTH C
20'	4"	6"	3' 6"	30"	24"
20'	5"	8"	3' 6"	30"	24"
25'	5"	8"	3' 6"	30"	24"
25'	5.5" - 6"	10"	3' 6"	30"	24"
30'	5"	8"	3' 6"	30"	24"
30'	6"	10"	3' 6"	30"	24"
35'	5"	8"	4' 0"	36"	30"
35'	6" - 7"	10"	4' 0"	36"	30"
40'	7"	10"	4' 6"	42"	36"
40'	8"	12"	4' 6"	42"	36"
45'	8"	12"	5' 0"	48"	42"
50'	8"	12"	5' 6"	48"	42"
50'	10"	15"	5' 6"	48"	42"
60'	10" - 12"	15"	6' 10"	48"	42"
70'	10" - 12"	15"	8' 0"	60"	48"
80'	12"	15"	9' 0"	60"	48"