Sentry

Sentry II

ROPE BASED
INTERNAL HALYARD
GROUND SET FLAGPOLE

INSTALLATION INSTRUCTIONS

Read these instructions completely before any installation is started. Pay close attention to all safety concerns. In the unlikely event that you encounter any difficulty, contact the dealer or representative from which the flagpole was purchased and if necessary they will contact us.

Warning, do not install your flagpole near overhead power lines and always be aware of anything under the soil. Contact the utility departments to confirm that it is safe to dig in the area where the flagpole is to be installed. It is advisable to have someone help in the installation. Any pole with a 5" diameter base or larger or over 25' in length may require some type of lifting device. Following a review of these instructions, the purchaser of the flagpole should determine if they are qualified to perform the installation or should obtain the services of a professional sign/flagpole installation company. Due to various methods of installation used by installers, as the manufacturer of the flagpole, cannot be liable for structural damage or injury occurring during the flagpole assembly and installation. Unless specifically designed and ordered otherwise, these flagpoles and their specifications are designed for ground mount applications only. Flagpoles mounted above grade, such as on a building, must be designed to take the height application into account.

1. Unwrapping and Inspection of the Shaft and Components The packaging in which the flagpole is shipped is to protect the finish in transportation. **Any tear in the package should be suspect for possible damage.** A pair of cotton gloves worn during the assembly and installation process helps to keep finger prints from the flagpole. Remove the flagpole from this shipping tube by removing the wooden blocks at each end. Remove the paper wrapping for inspection when it arrives. Keep the paper as it will be used in various steps in the installation process. The flagpole should be stored either in a dry area or on blocks off the ground with the shaft at an angle until installation. If the flagpole gets wet with the packaging still on it, it may develop stains as it dries. These are extremely difficult to remove and are not a warranty issue. This is the proper time to inspect the shaft for any damage that might have occurred during shipping. Verify that all parts have been received and are in good and acceptable condition.

If the flagpole has received an anodized finish, there might appear to be slight differences or variations in the color under different light conditions. For example, when viewing the straight section of the flagpole it might appear to be a slightly different color than the tapered section. This is often due to the angle of the light that hits the surface and is normal. Various components of an aluminum flagpole are manufactured using different types of aluminum and in the case of an anodized flagpole, these components will be effected differently by the process. Due to this, some components are not anodized but are finished using other methods such as powder coating. This will cause a slight difference in appearance but not in operation.

If there is any significant damage to the shaft or components, do not continue with the installation without first contacting the dealer. To continue with the installation signifies the acceptance of the product in the condition received. Concord will not be responsible for later installation expenses for missing or damaged parts.

2. Foundation Preparation Prepare the foundation hole as detailed in these instructions. **Note that these dimensions are considered minimum dimensions for an in-ground or embedded flagpole in firm dry soil.** Variations in these dimensions may be needed in different soil conditions. If your flagpole was purchased with a shoe base mount, similar to a street light, there will be an additional set of installation instructions for the base. If this additional set is not included, contact the dealer before proceeding.

Sentry Flagpoles are normally sold with a corrugated ground sleeve as the standard installation format. However, flagpoles with a 5" base diameter can also be installed using a PVC ground sleeve. If a PVC sleeve was purchased, it will be attached to the shaft or on the outside of the shaft shipping package. The same installation instructions can be followed with the exception that a layer of gravel should be placed in the bottom of the hole to bring the top of the installed sleeve to the desired level of approximately 2" above the level of the poured concrete.

Set the Ground Sleeve in the center of the hole with the top of the sleeve approximately 2" above grade. Push the sleeve rod into the ground so the sleeve assembly is resting on the small attached setting plate. When the concrete is poured, it will fill in the area between the setting plate and the base plate. Carefully plumb the Ground Sleeve vertically and brace it so it cannot move or rise up during the pouring of the concrete. You may use a simple level inserted into the sleeve to insure it is vertical.

Slowly pour the concrete, continuing to verify vertical plumb. Care should be taken that the pouring of the concrete is not at a rate that might cause the ground sleeve to "float up" as the concrete goes under the sleeve base plate. Trowel to desired finish. Keep inside of the sleeve dry and free of debris by covering the opening. Allow the concrete to cure for at least 24 hours.

If your flagpole has a single piece shaft, refer to section 3A. If the flagpole is a multiple piece shaft, proceed to section 3B.

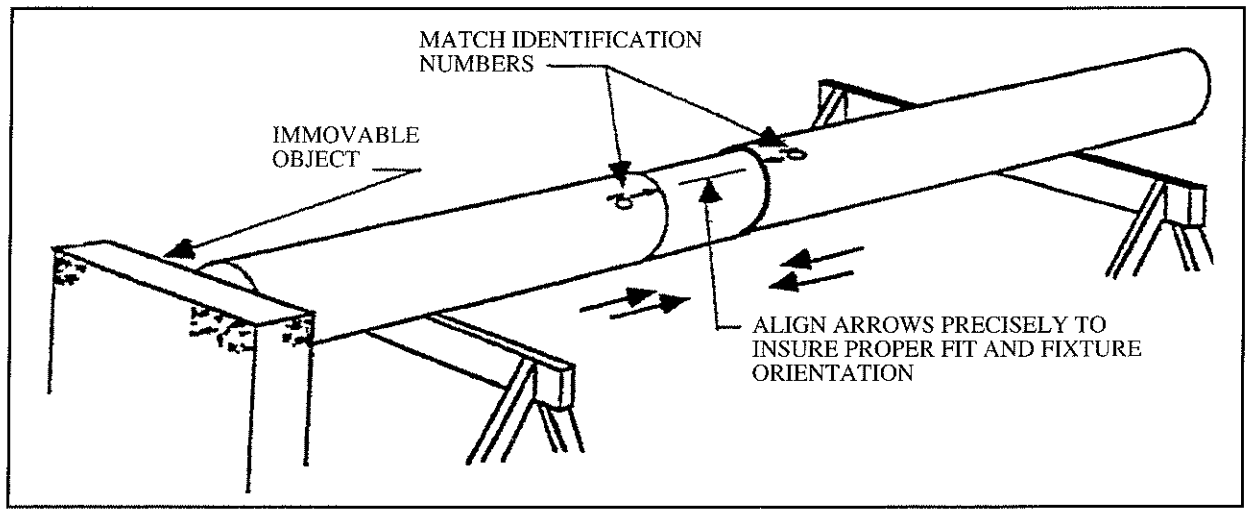
3A. Single Piece Flagpole Place the flagpole shaft on sawhorses in order to attach the components. For a single piece flagpole the shaft is a complete unit, there are no additional steps needed before the attachment of the components. Skip Section 3B and proceed to Section 4.

3B. Multi- Section Flagpole Assembly Instructions Multiple section flagpoles are fabricated with a self aligning jam sleeve with close tolerances that are used in joining the shaft sections into a single unit. Inspect the shaft sections for damage before any assembly. It is imperative that these sections be handled with extreme care to avoid creating an out of round condition which would prevent the sections from completely joining and forming a snug fit when assembled. This is not only an appearance issue but can affect the structural integrity of the flagpole. **Do not expect to be able to disassemble the shaft sections after they have been put together. Taking them apart without damage is extremely difficult or impossible.** No hardware should be installed until the shaft sections are totally assembled. The following information is intended to be a helpful guide to the installer. Previous experience in installing multiple piece flagpoles is beneficial.

Set the bottom section on blocks or saw horses in a horizontal position with the base of the shaft against an immovable object. Protect all ends with wooden blocks and padding. Rotate the shaft until the match marks can be seen. They are stamped near the ends of each section. Check the alignment of the match marks.

All numbers must be the same. If they are not, do not proceed. They will not properly fit together. If you have purchased more than one pole, verify that all sections are grouped with the correct match number. They are not interchangeable.

Clean all mating surfaces of both the outside of the jam sleeve and the inside of bottom part of the next smaller shaft into which the jam sleeve will be fitted. Cleanliness is imperative. Carefully look for and remove any debris that might be in the section after the manufacturing or shipping process. Any foreign material may stop the sections from properly fitting. Check for and remove any burrs.



Cover the jam sleeve and the immediate inner section of the section that it will be fitted into with a light layer of liquid soap. Do not use grease, oil or other petroleum products as these lubricants can seep out over time and stain the flagpole. Keep the finish surfaces free of hand prints and excess lubricants.

Gently slide the section of the flagpole over the jam sleeve as far as possible without forcing the two pieces together. The two pieces should be within 2" of closure. If not, gently remove the section and recheck for any obstructions, burrs or an out of round condition in either piece. Place blocks so that the two sections have a straight centerline. This is critical. If the flagpole is a 3 piece unit, debur, clean, and lubricate the next section in the same manner.

With the pieces in line, place a 4x4 block of wood against the top of the flagpole to absorb the direct shock and firmly strike the wood to drive the sections together. Excessive force, that which will damage the ends, is not necessary. If the pieces are not coming together inline, contact your dealer.

4. Assemble the Hardware When working with threaded components in aluminum, a light coat of an anti-seize compound is recommended. This is available at most hardware stores. Extreme care should be exercised when starting the threads of any components to prevent cross threading.

The Truck assembly for a Sentry Series Flagpole can be ordered in three different configurations.

* The traditional design is often referred to as a Cone Truck or Top Hat Truck. This style of Revolving Truck assembly is normally used with a flagpole ball, eagle or other appropriate finial. Before attaching the Cone Truck Assembly to the shaft, you must first remove the two screws holding the truck cover to the base plate. Remove the cover after noting the alignment of the cover and its pulley with the exit hole in the base. Thread the loose end of the halyard through the bottom of the grommet, over the pulley inside the Truck's cover and down through the hole in the truck spindle. Pull several feet of halyard through the spindle, making sure that the pulley is freely turning and nothing is binding up or scraping. The flagpole ball is

supplied with a jam nut. By hand, gently screw the ball into the threaded hole in the top of the Truck cover. A small amount of thread locking cement can be used. **CAUTION: DO NOT ALLOW THE BALL'S THREADED SHAFT TO PROTRUDE MORE THAN 1/8" THROUGH THE HOLE. EXCESS STEM LENGTH CAN PINCH THE HALYARD AGAINST THE PULLEY AND CUT THE ROPE.** Using an open end wrench, securely tighten the jam nut against the top of the Truck cover. Reattach the cover to the base assembly using the two screws. Insure that the pulley is above the grommet and that the halyard is free to operate.

* If you purchased your flagpole with the optional Ball/Truck, remove the screws around the middle of the truck, again noting the relationship of the top and bottom halves with regard to the direction of the pulley and the location of the exit grommet. Thread several feet of halyard through the grommet over the pulley and down through the hole in the spindle. Reattach the two halves and make sure that the halyard is free.

* If your flagpole is equipped with a Stationary Truck, follow the instructions for attaching the ball in the same manner as the Cone Truck. Feed the halyard over both pulleys.

Attach the loose end of the halyard that exits from the bottom of the Truck Spindle to fish tape. Feed the fish tape into the top of the flagpole shaft to the door assembly that houses the cam cleat. Put the rope through the cam cleat and tie a large knot at the end of the halyard to prevent it from coming back through the cam cleat. Pull the excess out the door opening and loosely tie it around the pole until it is set in the ground.

Before installation of a Revolving Truck, carefully check for dirt, burrs or irregularities on the threads of the truck and inside the top of the shaft. Correct as necessary. A small amount of anti-seize can be placed on the spindle threads. Gently align the spindle threads with the pole threads and begin screwing the Truck assembly into the shaft. If there is any resistance that feels like the threads are not lining up, back the spindle out, check for stripping and try again. The threads are tapered pipe threads – 1 ¼"NPT - and will begin to snug up as the truck is screwed in. Over half of the spindle threads should be in the shaft. Use a pipe wrench to tighten.

If your flagpole has a Stationary Truck Assembly, slip the cap over the top of the flagpole, align the pulley with the door opening and tighten the three set screws.

On the portion of the halyard that exits from the Truck Assembly, a yoke has been attached to the halyard using an aluminum crimp. Using the provided quick link, attach the yoked end of the halyard to one end of the counterweight. The attachment bars that are cast into the counterweight are sized so that the link may need to be forced over it by a gentle tap of a hammer. Attach one end of the Retainer Ring to the link at the other end of the counterweight. Wrap the retainer ring around the flagpole and attach the other end to the same lower link. **DO NOT ATTACH THE RETAINER RING TO THE SAME LINK AS THE HALYARD ASSEMBLY. BOTH LINKS MUST BE USED TO PROVIDE THE SAFEST ASSEMBLY.** Make sure all thimbles on the quick links are secured. Temporarily tape the counterweight against the pole after placing a piece of the wrapping paper around the pole to avoid tape marks and scratches.

Gently slide the collar up the pole from the bottom and tape it out of the way near the door. Using some of the paper in which the shaft was wrapped will provide further protection to the finish.

5. Setting the Flagpole into the Ground Sleeve

Single Piece Flagpole Shaft If the flagpole is a single piece shaft, raise the shaft in a safe and secure manner and carefully slide it into the setting tube, rotating it so that the door faces the desired direction.

Multi Piece Flagpole Shaft If the flagpole has a multiple piece shaft, extra care must be used when setting it into the sleeve. Before standing the pole, make certain that the joints are fully seated and that the shaft is straight. **Never stand a flagpole that is not properly assembled and straight.** If a lifting device is used, never pick up the assembled pole from the top. The pole should be moved to a position that places the base of the pole close to the foundation. Prior to lifting the flagpole, make sure that any shaft joint below the lift point is securely lashed together with ratchet straps to prevent a possibility of separation during lifting. If lifting by crane, bucket truck, etc. the point of attachment should be above the pivot point or center of gravity point of the shaft so that the bottom of the shaft is the last to rise from the ground. **Caution: The flagpole joint IS NOT designed to support the weight of the bottom or middle section of the flagpole.**

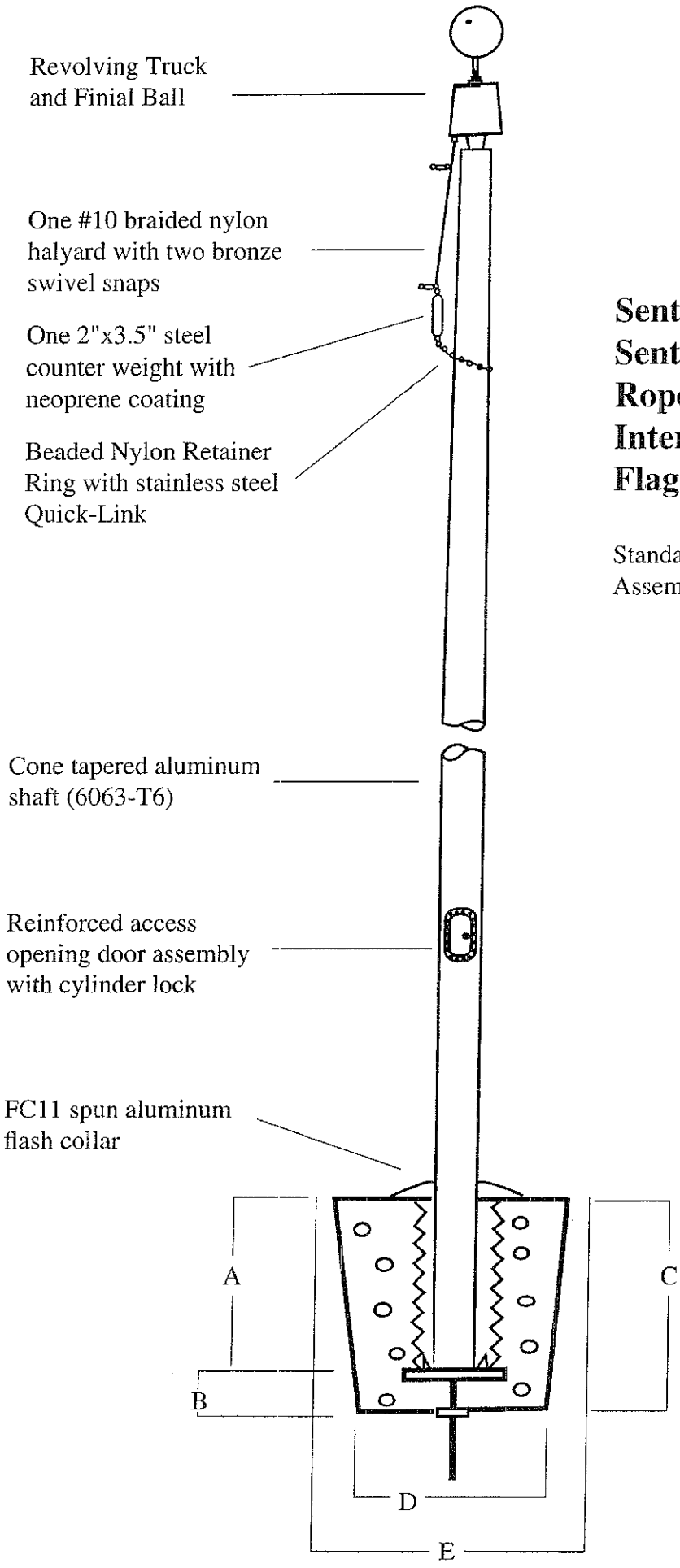
6. Finishing Up Make sure the flagpole is plumb and slowly fill the void between the flagpole and the ground sleeve with sharp river washed play sand – do not use silica sand. After some sand has been added, tamp the sand to compact it. Add and tamp more sand until the sand is within ½" from the top of the setting tube. Caulk the remainder of the distance to the top of the sleeve. Never use concrete to seal the spacing between the flagpole and the ground sleeve.

Lower the flash collar over the ground sleeve and caulk where the shaft passes through the collar.

It is important to always remember that when raising or lowering the flag, the counterweight is also being raised and lowered above the operator. Always be aware of the location of the counterweight as a safety issue. At a monthly minimum, inspect the condition of the halyard, yoke, links, snaps, cam cleat, retainer ring and counterweight. Replace worn components to insure the safe and correct operation of your flagpole. Do not allow anyone to operate the flagpole that is not capable of firmly gripping the halyard with the forces applied by the flag and counterweight while raising and lowering the flag.

Attach flag to snaps and run to the peak. Do not "jam" the flag arrangement into the Truck Assembly. Allowing some "give" in the components can effectively extend the life of the various parts, When the flag is at the desired height, lock the halyard in the cam cleat and confirm that the door is locked.

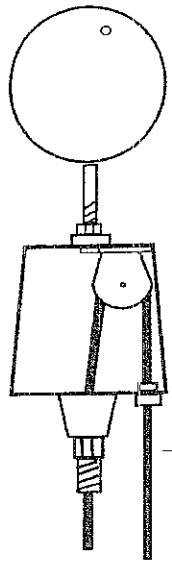
We again want to thank you for choosing a Carrot-Top Industries, Inc. Flagpole and hope that you have many years of pride and pleasure with your flagpole and flag.

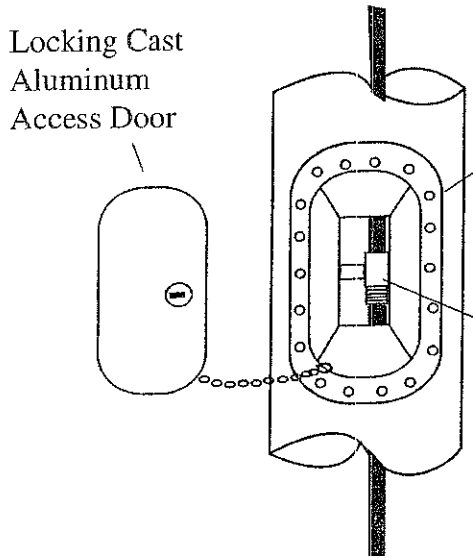


Sentry & Sentry II Series Rope Based Internal Halyard Flagpole

Standard Revolving Truck Assembly and spun ball shown

Standard Truck Assembly and Spun Aluminum Ball





* The door assembly of the Sentry II incorporates a welded support frame and cast door which provides a more flush mounted appearance. The operation is the same.

Sentry* Reinforcement Frame

The door frame assembly on the Sentry flagpole is attached using patented reinforcing castings inside the shaft. Never loosen the attachment screws. Periodically check for tightness and re-tighten screws if necessary. Do not over-tighten.

These are the minimum foundation dimensions for firm dry soil. Specific soil conditions where the flagpole will be installed should be taken into consideration. **WARNING: EXTREME CAUTION SHOULD BE EXERCISED WHEN INSTALLING FLAGPOLES NEAR OVERHEAD POWERLINES OR IN THE VACINITY OF BURIED CABLES AND GAS, WATER OR SEWAGE LINES. Do no allow the concrete to come in contact with the aluminum shaft.**

Minimum Recommended Foundation Dimensions

Exposed Height	A	B	C	D	E
20'	3'0"	6"	3'6"	24"	30"
25'	3'0"	6"	3'6"	24"	30"
30'	3'0"	6"	3'6"	24"	30"
35'	3'6"	6"	4'0"	30"	36"
40'	4'0"	6"	4'6"	36"	42"

Sentry Series

Rope Based Internal Halyard Flagpole

We have provided a list of parts that make up the flagpole assembly. There can be some variations when considering the options that you have chosen. Please review this list against the parts received **before** you begin the installation process. In the event that you have a shortage or damage, please contact the dealer at your earliest opportunity so that we can correct the issue.

			Packed By
Shaft with Cam Cleat and Door	Sections	_____	_____
Finial (Ball, Eagle, Other)	Each	_____	_____
Pulley (Truck) Assembly	Each	_____	_____
Flagpole Halyard	Each	_____	_____
Flag Snaps	Each	_____	_____
Flash Collar	Each	_____	_____
Counterweight	Each	_____	_____
Retainer Ring	Each	_____	_____
Installation Instructions	Each	_____	_____
Ground Sleeve	Each	_____	_____

Note: if you opted for the PVC sleeve assembly, it is attached to the shaft or shaft shipping tube and will not be a loose part.

Optional Items

Snap Covers	Each	_____	_____
Ball/Truck Assembly	Each	_____	_____
Flag	Each	_____	_____
Other _____	Each	_____	_____

We are proud to say that our flagpole shafts and the large majority of the components are made in America. If you encounter any problems or need items for repair or maintenance in the future, please contact the company from which you purchased the flagpole. They will contact us for the necessary parts or information. They are also an excellent source for replacement flags.

_____ Date

_____ Job Number