



## Flagpole Specifications

Section 107500 (103500) - Flagpoles

### Nautical Single Mast - External Single Revolving - Shoe Base Flagpole

#### PART 1 – GENERAL

##### 1.1 SUMMARY/DESCRIPTION

A. Scope of Section: Provide aluminum flagpole(s) as shown on drawing and as specified herein, with components as needed for a complete installation.

##### 1.2 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide flagpoles capable of withstanding the effects of wind loads as determined according to NAAMM FP 1001-07, "Guide Specifications for Design of Metal Flagpoles", or to specified wind speed, whichever is more stringent.

B. Flagpole Design: Base design on maximum standard size nylon flag suitable for use with pole or flag size indicated, whichever is more stringent.

##### 1.3 SUBMITTALS

A. Product Data: For each type of flagpole required, submit manufacturer's technical data and standard installation instructions.

B. Shop Drawings: Show general layout, jointing, anchorage, support systems, and accessories.

C. Samples: Finish samples for each finished metal used on flagpoles, as may be required.

##### 1.4 QUALITY ASSURANCE

A. Source: Obtain each flagpole as a complete unit from American Flagpole, including fittings, accessories, bases, and anchorage devices.

##### 1.5 DELIVERY, STORAGE, AND HANDLING

A. General: Spiral wrap flagpoles with a heavy Kraft paper or other lightweight wrapping and enclose in a hard fiber tube or other protective means. Store bare flagpoles in a dry location, protected from the weather and moisture, as recommended by the manufacturer.

B. Shipping: Ship to project site in one piece or as specified. If more than one piece is necessary, provide snug fitting precision joints with self-aligning, internal splicing sleeve arrangements for weather tight, hairline field joints.

#### PART 2 – PRODUCTS

##### 2.1 MANUFACTURER

A. Manufacturer, subject to compliance with requirements, shall be:

**American Flagpole**

**26252 Hillman Highway**

**Abingdon, VA 24210**

**1.855.530.4078 (telephone)**

**1.276.676.3090 (fax)**

**<http://www.americanflagpole.com>**



## 2.2 FLAGPOLE TYPE AND CONSTRUCTION

A. Aluminum Flagpole Construction: Fabricate from seamless, extruded tubing complying with ASTM B 221, alloy 6063-T6, having a tensile strength not less than 30,000 psi with a yield point of 25,000 psi. Heat treat after fabrication to comply with ASTM B 597, temper T6.

1. Provide cone-tapered flagpoles, per manufacturer's standard rate of taper.

B. Assembly Construction: External Single Revolving - Rope Halyard – Shoe Base Foundation. *See Specification Drawing for Mounting Height, Wall Thickness, Butt Diameter, Shaft Pieces, Maximum Wind Speeds, and Maximum Flag Size Specifications.*

## 2.3 MOUNTING

A. Shoe Base: Cast aluminum shoe base will be anchored using four galvanized steel anchor bolts (55,000 PSI minimum yield) conforming to AASHTO M314-90 Grade 55. Threaded end of bolt will be galvanized 10" per ASTM A153. Kits will contain (4) hex nuts, (4) lock washers and (4) flat washers, with all components being galvanized steel. Anchor bolts will be secured in foundation utilizing 3000 psi concrete.

## 2.4 FITTINGS

A. Finial (Ornament): Finial sized as indicated or, if not indicated, to match pole butt diameter. *See Specification Drawing for Type and Size of Finial Specified.*

B. Single Revolving Truck Assembly: Cast aluminum non-fouling revolving with single pulley and pin, stainless steel roller bearings, and threaded aluminum spindle for attachment to pole top.

C. Halyard: Provide three (3) continuous 5/16" (#10) polypropylene halyard.

D. Halyard Flag Snaps: Provide six (6) stainless steel swivel snap hooks with neoprene covers.

E. Cleat(s): Provide three (3) heavy-duty cast aluminum cleat (9") with 1/4"-20NC flat head stainless steel self-tapping screws. *See Specification Drawing for Optional Halyard Security Choices.*

F. Flash Collar: Provide Spun Aluminum Collar to match flagpole. *See Specification Drawing for Collar Specification.*

G. Nautical Components: Provide yardarm, aluminum attaching bands, and stainless steel fasteners necessary for attachment to pole based on standard sizes and lengths provided by manufacturer. Include pulley system for attachment of halyard to yardarm.

## 2.5 MISCELLANEOUS MATERIALS

A. Concrete: Comply with requirements of Division 3 Section "Cast in Place Concrete".

## 2.6 FINISHES

A. Metal Finishes, General: Comply with National Association of Architectural Manufacturers' (NAAMM) "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Finish: *See Specification Drawing for Finish Specification*

C. Finish Specifications (Satin, Anodized, and Powder Paint Finishes): Aluminum Finish designations prefixed by AA conform to the system established by the Aluminum Association for designating aluminum finishes.

- a) Natural Satin Finish: Provide directional-sanded satin finish (AA-M33); buff complying with AA-M20.

- b) Anodized Finishes: Provide Class 1 finish complying with AA M32-C22-A41 (Clear Anodized) or AA M32-C22-A42 (Color Anodized Finishes) in thicknesses ranging from 1 to 3 mils.
  - i) Anodized - Clear (AA)
  - ii) Anodized - Light Bronze (AB)
  - iii) Anodized - Medium Bronze (AC)
  - iv) Anodized - Dark Bronze (AD)
  - v) Anodized - Black (AE)
- c) Powder Coated Finish: Thermo-set Polyester Powder Coated Finish, with a minimum thickness of 1-½ mils. Application shall be in a closed loop automated powder coating system to insure uniformity and quality of finish.
  - i) Powder Paint – Clear (BZ)
  - ii) Powder Paint – Light Bronze (BN)
  - iii) Powder Paint – Medium Bronze (BO)
  - iv) Powder Paint – Dark Bronze (BM)
  - v) Powder Paint – Black (BA)
  - vi) Powder Paint – White (BH)
  - vii) Powder Paint – Dark Green (BV)
  - viii) Powder Paint – Gray (BE)
  - ix) Powder Paint – Sparkle Silver (EP)
  - x) Powder Paint – Specify (XX)

## **PART 3 – EXECUTION**

### **3.1 PREPARATION**

A. Excavation: For foundations, excavate to neat clean lines in undisturbed soil. Remove loose soil and foreign matter from excavation and moisten earth before placing concrete.

B. Foundation: Provide forms where required due to unstable soil conditions and for perimeter of flagpole base at grade. Secure anchor bolts in position and brace to prevent displacement during concreting. Place concrete immediately after mixing. Compact concrete in place using vibrators. Moist-cure exposed concrete for not less than 7 days or use a non-staining curing compound. Trowel exposed concrete surfaces to a smooth, dense finish, free of trowel marks and uniform in texture and appearance. Provide positive slope for water runoff to base perimeter.

### **3.2 FLAGPOLE INSTALLATION**

A. General: Install flagpoles where shown and according to shop drawings and manufacturer's written instructions.

B. Shoe Base Installation: Place flagpole on top of the installed anchor bolts and install using flat washer, lock washer and hex nut. Tighten nut and verify that all threads are fully engaged. Cover with flashing collar.