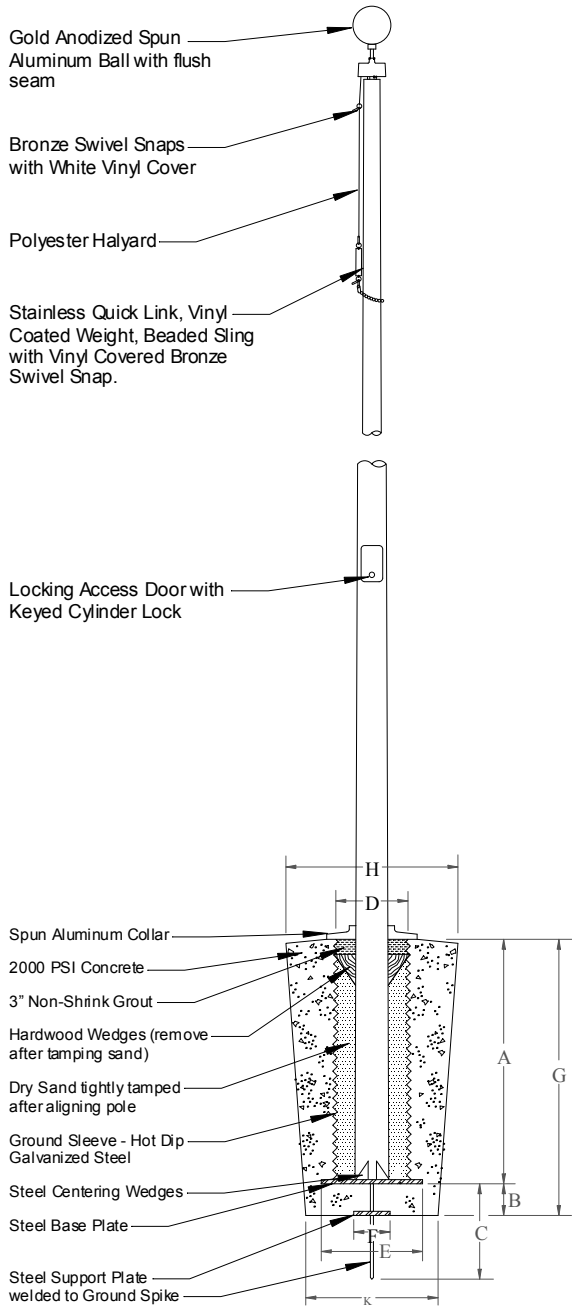


# L.Ph. Bolander & Sons Inc.

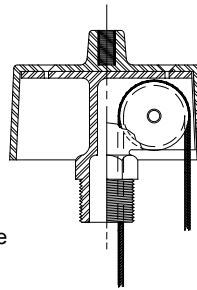
1355 Evans Ave.  
San Francisco, Calif. 94124  
800/434-5611

Quality Flagpoles Since 1885

# EXTRA HEAVY GROUND SET CONE TAPERED ALUMINUM FLAGPOLES CAM CLEAT CONCEALED HALYARD

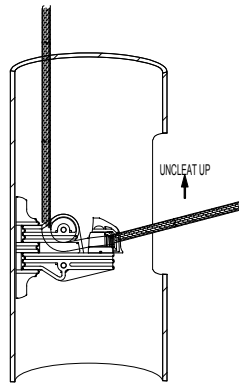
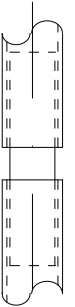


**STATIONARY  
NON-FOULING  
TRUCK DETAIL**  
Aluminum Body,  
cast Delrin Sheave  
on Stainless Steel  
Pin.

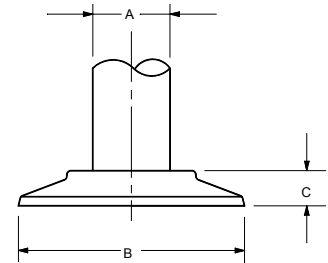


**SELF ALIGNING  
INTERNAL SLEEVE**

This pre-fitted, shop machined sleeve is designed to allow for the field assembly, without welding, of large shafts which must be shipped in sections. Proper mating of the numbered parts will result in a fine hair line joint.



**Cam Cleat Assembly  
with Locking Access Door**



**Spun Aluminum  
Standard Flash Collar**

| A     | B   | C     |
|-------|-----|-------|
| 5"-8" | 15" | 2.75" |
| 10"   | 22" | 3.5"  |

**FOUNDATION DIMENSIONS**

| Exposed Height | A    | B  | C   | D   | E   | F  | G    | H   | K   |
|----------------|------|----|-----|-----|-----|----|------|-----|-----|
| 20'            | 3'   | 6" | 18" | 8"  | 10" | 4" | 3'6" | 24" | 22" |
| 25'            | 3'   | 6" | 18" | 8"  | 10" | 4" | 3'6" | 28" | 22" |
| 30'            | 3'   | 6" | 18" | 10" | 12" | 4" | 3'6" | 30" | 24" |
| 35'            | 3'6" | 6" | 18" | 10" | 12" | 4" | 4'   | 30" | 26" |
| 40'            | 4'   | 6" | 18" | 12" | 14" | 8" | 4'6" | 36" | 32" |
| 45'            | 4'6" | 6" | 18" | 12" | 14" | 8" | 5'   | 42" | 36" |
| 50'            | 5'   | 6" | 24" | 15" | 18" | 8" | 5'6" | 48" | 42" |
| 60'            | 6'   | 6" | 24" | 15" | 18" | 8" | 6'6" | 48" | 42" |
| 70'            | 7'   | 6" | 24" | 15" | 18" | 8" | 7'6" | 60" | 48" |
| 80'            | 8'   | 6" | 24" | 15" | 18" | 8" | 8'6" | 60" | 48" |

These recommended foundations are only minimums. Dimensions may vary according to soil and wind conditions at location of installation.

| Exposed Height | Overall Height | Diameter Butt | Diameter Top | Wall Thickness | Length Tapered | Length Straight | Ball Dia. | Halyard Dia. | Ship Sections | Ground Sleeve | Flag Size | Shipping Weight |
|----------------|----------------|---------------|--------------|----------------|----------------|-----------------|-----------|--------------|---------------|---------------|-----------|-----------------|
| HTJ20'         | 23'            | 5"            | 3"           | .188"          | 11'            | 12'             | 5"        | 5/16"        | 1             | 8"            | 3'x5'     | 162#            |
| HTJS25'        | 28'            | 5"            | 3"           | .188"          | 11'            | 17'             | 5"        | 5/16"        | 1             | 8"            | 4'x6'     | 167#            |
| HTJS30'        | 33'            | 6"            | 3.5"         | .156"          | 17'3"          | 15'9"           | 6"        | 5/16"        | 1 or 2        | 10"           | 5'x8'     | 204#            |
| HTJ30'         | 33'            | 6"            | 3.5"         | .188"          | 17'3"          | 15'9"           | 6"        | 5/16"        | 1 or 2        | 10"           | 5'x8'     | 224#            |
| HTJS35'        | 38'6"          | 7"            | 3.5"         | .156"          | 20'            | 18'6"           | 6"        | 5/16"        | 1 or 2        | 10"           | 5'x8'     | 265#            |
| HTJ35'         | 38'6"          | 7"            | 3.5"         | .188"          | 20'            | 18'6"           | 6"        | 5/16"        | 1 or 2        | 10"           | 5'x8'     | 281#            |
| HTJS40'        | 44'            | 8"            | 3.5"         | .156"          | 29'1"          | 14'11"          | 8"        | 5/16"        | 2             | 12"           | 6'x10'    | 303#            |
| HTJ40          | 44'            | 8"            | 3.5"         | .188"          | 29'1"          | 14'11"          | 8"        | 5/16"        | 2             | 12"           | 6'x10'    | 337#            |

# *L. Ph. Bolander & Sons*

## Flagpoles Since 1885



### EXTRA HEAVY GROUND SET CONE TAPERED ALUMINUM FLAGPOLES

#### Specifications

**GENERAL.** Bolander Internal Halyard aluminum flagpoles are made from all new, heat treated, seamless 6063-T6 tubing and are designed to withstand winds of 160 MPH. All shafts are uniformly cone tapered approximately 1" in every 5'6".

Overall lengths up to 28' can be fabricated in one piece and shipped via motor freight to almost any destination. Longer lengths requiring shipment in two sections shall be factory fitted with self aligning flush seam field joint, requiring no welding.

All poles are highly polished with fine grain aluminum oxide cloths resulting in a high quality deep luster finish. This extremely fine grain finish provides a elegant soft sheen while remaining maintenance free. Optional Duranodic and Clear anodizing finishes are available upon request as well as a full line of powder coating.

Upon completion of polishing, the poles are spiral wrapped in tire paper and shipment is made in a hard fiber tube to protect the finish. The unexposed portion of the shaft, which will be below grade, can be given a heavy coat of asphaltum paint if required.

**STANDARD FITTINGS.** Fittings listed below are standard on all ground mounted HTJ internal halyard flagpoles.

**TRUCK.** Cast of virgin aluminum and shall be one sheave, internal, stationary, non-fouling.

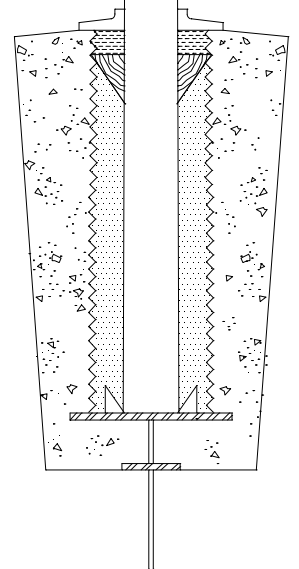
**BALL.** Constructed of 14ga. aluminum, with flush seam and gold anodized for color and durability.

**HALYARD.** Shall be white, UV resistant Polyester, of length for pole height, with white vinyl covered brass flag snaps

**CAM CLEAT.** No maintenance, self locking, non-corrosive materials, mounted inside the pole.

**FLASH COLLAR.** The flash collar shall be spun aluminum alloy 5052-H32, of diameter and shape as detailed. The finish shall match that of the pole.

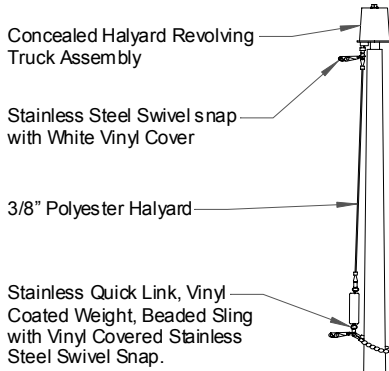
**GROUND SLEEVE.** Fabricated from #16 ga. galvanized steel with 3/8" steel base plate, whose square dimension is two inches larger than the sleeve diameter. All steel wedges, base plate, support plate and lightning ground rod shall be welded of dimensions as detailed.



# L.Ph. Bolander & Sons

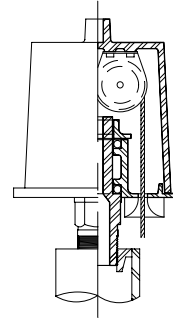
1355 Evans Ave.  
San Francisco, Calif. 94124  
800/434-5611 Fax 415/648-0402  
Quality Flagpoles Since 1885

# EXTRA HEAVY GROUND SET CONE TAPERED ALUMINUM FLAGPOLES ROPE CLUTCH CONCEALED HALYARD



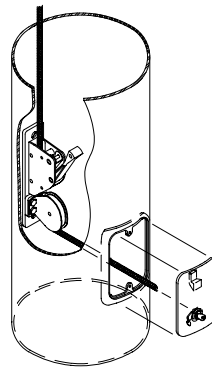
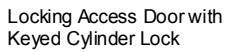
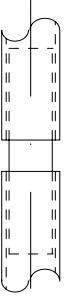
### REVOLVING NON-FOULING TRUCK DETAIL

Aluminum Body, non-fouling Internal Halyard Truck, cast aluminum body, 26 Stainless Steel Ball Bearings & 2 1/2" dia. plated Steel Sheave, and Stainless Steel Ferrule for Halyard longevity.

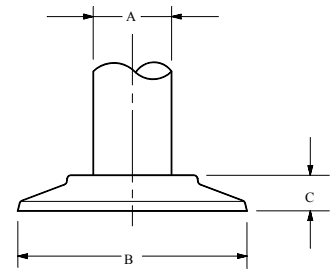


### SELF ALIGNING INTERNAL SLEEVE

This pre-fitted, shop machined sleeve is designed to allow for the field assembly, without welding, of large shafts which must be shipped in sections. Proper mating of the numbered parts will result in a fine hair line joint.

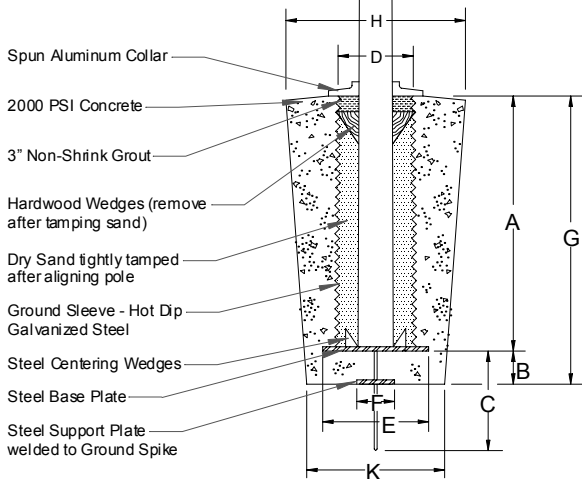


Jam Cleat Assembly with Locking Access Door



### Spun Aluminum Standard Flash Collar

| A   | B   | C     |
|-----|-----|-------|
| 8"  | 15" | 2.75" |
| 10" | 22" | 3.5"  |



### FOUNDATION DIMENSIONS

| Exposed Height | A    | B  | C   | D   | E   | F  | G    | H   | K   |
|----------------|------|----|-----|-----|-----|----|------|-----|-----|
| 20'            | 3'   | 6" | 18" | 8"  | 10" | 4" | 3'6" | 24" | 22" |
| 25'            | 3'   | 6" | 18" | 8"  | 10" | 4" | 3'6" | 28" | 22" |
| 30'            | 3'   | 6" | 18" | 8"  | 10" | 4" | 3'6" | 28" | 24" |
| 35'            | 3'6" | 6" | 18" | 10" | 10" | 4" | 4'   | 30" | 26" |
| 40'            | 4'   | 6" | 18" | 10" | 10" | 8" | 4'6" | 36" | 32" |
| 45'            | 4'6" | 6" | 18" | 12" | 14" | 8" | 5'   | 42" | 36" |
| 50'            | 5'   | 6" | 24" | 12" | 14" | 8" | 5'6" | 48" | 42" |
| 60'            | 6'   | 6" | 24" | 15" | 16" | 8" | 6'6" | 48" | 42" |
| 70'            | 7'   | 6" | 24" | 15" | 16" | 8" | 7'6" | 60" | 48" |
| 80'            | 8'   | 6" | 24" | 15" | 16" | 8" | 8'6" | 60" | 48" |

These recommended foundations are only minimums. Dimensions may vary according to soil and wind conditions at location of installation.

| Exposed Height | Overall Height | Diameter |      | Wall Thickness | Length  |          | Ball Dia. | Halyard Dia. | Ship Sections | Ground Sleeve | Flag Size | Shipping Weight |
|----------------|----------------|----------|------|----------------|---------|----------|-----------|--------------|---------------|---------------|-----------|-----------------|
|                |                | Butt     | Top  |                | Tapered | Straight |           |              |               |               |           |                 |
| HTJ45'         | 49'6"          | 8"       | 3.5" | .188"          | 32'8"   | 16'10"   | 8"        | 3/8"         | 2             | 12"           | 6'x10'    | 375#            |
| HTJ50'         | 55'            | 10"      | 4"   | .188"          | 37'2"   | 17'10"   | 10"       | 3/8"         | 3             | 15"           | 8'x12'    | 547#            |
| HTJ60'         | 66'            | 12"      | 4"   | .250"          | 60      | 6'       | 12"       | 3/8"         | 3             | 15"           | 10'x15'   | 699#            |
| HTJ70'         | 77'            | 12"      | 4"   | .250"          | 66'6"   | 10'6"    | 12"       | 3/8"         | 3             | 15"           | 12'x18'   | 876#            |
| HTJ80'         | 88'            | 12"      | 4"   | .375"          | 77'6"   | 10'6"    | 12"       | 3/8"         | 3             | 15"           | 15'x25'   | 1153#           |

*L. Ph. Bolander & Sons*

**Flagpoles Since 1885**



**EXTRA HEAVY, GROUND SET, CONE TAPERED ALUMINUM FLAGPOLES**

**Specifications**

**GENERAL.** Bolander Internal Halyard aluminum flagpoles are made from all new, heat treated, seamless 6063-T6 tubing and are designed to withstand winds of 160 MPH. All shafts are uniformly cone tapered approximately 1" in every 5'6".

Overall lengths up to 28' can be fabricated in one piece and shipped via motor freight to almost any destination. Longer lengths requiring shipment in two or three sections shall be factory fitted with self aligning flush seam field joint, requiring no welding.

All poles are highly polished with fine grain aluminum oxide cloths resulting in a high quality deep luster finish. This extremely fine grain finish provides a elegant soft sheen while remaining maintenance free. Optional Duranodic and Clear anodizing finishes are available upon request as well as a full line of powder coating.

Upon completion of polishing, the poles are spiral wrapped in tire paper and shipment is made in a hard fiber tube to protect the finish. The unexposed portion of the shaft, which will be below grade, can be given a heavy coat of asphaltum paint if required.

**STANDARD FITTINGS.** Fittings listed below are standard on all ground mounted HTJ internal halyard flagpoles 45' and taller.

**TRUCK.** Cast of virgin aluminum and shall be one sheave revolving, non fouling, with 26 stainless steel ball bearings, and Delrin bushing for halyard longevity.

**HALYARD.** Shall be white, UV resistant Polyester, of length for pole height, with white vinyl covered brass flag snaps

**ROPE CLUTCH.** No maintenance, manually activated "EASYLOCK" rope clutch, all aluminum and non-corrosive materials, mounted inside the pole.

**FLASH COLLAR.** The flash collar shall be spun aluminum alloy 5052-H32, of diameter and shape as detailed. The finish shall match that of the pole.

**GROUND SLEEVE.** Fabricated from #16 ga. galvanized steel with 3/8" steel base plate, whose square dimension is two inches larger than the sleeve diameter. All steel wedges, base plate, support plate and lightning ground rod shall be welded of dimensions as detailed.

