Advanced, State-Of-The-Art Manufacturing Combined With Exceptional Engineering and Design!
Proven Performance

The “Green” Choice

Breakaway Solutions

Reduced Cost of Ownership
Hapco is proud of its long history of producing the highest quality products for the Commercial and Industrial, Utility, Municipal, and DOT lighting markets.
Who We Are

**History**

Hapco has a long history dating to 1843 when its parent corporation, Hubbard and Company, originated as a national manufacturer of forgings and stampings to the utility industry. A major contributor to the emerging telephone and power industries of the late 19th century, their commitment to "offering products of the highest quality at ever-increasing service levels" established Hubbard as the leading company in these growing fields.

In 1951, Hubbard established a new division, the Hubbard Aluminum Products Company (HAPCO), and offered its first line of aluminum lighting poles and brackets in August of that same year. The superior properties of aluminum poles were immediately embraced by the market, with Hapco seeing significant growth during these early years.

Hapco was acquired by our current owner Dyson-Kissner-Moran (DKM) in 1958, and the original Pittsburg, Pennsylvania facility was moved to our present-day location in Abingdon, Virginia in 1962. Today, after over 50 years and multiple plant expansions, our skilled workforce continues to vigorously pursue our founder’s original commitment of "the highest quality" products in the pole products industry.

**Engineering Excellence**

“By adopting the latest methods of…fabrication combined with expert engineering knowledge of the many alloys of aluminum and their properties, Hapco Products are maintained at the highest level of quality.”

*Hapco Product Catalog Number 60, 1955*

As a manufacturer forging the way in aluminum pole production for over 60 years, Hapco is at its core a company with a passion for excellence in innovation and product quality. The formula for this success hasn’t changed since 1955, as the statement above is as true about Hapco today as it was then. "Engineering Knowledge" has been instrumental in carrying Hapco from an industry pioneer to today’s recognized leader in the aluminum pole industry.

Our advanced technical skill and in-depth aluminum metallurgical knowledge is unequaled, earning Hapco a respected reputation for both our design capabilities and product quality. Our hundreds of combined years of engineering experience are focused on Hapco’s “Better By Design” pledge, and the results of our commitment to excellence can be seen in our exclusive Lifetime Warranty.

See Pages 8-9 for additional information on Hapco’s Lifetime Pole Assembly Warranty.

**Manufacturing Expertise**

Hapco’s entry into aluminum pole products manufacturing was undertaken with a simple philosophy…to provide our customers superior street and area lighting products through the investment and implementation of the most advanced machinery and manufacturing processes of the day. This philosophy led to several firsts in the market, including one-piece aluminum poles in lengths to 40’ and the use of automatic ovens for accurate regulation of the heat treat cycle.

Today, this “Best-in-Class Manufacturing” mentality continues with the most advanced, state-of-the-art aluminum manufacturing technologies incorporated into our 275,000 square foot facility. Decades of experience are combined with automated on-site powder paint facilities, on-site fluting, dedicated custom lines and a full embrace of the principles of Lean Manufacturing.

After over six decades our manufacturing expertise continues to produce products of the highest quality, earning Hapco a respected reputation for excellence and making Hapco one of the most recognized…and specified…names in the light pole industry.
Dedicated Research and Development
Hapco has a proud history of dedicated involvement in the research that shaped the industry, with decades of active participation in organizations such as The Aluminum Association, the National Electrical Manufacturers Association (NEMA), the National Cooperative Highway Research Program (NCHRP), and the American Association of State and Highway Transportation Officials (AASHTO). This background and experience provides the solid foundation for our leading Research and Development program.

Hapco’s commitment to R&D can be observed in our fully-equipped, in-house R&D labs and testing facilities. In addition, Hapco has an on-site crash test pendulum that provides the means to test full-scale poles and brackets at our Abingdon, VA campus. Thousands of tests have been conducted through the years in the interest of product improvement and safety, playing a major role in earning Hapco the reputation of providing the highest quality aluminum pole products.

This dedication to in-house testing, combined with extensive research projects performed in collaboration with accredited university testing labs, have led to many industry-recognized contributions to aluminum pole development. Hapco initiated the first wind tunnel testing to insure more efficient product designs, and our early work on vibration control and breakaway safety led to the first industry patents awarded in these categories.

Quality Assurance
To assure the highest quality products, Hapco poles are structurally designed to stringent specifications that meet or exceed American Association of State Highway & Transportation Officials (AASHTO) standards. Not all manufacturers design to AASHTO, which is conservative by nature, assuring that Hapco designs are the safest, highest quality and longest lasting available in the industry.

Fully embracing our Quality Assurance System begins with strict raw material specifications. Round Aluminum shafts are constructed of seamless aluminum alloys conforming to American Society for Testing and Materials (ASTM) standards. Shaft tolerances are 50-60% tighter than industry accepted standards, leading to greater efficiencies in the manufacturing process and unequaled finished product quality. Required welding is performed by American Welding Society (AWS) / Canadian Welding Bureau (CWB) certified welders to AWS Specification D1.2 or CWB Specification W 47.2 standards. All light pole shafts are heat treated after base weld to a full T6 temper in computer controlled ovens certified to meet the requirements of ASTM B597 and Mil-H-6088 specifications.

In addition, all component parts meet applicable ASTM standards. Components follow a strict initial standard inspection process, followed by a first and fifth piece inspection at each step of the manufacturing process. A final inspection of finished products ensures a level of quality only available with Hapco.

Custom Capabilities
No one can duplicate Hapco’s ability to deliver solutions to design professionals and project owners looking for that truly custom or unique design. Long recognized as the leader in providing innovative light poles and brackets, our team of engineers stand ready with the technical competence and experience to assist on even the most complex project.

Expert engineering design, world-class manufacturing capabilities, and an emphasis on quality control make Hapco the perfect choice for your next custom project.

Vertical Integration
In 2008, Hapco’s parent company, Dyson-Kissner-Moran (DKM), purchased a leading extrusion company located only 20 miles from our Abingdon, VA facility. This vertical integration strengthens our ability to support industry leading service levels for today’s tight project schedules. Material certification requirements are substantially tighter than industry standards, ensuring a continuous flow of quality extruded aluminum tubing to Hapco.

Hapco Delivers
- Lower Overall Cost of Ownership (Page 6)
- Superior Aesthetics (Page 6)
- Lifetime Warranty (Pages 8-9)
- Breakaway Solutions (Pages 10-11)
- Design Efficiency (Page 12)
- Proven Performance (Page 162)
- Sustainable Design (Page 163)
Advantages of Aluminum Poles

Why Aluminum?
The superior properties of aluminum make it both the perfect choice and best value for outdoor lighting poles and brackets.

Corrosion Resistant
On contact with air, aluminum forms a protective layer of aluminum oxide that guards against corrosion. This natural resistance to corrosion ensures that your aluminum lighting pole will resist the ravages of time, temperature and humidity while providing years of low maintenance care.

Lightweight
Aluminum provides the perfect combination of lightweight material with high strength-to-weight ratios. At one-third the weight of steel, aluminum poles are much easier to handle and install, providing substantial installation savings in both labor and equipment.

Proven Performance
Hapco has been manufacturing quality Aluminum Pole Products for more than 60 years, with many of the original installations still in service with no structural issues or noticeable differences in appearance. The longevity and durability of our products can be validated with our industry-leading Lifetime Warranty on aluminum pole assemblies (see Pages 8-9).

Lower Overall Cost of Ownership
The properties of aluminum make it a tremendous value when the overall cost of ownership is considered. Higher installation and maintenance costs for aluminum alternatives, combined with guaranteed replacement costs of shorter lifecycle materials, contribute to aluminum having the lowest cost of ownership of any lighting pole option.

The “Green” Choice
Aluminum provides an environmentally responsible choice of material and approach within the burgeoning green movement. Aluminum is the most abundant mineral in the earth’s crust, reduces material replacement energy by its incredibly long life cycle, and is 100% recyclable.

Advantages of Aluminum
When compared to alternative materials, the advantages of aluminum are substantial.

Steel
• Steel is not corrosion resistant and will begin to deteriorate as soon as it is installed, allowing visible rust and corrosion which lead to higher maintenance costs.
• Inherently shorter lifecycles contribute to an overall higher cost of ownership when compared to aluminum.
• Weighs three times as much as aluminum.
• Limited recycle value.
• Should not be Direct Buried.

Composite
• Composite poles are affected by ultraviolet fading and fiber blooming, quickly leading to poor aesthetics in many environments.
• Can be damaged by mowing or trimming. Round aluminum poles are heat treated after base weld to a full T6 temper, giving superior resistance to cuts and abrasions from trimmer and mowers.
• No recycle value, making them difficult and expensive to dispose of in case of pole knockdowns.
• Expensive maintenance costs associated with repainting and replacement.
• Excessive deflection of the top of poles with many arm/luminaire combinations.
• Limited breakaway designs.

Concrete
• Concrete is much heavier than Aluminum, resulting in significantly higher shipping and labor costs.
• Product Weight Comparison - 25’ Mounting Height
  Aluminum pole = 140 lbs.
  Concrete Pole = 1100 lbs.
• Slower, less efficient installations translate into extended job completion times.
• Difficult to install, requiring expensive installation equipment and larger installation crews.
• No breakaway performance, making concrete more hazardous in regards to highway safety than other pole materials.
• Susceptible to spalling (crumbling), staining and fading.
• No recycle value.
The advantages of aluminum poles make them the perfect option for direct buried applications. With a 60 year record of successful installations throughout the country, Hapco Aluminum Direct Buried Poles provide industry professionals with significant overall job savings.

**Direct Buried Advantages**

- Provides faster, more cost efficient installations.
- Eliminates foundations, removing the associated costs and the possibility of improper pouring/setting.
- Eliminates the need for bolt circle templates and anchor bolts.
- Eliminates the use of shims or double nuts for leveling.
- Eliminates improper bolt projections that result in uneven base covers and grouting.
- Eliminates the possibility of foundation and anchor bolt replacement in the event of a knockdown.
- Reduces the risk of wind induced vibration due to the ground acting as a natural damper.
- Provides more strength, lending greater EPA values than anchor base designs due to the elimination of the weld joint.
- Improves Aesthetics.
- Exclusive Hapco Lifetime Warranty which includes corrosion (see Lifetime Warranty – Pages 8-9).

**Hapco Aluminum + LED Lighting**

The "Total Sustainable Assembly"

- Longevity
- Near-Zero Maintenance
- Lower Overall Cost of Ownership

Why erode the benefits of LED Lighting with high-maintenance lighting poles that have shorter life-cycles and are inherently less aesthetic than aluminum?

A completed assembly containing LED Fixtures and Hapco Aluminum Poles guarantee project owners the proven performance, longevity and superior aesthetics of aluminum with the Specification Advantages and Lifetime Warranty that can only be delivered by Hapco.

Aluminum is the "LED" of Lighting Poles!
**Lifetime Pole Assembly Warranty**

**Lifetime Quality...Guaranteed**

At Hapco, it is our mission to create lasting customer relationships by providing the very best quality products. We do this by combining the most advanced, industry-leading manufacturing technologies with exceptional engineering and design.

Because we stand behind our products and truly believe in their longevity and durability, our aluminum pole assemblies are covered by a Lifetime Warranty.

“As a leader in the manufacture of aluminum lighting poles for more than 60 years, we are proud to be the first in the metal pole industry to offer this guarantee. We have the facilities, the products, the people, the experience and the desire to become and stay your FIRST choice for aluminum pole solutions.”
Lifetime Warranty

Hapco warrants its aluminum pole assemblies for their lifetime to be free of defects in material and workmanship and to be free from corrosion, except those items normally consumed in service. This warranty does not cover failures or corrosion due to:

- Improper installation.
- Misapplication – product used outside of specified use.
- Damage from handling, transportation, installation, vehicular impact, abuse, or vandalism.
- Site specific wind induced or other vibration.
- Installation in soils with a pH under 5 or over 9.
- Improper grounding.

Hapco will, at its sole option, repair, replace, or credit Buyer’s account for any product that does not conform to this warranty.

HAPCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HAPCO SHALL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGE, INCLUDING BUT NOT LIMITED TO CONSEQUENTIAL DAMAGES, LIQUIDATED DAMAGES AND BACK CHARGES.

This warranty does not include reimbursement for the expense of installation or removal of equipment, transportation, or any other expenses which may be incurred. This warranty applies to the pole assembly only and does not include anchor bolts, connecting hardware, or foundation. Authorization must be obtained from Hapco before any material is returned. This warranty excludes finishes such as powder coating, anodizing, and satin. “Lifetime” is defined as the lifetime of the products intended use. The foregoing states the Buyer’s sole remedy for any breach of warranty by Hapco.

This warranty applies only to Hapco aluminum pole assemblies shipped on or after January 1st, 2011.

Hapco
26252 Hillman Highway
Abingdon, VA 24210
800.368.7171
www.hapco.com
HAPCO Leads the Industry in Federal Highway Administration (FHWA) Accepted Breakaway Options.

The Federal Highway Administration (FHWA) definition of “Breakaway” refers to crash-tested devices that break or yield upon impact. FHWA guidelines require the specification of Breakaway poles and bases meeting rigorous impact testing to mitigate the potential severity of crashes, providing a safer outcome in the event of a collision.


4-Bolt Breakaway Anchor Base

Hapco’s Anchor Base was the first pole anchoring shoe base allowing standard installation techniques to meet FHWA Breakaway provisions. Its simplicity of design eases the installation process, combining the most cost efficient Breakaway device in the industry with the aesthetic appeal of a standard shoe base.

Breakaway T-Base

Hapco offers Transformer Base (T-Base) designs to accommodate a wide range of pole sizes and bolt circle requirements (see Page 157). The historic appearance of the T-Base design offers a higher probability of re-use of the pole in the event of a knockdown.

X-Base

The X-Base, a Hapco exclusive, is welded to the bottom of the base as part of the pole assembly. It is supplied assembled and serves as the base flange, bolting directly to the anchor bolts. The X-Base extends the range of sizes for FHWA accepted Breakaway poles to a 10” Butt Diameter and 55’ Mounting Heights.

Breakaway Couplings

Breakaway couplings are available for use in a wide range of pole sizes.

Lifetime Warranty

Aluminum pole assemblies incorporating FHWA Accepted Breakaway Devices are covered under Hapco’s exclusive Lifetime Warranty. See Pages 8-9 Lifetime Pole Assembly Warranty for more information.

<table>
<thead>
<tr>
<th>Breakaway Device</th>
<th>Butt Dia. (Max.)</th>
<th>Mounting Height (Max.)</th>
<th>Wall Thickness (Max.)</th>
<th>Anchor Bolt Circle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anchor Base</td>
<td>6”</td>
<td>30’</td>
<td>0.188</td>
<td>9” - 10”</td>
</tr>
<tr>
<td></td>
<td>7”</td>
<td>35’</td>
<td>0.188</td>
<td>10” - 11”</td>
</tr>
<tr>
<td>T-Base</td>
<td>TB1-17 (70501)</td>
<td>55’</td>
<td>0.250</td>
<td>11” - 12”</td>
</tr>
<tr>
<td></td>
<td>TB2-17 (70511)</td>
<td>45’</td>
<td>0.250</td>
<td>12”</td>
</tr>
<tr>
<td></td>
<td>TB3-17 (70521)</td>
<td>55’</td>
<td>0.312</td>
<td>17.25”</td>
</tr>
<tr>
<td>X-Base</td>
<td>8”</td>
<td>45’</td>
<td>0.250</td>
<td>11” - 12”</td>
</tr>
<tr>
<td></td>
<td>9”</td>
<td>50’</td>
<td>0.250</td>
<td>13” - 15”</td>
</tr>
<tr>
<td></td>
<td>10”</td>
<td>55’</td>
<td>0.250</td>
<td>14” - 15”</td>
</tr>
<tr>
<td>Breakaway Couplings</td>
<td>7” - 10”</td>
<td>55’</td>
<td>0.250</td>
<td>Varies</td>
</tr>
</tbody>
</table>

4-Bolt Breakaway Anchor Base

Hapco’s Anchor Base was the first pole anchoring shoe base allowing standard installation techniques to meet FHWA Breakaway provisions. Its simplicity of design eases the installation process, combining the most cost efficient Breakaway device in the industry with the aesthetic appeal of a standard shoe base.

Breakaway T-Base

Hapco offers Transformer Base (T-Base) designs to accommodate a wide range of pole sizes and bolt circle requirements (see Page 157). The historic appearance of the T-Base design offers a higher probability of re-use of the pole in the event of a knockdown.

X-Base

The X-Base, a Hapco exclusive, is welded to the bottom of the base as part of the pole assembly. It is supplied assembled and serves as the base flange, bolting directly to the anchor bolts. The X-Base extends the range of sizes for FHWA accepted Breakaway poles to a 10” Butt Diameter and 55’ Mounting Heights.

Breakaway Couplings

Breakaway couplings are available for use in a wide range of pole sizes.

Lifetime Warranty

Aluminum pole assemblies incorporating FHWA Accepted Breakaway Devices are covered under Hapco’s exclusive Lifetime Warranty. See Pages 8-9 Lifetime Pole Assembly Warranty for more information.
Direct Buried Breakaway

Hapco is proud to offer the industry’s first FHWA Accepted Direct Buried Breakaway Aluminum Pole.

Aluminum poles used in direct buried applications throughout the country have a 60 year record of successful installations and can provide significant overall job savings.

Through an extensive process of expert design, modeling, and testing, Hapco engineers have created a breakaway design that brings the cost efficient properties of direct buried poles to our FHWA accepted Breakaway product line.

Direct Buried Advantages

- Provides faster, more cost efficient installations.
- Eliminates foundations, removing the associated costs and the possibility of improper pouring/setting.
- Eliminates the need for bolt circle templates and anchor bolts.
- Eliminates the use of shims or double nuts for leveling.
- Eliminates improper bolt projections that result in uneven base covers and grouting.
- Eliminates the possibility of foundation and anchor bolt replacement in the event of a knockdown.
- Reduces the risk of wind induced vibration due to the ground acting as a natural damper.
- Provides more strength, lending greater EPA values than anchor base designs due to the elimination of the weld joint.
- Improves Aesthetics.

Extensively Tested
FHWA Accepted
Lifetime Warranty
Includes Corrosion

Screen captures of high speed video of Hapco’s Direct Buried FHWA accepted Breakaway Aluminum Pole.

The butt end of Hapco Direct Buried Breakaway poles are partially flattened into an anti-rotational, oval cross section.

<table>
<thead>
<tr>
<th>Butt Dia.</th>
<th>Mounting Height (Max.)</th>
<th>Wall Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Buried 8&quot;</td>
<td>40&quot;</td>
<td>0.156</td>
</tr>
<tr>
<td>Direct Buried 9&quot;</td>
<td>45&quot;</td>
<td>0.156</td>
</tr>
<tr>
<td>Direct Buried 10&quot;</td>
<td>45&quot;</td>
<td>0.156</td>
</tr>
</tbody>
</table>

www.hapco.com
Hapco has been the nation’s leading aluminum pole producer for more than 60 years. Hapco achieved and maintained this position with expert engineering, manufacturing innovation, and pole product testing. We have a proud history of dedicated involvement in the research that has shaped our industry, leading to many industry patents which include the first patent on a successful pole vibration damper.

Hapco has an in-house testing facility that provides a means to test full-scale poles and brackets under static and cyclic load conditions. Thousands of tests have been conducted in the interest of product improvement. These tests, extensive research projects in collaboration with major universities, and current design specifications provide the basis for Hapco’s design criteria.

Hapco can provide designs based on the American Association of State Highway and Transportation Officials Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals (otherwise known as the AASHTO-LTS) and local building code requirements. Poles in this catalog are designed to meet the strength requirements of 2009 AASHTO LTS-5. Please advise Hapco of any additional requirements you may have.

Design Efficiency

Efficiency of design can lead to significant overall cost savings. In order to manage project funds efficiently, it is important to utilize materials accurately, and Hapco has the knowledge and experience to provide the most efficient offering for each pole project. There are four main factors to consider when selecting the proper pole.

1. Mounting Height: Illumination levels determine the luminaire and mounting height selection process.
2. Total Weight: The combined weight of any object that will be mounted on the pole (luminaires, arms, brackets, accessories, etc.).
3. Total EPA: Effective Projected Area (EPA) is the product of the actual area seen by the wind multiplied by the appropriate drag coefficient and is dependent upon the angle of the wind with respect to the item being considered.
4. Wind Velocity: Location-specific, 3-second gust basic wind speed as presented in this section.

Methods of Analysis and Loading Due to Wind and Other Forces

The stresses caused by all pole attachments exist continuously throughout the life of the installation. These stresses are subject to fluctuation caused by the aerodynamics of the luminaire or other characteristics of the assembly, due to wind loads. Therefore, these stresses must be limited to a conservative value to reduce the possibility of fatigue. Other loads that should be considered are those produced by ice, overhead wiring (must be treated as a special loading challenge), and future changes to the original design. The forces anticipated in a particular installation must be known in order to select the correct pole.

Pole designs typically constitute an analysis of the combined stresses caused by the various types of loads. Our engineers evaluate each pole configuration and determine the stress that is permissible according to the design code, and the recommended loads are limited to stay within that allowable stress value.

Stiffness considerations are included in the analysis of a Hapco pole. The dead load deflection of the shaft is limited to provide an attractive appearance. The allowable deflection is based on the angular deflection, or rotation, of the shaft top, which is the characteristic that is the best measure of appearance for this type of loading.

Shielding Factor

The table shown at right will assist you in calculating the total EPA for many of the popular luminaire configurations. Using the shielding factor to calculate total EPA prevents an over-designed pole being used, resulting in cost savings.

<table>
<thead>
<tr>
<th>LUMINAIRE CONFIGURATION</th>
<th>EPA</th>
<th>SHIELDING FACTOR</th>
<th>TOTAL EPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 @ 180°</td>
<td>1.5</td>
<td>X 2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>3 @ 180°</td>
<td>1.5</td>
<td>X 3.0</td>
<td>4.5</td>
</tr>
<tr>
<td>4 @ 180°</td>
<td>1.5</td>
<td>X 4.0</td>
<td>6.0</td>
</tr>
<tr>
<td>3 @ 120°</td>
<td>1.5</td>
<td>X 2.3</td>
<td>3.45 (Shielded)</td>
</tr>
<tr>
<td>4 @ 90°</td>
<td>1.5</td>
<td>X 3.2</td>
<td>4.8 (Shielded)</td>
</tr>
</tbody>
</table>

Example assumes a single luminaire EPA of 1.5.
Wind Velocity Selection

2009 AASHTO LTS-5 specification 3-second gust basic wind speeds (mph) with gust effect factor (G) of 1.14 and 25 year design life wind map (ASCE 7-05) is shown above. This wind map should be used to determine wind velocity for your specific location. If you are located between two different velocity isotach lines, the higher velocity should be used.

Hapco has learned from years of experience that there are local isolated high wind conditions that can be devastating to poles and luminaires not designed for such conditions. Additionally, constant winds in the 10-25 mph range can severely damage certain poles and luminaires by vibration. Vibration is a local, site specific condition that should not be overlooked when selecting a pole. Destructive vibration is NOT an indication of substandard material, workmanship, or pole design. Please advise Hapco of any unusual wind conditions prior to purchase of poles. More robust poles and/or vibration dampers may be necessary to avoid wind damage.

Pole failures as a result of wind induced vibration are NOT covered under manufacturer’s warranty. Please reference “LIFETIME WARRANTY” (pages 8-9) and “WIND-INDUCED VIBRATION” (pages 150-151) for Hapco’s policy regarding vibration.

### Special Wind Regions

<table>
<thead>
<tr>
<th>Location</th>
<th>V MPH (m/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>105 (47)</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>145 (65)</td>
</tr>
<tr>
<td>Guam</td>
<td>170 (76)</td>
</tr>
<tr>
<td>Virgin Islands</td>
<td>145 (65)</td>
</tr>
<tr>
<td>American Samoa</td>
<td>125 (56)</td>
</tr>
<tr>
<td>Hawaii</td>
<td>130 (58)</td>
</tr>
<tr>
<td>Puerto Rico</td>
<td>140 (63)</td>
</tr>
<tr>
<td>Guam</td>
<td>150 (67)</td>
</tr>
</tbody>
</table>
## Catalog Part Number Description

### Catalog Part Number - No Arms

<table>
<thead>
<tr>
<th>General Shaft Assembly</th>
<th>MOUNTING HEIGHT</th>
<th>BUTT DIAMETER</th>
<th>BASE STYLE</th>
<th>FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td><strong>B</strong></td>
<td><strong>D</strong></td>
<td><strong>F</strong></td>
<td><strong>G</strong></td>
</tr>
<tr>
<td>RSA = Round Straight Aluminum</td>
<td>10&quot;</td>
<td>5&quot;</td>
<td>7&quot;</td>
<td>01</td>
</tr>
<tr>
<td>RTA = Round Tapered Aluminum</td>
<td>12&quot;</td>
<td>6&quot;</td>
<td>8&quot;</td>
<td>02</td>
</tr>
<tr>
<td>SSA = Square Straight Aluminum</td>
<td>4&quot;</td>
<td>J = 6.625&quot;</td>
<td>9&quot;</td>
<td>BA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting Heights</td>
<td>SHAFT ASSEMBLY</td>
<td>WALL THICKNESS</td>
<td>TOP DIAMETER</td>
<td></td>
</tr>
<tr>
<td>08 = 8’</td>
<td>A</td>
<td>C</td>
<td>E</td>
<td></td>
</tr>
<tr>
<td>10 = 10’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 = 12’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 = 14’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 = 16’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35 = 35’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 = 40’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 = 45’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 = 50’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wall Thickness</td>
<td>BASE STYLE</td>
<td>ARM QUANTITY</td>
<td>ARM LENGTH</td>
<td>FINISH</td>
</tr>
<tr>
<td>B = 0.125”</td>
<td><strong>G</strong></td>
<td><strong>I</strong></td>
<td><strong>J</strong></td>
<td></td>
</tr>
<tr>
<td>C = 0.156”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D = 0.188”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E = 0.219”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F = 0.250”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G = 0.312”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H = 0.375”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I = 0.375”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J = 0.375”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example:**

RTA30D8B4-01  
Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, 4-Bolt Base, Satin Aluminum Finish.

### Catalog Part Number - With Arms

<table>
<thead>
<tr>
<th>Arm Style</th>
<th>MOUNTING HEIGHT</th>
<th>BUTT DIAMETER</th>
<th>BASE STYLE</th>
<th>ARM QUANTITY</th>
<th>ARM LENGTH</th>
<th>FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H</strong></td>
<td><strong>B</strong></td>
<td><strong>D</strong></td>
<td><strong>F</strong></td>
<td><strong>I</strong></td>
<td><strong>J</strong></td>
<td><strong>G</strong></td>
</tr>
<tr>
<td>B = Bullhorn Arm</td>
<td>10&quot;</td>
<td>5&quot;</td>
<td>7&quot;</td>
<td>1</td>
<td>4’</td>
<td>12&quot;</td>
</tr>
<tr>
<td>F = Cross Arm (Floodlight)</td>
<td>12&quot;</td>
<td>6&quot;</td>
<td>8&quot;</td>
<td>2</td>
<td>6’</td>
<td>14’</td>
</tr>
<tr>
<td>D = Davit Arm</td>
<td>4&quot;</td>
<td>J = 6.625&quot;</td>
<td>9&quot;</td>
<td>3</td>
<td>8’</td>
<td>15’</td>
</tr>
<tr>
<td>M = Mast Arm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A = 10’</td>
<td></td>
</tr>
<tr>
<td>T = Truss Arm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F = 16’</td>
<td></td>
</tr>
</tbody>
</table>

**Example:**

RTA40E1C4T1A-BM  
Round Tapered Aluminum, 40’ Mounting Height, .219” Wall Thickness, 10” Butt Diameter, 6” Top Diameter, 4-Bolt Base, **Truss Arm, Single, 10’ Arm Length**, Dark Bronze Powder Paint Finish.
Satin Aluminum Finish
Hapco’s Satin Aluminum is a polished aluminum finish achieved in a multi-pass, mechanical rotary sanding operation. No alternative finish option offers a lower overall cost of ownership or longer aesthetic beauty, making it the industry’s first choice for low-maintenance and enduring finishes.

Hapco’s RTA and RSA round aluminum poles are constructed of Aluminum Alloy 6063. This marine grade alloy is composed primarily of Aluminum, Magnesium and Silicone and is chosen because of its superior attributes and extremely high resistance to corrosion. On contact with air, these aluminum alloys naturally oxidize, creating a layer of aluminum oxide on the surface of the pole that effectively and permanently guards against corrosion.

Thermoset Powder Coat Finishes
Hapco’s on-site, state-of-the-art powder coating operations utilize weather resistant triglycidyl isocyanurate (TGIC) polyester thermoset powders that are electrostatically applied, oven cured and bonded to a minimum dry film thickness of 2.0 mils. The National Association of Architectural Metal Manufacturers, Metal Finishes Manual, rate the outdoor life of these powders at 15 plus years.

AAMA 2604
All polyester thermoset powders are not created equal. The American Architectural Manufacturers Association (AAMA) provides classifications for powder coatings which are industry recognized standards for testing and performance. AAMA 2604 coatings, known as Super Durable, are formulated with advanced polyester resin technology that utilizes higher performance pigments. Qualities include superior gloss, color retention and weathering capabilities, better exterior durability and UV resistance, and highly resistant scratching, chipping and peeling characteristics.

RAL and Custom Colors
Along with our standard colors, Hapco can provide both RAL and custom colors. Options are unlimited. Simply provide any RAL Color Number or Color Chip Sample and Hapco will provide the perfect AAMA 2604 Powder Paint Color for your next project.

Powder Coat 5-Year Finish Warranty
Hapco warrants its factory-applied powder coatings against cracking, peeling or excessive fading due to normal climatic exposure for a period of five (5) years from the date of shipment. Damage to the finish coating caused by mechanical abuse, such as rough handling during installation or by vandalism, is not covered by this warranty. This warranty is limited to, at the seller’s option, the repair or replacement of the material involved and shall not include reimbursement of consequential expenses such as installation, removal of equipment, or transportation costs.

Anodized Finish
Anodized colors are limited to clear, black and various shades of bronze.

Color Uniformity
While a color finish on aluminum poles can be obtained by either anodizing or powder painting, anodizing of pole assemblies will inherently result in color variations and color uniformity is not guaranteed. Variations in the physical or chemical composition of the metals contained in the base flange, pole shaft, welds, and pole accessories create color variations in anodized finishes that are unavoidable. Color variations in anodized finishes are not covered under Hapco warranty.

Powder Coat finishes offer a more attractive price and lead time compared to anodized products and are recommended for guaranteed uniformity of color.
The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

### Base Style
4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

### Handhole
4"-8" Butt Diameters - 2" x 4" Handhole with curved Lap Style Aluminum Door and two (2) SS Self-Tapping Attaching Screws. A Grounding Provision incorporating a tapped 1/4"-20NC hole is provided.

6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

### Anchorage
Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade SS. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

### Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

### Mounting Designation
Side Drill Mount
For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

### Tenon Mount - Welded or Spun
For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3", 4", etc.). Tenon style is factory option. Welded Tenon can be specified.
<table>
<thead>
<tr>
<th>A Mfg. Ntg.</th>
<th>B Wall Thickness</th>
<th>C Butt Diameter</th>
<th>Total Lm. Weight</th>
<th>Old Cat. Number</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>0.125&quot;</td>
<td>4</td>
<td>100</td>
<td>17.6</td>
<td>14.2</td>
</tr>
<tr>
<td>08</td>
<td>0.125&quot;</td>
<td>4</td>
<td>100</td>
<td>17.2</td>
<td>13.8</td>
</tr>
<tr>
<td>08</td>
<td>0.125&quot;</td>
<td>4</td>
<td>75</td>
<td>21.2</td>
<td>10.0</td>
</tr>
<tr>
<td>10</td>
<td>0.125&quot;</td>
<td>4</td>
<td>100</td>
<td>25.6</td>
<td>19.8</td>
</tr>
<tr>
<td>06</td>
<td>0.188&quot;</td>
<td>5</td>
<td>100</td>
<td>24.6</td>
<td>19.8</td>
</tr>
<tr>
<td>08</td>
<td>0.188&quot;</td>
<td>5</td>
<td>100</td>
<td>26.2</td>
<td>20.8</td>
</tr>
<tr>
<td>10</td>
<td>0.188&quot;</td>
<td>5</td>
<td>100</td>
<td>27.8</td>
<td>23.0</td>
</tr>
<tr>
<td>12</td>
<td>0.188&quot;</td>
<td>5</td>
<td>50</td>
<td>35.0</td>
<td>27.0</td>
</tr>
<tr>
<td>06</td>
<td>0.312&quot;</td>
<td>8</td>
<td>100</td>
<td>41.8</td>
<td>33.8</td>
</tr>
<tr>
<td>08</td>
<td>0.312&quot;</td>
<td>8</td>
<td>100</td>
<td>41.8</td>
<td>33.8</td>
</tr>
<tr>
<td>08</td>
<td>0.312&quot;</td>
<td>8</td>
<td>100</td>
<td>41.8</td>
<td>33.8</td>
</tr>
<tr>
<td>08</td>
<td>0.312&quot;</td>
<td>8</td>
<td>100</td>
<td>41.8</td>
<td>33.8</td>
</tr>
<tr>
<td>08</td>
<td>0.312&quot;</td>
<td>8</td>
<td>100</td>
<td>41.8</td>
<td>33.8</td>
</tr>
</tbody>
</table>

---

**Catalog Number Example -**

**RTA 30 D 8 B 4 – 01**

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, 4-Bolt Base, Satin Aluminum Finish

**Wall Thickness**

<table>
<thead>
<tr>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>.125</td>
<td>.156</td>
<td>.188</td>
<td>.219</td>
<td>.250</td>
<td>.312</td>
</tr>
</tbody>
</table>

**Butt Diameter**

<table>
<thead>
<tr>
<th>4”</th>
<th>5”</th>
<th>6”</th>
</tr>
</thead>
<tbody>
<tr>
<td>4”</td>
<td>5”</td>
<td>6”</td>
</tr>
</tbody>
</table>

**Top Diameter**

<table>
<thead>
<tr>
<th>3”</th>
<th>4.5”</th>
<th>6”</th>
</tr>
</thead>
<tbody>
<tr>
<td>4”</td>
<td>5”</td>
<td>6”</td>
</tr>
</tbody>
</table>

**Base Style**

<table>
<thead>
<tr>
<th>4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 - 4-Bolt Base</td>
</tr>
</tbody>
</table>

**Finish**

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

**EPA Notes:** Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if width is exceeded, or if other design life or code is required, please consult the factory.
The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

### Base Style

- **3-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Spun Aluminum Base Cover and Stainless Steel Hex Head Attaching Screw.**

### Handhole

- **4”-5” Butt Diameters - 2” x 4” Handhole with curved Lap Style Aluminum Door and two (2) Stainless Steel Self-Tapping Attaching Screws.**
- A Grounding Provision incorporating a tapped 1/4”-20NC hole is provided opposite the Handhole.

### Anchorage

- An Anchorage Kit will include three (3) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of Threaded End will be Galvanized per ASTM A153.
- Kits will contain three (3) Hex Nuts, three (3) Lock Washers, and three (3) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

### Vibration Damper

- When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

### Mounting Designation

- **Side Drill Mount**
  - For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.
- **Tenon Mount - Welded or Spun**
  - For Tenon Mount applications specify both Tenon diameter (2.375”, 2.875”, 3.5”, etc.) and length (3”, 4”, etc.). Tenon style is factory option. Welded Tenon can be specified.

---

**Dimensions in Inches**

<table>
<thead>
<tr>
<th>C BUTT DIA.</th>
<th>D TOP DIA.</th>
<th>F BOLT CIR. DIA.</th>
<th>G COVER DIA.</th>
<th>H BOLT PROJ.</th>
<th>I BOLT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
<td>7</td>
<td>9.0625</td>
<td>2</td>
<td>.75 x 17 x 3</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>8</td>
<td>10.375</td>
<td>2</td>
<td>.75 x 17 x 3</td>
</tr>
</tbody>
</table>

---

**WARNING:** Do not install light pole without luminaire.
Catalog Number System
The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 20 C 5 A 3 – 01
Round Tapered Aluminum, 20’ Mounting Height, .156” Wall Thickness, 5” Butt Diameter, 3” Top Diameter, 3-Bolt Base, Satin Aluminum Finish.

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**

- **5” Butt Diameter** - 2-1/2” x 5” Handhole with curved Lap Style Aluminum Door and two (2) SS Self-Tapping Attaching Screws. A Grounding Provision is provided as part of the Handhole.
- **6” Butt Diameter** - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.
- **7”+ Butt Diameters** - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC Grounding Provision.

**Embed Detail**

Direct Buried Pole bottom section on 6”+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24” below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Mounting Designation**

- **Side Drill Mount**
  
  For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

- **Tenon Mount - Welded or Spun**
  
  For Tenon Mount applications specify both Tenon diameter (2.375”, 2.875”, 3.5”, etc.) and length (3”, 4”, etc.). Tenon style is factory option. Welded Tenon can be specified.
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

<table>
<thead>
<tr>
<th>MFG.</th>
<th>WALL</th>
<th>DIAM Device</th>
<th>BASE Style</th>
<th>SHAFT WALL TOP FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTA</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>

#### Catalog Number Example -

**RTA 30 D 8 B E - 01**

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, Direct Buried, Satin Aluminum Finish.

- **Wall Thickness**
  - B = .125”
  - C = .156”
  - D = .188”
  - E = .219”
  - F = .250”
  - G = .312”

- **Butt Diameter**
  - 5”
  - 6”
  - 7”
  - 8”
  - 9”
  - 1”

- **Top Diameter**
  - A = 3”
  - B = 4.5”
  - C = 6”

### Base Style

- E = Direct Buried

### Finish

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

**Specify Finish**

### EPA Notes:

Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

**Base Style**
- Cast Aluminum Transformer Base (T-Base) of Alloy 356-T6 with Aluminum Door and Stainless Steel Hex Head Screw. FHWA Approved Breakaway.

**Handhole**
- 6"-10" Butt Diameters - Tapered Door Opening (9-3/4" W Base x 9-1/4" W Top x 11-3/4" H) with Flush Mount Aluminum Cover and Stainless Steel Hex Head Screw. Grounding Provisions tapped 1/4"-20NC and 1/2"-13NC are provided.

**Anchorage**
- Base Anchorage includes four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10") of threaded end will be galvanized per ASTM A153.
- Top Connecting Hardware includes four (4) each 1"-8NC x 3-3/4" Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). A bolt circle template will be provided.

**Vibration Damper**
- When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Mounting Designation**
- Tenon Mount - Welded or Spun For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3", 4", etc.). Tenon style is factory option. Welded Tenon can be specified.
The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example -**

**RTA 30 D 8 B F – 01**

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Breakaway T-Base, Satin Aluminum Finish.

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Butt Diameter</th>
<th>Top Diameter</th>
<th>Base Style</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>B = .125”</td>
<td>6 = 6”</td>
<td>4.5”</td>
<td>F = T-Base</td>
<td>01 = Satin Aluminum</td>
</tr>
<tr>
<td>C = .156”</td>
<td>7 = 7”</td>
<td>6”</td>
<td>BA = Black Powder Coat</td>
<td></td>
</tr>
<tr>
<td>D = .188”</td>
<td>8 = 8”</td>
<td>8”</td>
<td>BM = Dark Bronze Powder Coat</td>
<td></td>
</tr>
<tr>
<td>E = .219”</td>
<td>9 = 9”</td>
<td>10”</td>
<td>BV = Dark Green Powder Coat</td>
<td></td>
</tr>
<tr>
<td>F = .250”</td>
<td>10”</td>
<td>10”</td>
<td>GC = Gray Powder Coat</td>
<td></td>
</tr>
</tbody>
</table>

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
Round Tapered Aluminum Pole
No Arm — Hinged Base

Pole Cap - Aluminum With Stainless Steel Screws
(Tenon Option Available - See Mounting Designation)

D Top Diameter

B Wall Thickness
Tapered Aluminum Tube
Alloy 6063-T6

A Mounting Height

Lowering Direction

Handhole 0°

Hinged Base Cross Section

C Butt Diameter

Hinged Base With Cover

RTA

The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Style
Hinged Cast Aluminum
Base Flange of Alloy
356-T6 with 2-Piece Cast Aluminum Base
Cover and Stainless Steel Tamper-Resistant Attaching Screws.

Handhole
4"-5" Butt Diameters -
2" x 4" Handhole with curved Lap Style
Aluminum Door and two (2) Stainless Steel Self-Tapping Attaching Screws.
A Grounding Provision incorporating a tapped 1/4"-20NC hole is provided.

Anchorage
Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of Threaded End will be Galvanized per ASTM A153.
Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

Mounting Designation
Side Drill Mount
For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

Tenon Mount - Welded or Spun
For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3", 4", etc.). Tenon style is factory option. Welded Tenon can be specified.

Satin Aluminum or Powder Coated Finish per Customer Specification.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
<td>7</td>
<td>9.75</td>
<td>2</td>
<td>0.75 x 17 x 3</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
<td>8.5</td>
<td>11.25</td>
<td>2</td>
<td>0.75 x 17 x 3</td>
</tr>
</tbody>
</table>

Dimensions in inches

WARNING: Do not install light pole without luminaire.
The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 20 C 5 A H – 01
Round Tapered Aluminum, 20' Mounting Height, .156" Wall Thickness, 5" Butt Diameter, 3" Top Diameter, Hinged Base, Satin Aluminum Finish.

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>BUTT DIAMETER</th>
<th>TOP DIAMETER</th>
<th>BASE STYLE</th>
<th>FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.125&quot;</td>
<td>4</td>
<td>3</td>
<td>H</td>
<td>BA</td>
</tr>
<tr>
<td>0.156&quot;</td>
<td>4</td>
<td>5</td>
<td>H</td>
<td>BA</td>
</tr>
<tr>
<td>0.188&quot;</td>
<td>4</td>
<td>7</td>
<td>H</td>
<td>BA</td>
</tr>
</tbody>
</table>

** EPA Notes: **
Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
RTA
Round Tapered Aluminum Pole
No Arm — Beehive Base

Pole Cap - Aluminum
With Stainless Steel Screws
(Tenon Option Available - See Mounting Designation)

D Top Diameter

B Wall Thickness
Tapered Aluminum Tube
Alloy 6063-T6

A Mounting Height

15-1/2”

C Butt Diameter
Beehive Base

Pole
The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Style
Bee Hive Cast
Aluminum Transformer
Base of Alloy 356-T6
with Aluminum Door and Stainless Steel Attaching Screw.

Handhole
4"-5" Butt Diameters - Contoured 7-1/2" W x 7-1/4" H
Door Opening with Flush Mount Aluminum Door (Alloy 43F) and Stainless Steel Hex Head Screw.
A Grounding Provision incorporating a 3/8" diameter hole is provided.

Anchorage
Anchorage Kit will include three (3) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of Threaded End will be Galvanized per ASTM A153.
Kits will contain three (3) Hex Nuts, three (3) Lock Washers, and three (3) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

Mounting Designation
Side Drill Mount
For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

Tenon Mount - Welded or Spun
For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3", 4", etc.). Tenon style is factory option. Welded Tenon can be specified.

Dimensions in Inches

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4 and 5</td>
<td>3</td>
<td>9</td>
<td>13.125</td>
<td>1.75</td>
<td>.75 x 17 x 3</td>
</tr>
</tbody>
</table>
Catalog Number System
The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 20 D 5 A V – 01
Round Tapered Aluminum, 20’ Mounting Height, .188” Wall Thickness, 5” Butt Diameter, 3” Top Diameter, Beehive Base, Satin Finish.

Wall Thickness
B = .125”
D = .188”

Butt Diameter
4 = 4”
5 = 5”

Top Diameter
A = 3”

Base Style
V = Beehive Base

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
**RTA**

**Round Tapered Aluminum Pole with Arms**

**Single Mast — 4-Bolt Base**

---

**J Arm Length**

2" NPS Slipfitter

(Options Available - See Accessory Specifications)

**2°**

**Arm Length**

Extruded Aluminum Pole Plate

Alloy 6063-T6 With 1/2″-13NC Stainless Steel Hardware

(Wire Hole In Shaft With 1" I. D. Rubber Grommet)

---

**D Top Diameter**

Tapered Aluminum Tube

.125" Wall Alloy 6063-T6

---

**B Wall Thickness**

Tapered Aluminum Tube

Alloy 6063-T6

---

**A Mounting Height**

---

**Handhole**

---

**C Butt Diameter**

4-Bolt Base

With Bolt Covers

---

**Satinn Aluminum or Powder Coated Finish per Customer Specification.**

---

### Dimensions in Inches

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
</tbody>
</table>

---

**Pole**

Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

---

**Base Style**

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

---

**Handhole**

6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

---

**Anchorage**

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.

Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

---

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**WARNING:** Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -

RTA 30 D 8 B 4 M 1 6 – 01

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, 4-Bolt Base, Mast Arm, Single, 6’ Arm Length, Satin Aluminum Finish.

Wall Thickness

C = .156”
D = .188”
E = .219”
F = .250”

Butt Diameter

6 = 6”
7 = 7”
8 = 8”

Top Diameter

B = 4.5”
C = 6”

Base Style

M = Mast

Arm Style

1 = Single

Arm Quantity

LTH. FINISH

4 = 4’
6 = 6’
8 = 8’
10 = 10’

A = 10’

Finish

01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.
**RTA Round Tapered Aluminum Pole with Arms**

**Single Mast — Direct Buried**

- **J Arm Length**
- **2" NPS Slipfitter** (Options Available - See Accessory Specifications)
- **Aluminum Pole Cap With S. S. Screws**
- **2'-6" Rise**
- **2°**

**D Top Diameter**

- **Tapered Aluminum Tube .125" Wall Alloy 6063-T6**
- **Elliptical Section**
- **Extruded Aluminum Pole Plate Alloy 6063-T6 With 1/2"-13NC Stainless Steel Hardware** (Wire Hole In Shaft With 1" I. D. Rubber Grommet)

**B Wall Thickness**

- **Tapered Aluminum Tube Alloy 6063-T6**

**A Mounting Height**

- **Handhole**

**C Butt Diameter**

- **Butt Diameter**
- **Ground Line**
- **Wire Access Slots - 1-3/4" x 6" 2@180°**
- **1" to 2' Flattened**

**E Embed Length**

- **3" to 6"**

**Embed Detail**

Direct Buried Pole bottom section on 6"+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24" below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Pole**

Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**

- **6" Butt Diameter** - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.
- **7"+ Butt Diameters** - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8" - 16NC Grounding Provision.

---

** WARNING:** Do not install light pole without luminaire.

---

<table>
<thead>
<tr>
<th>C Butt Dia.</th>
<th>D Top Dia</th>
<th>E Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4'</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5'</td>
</tr>
</tbody>
</table>

C and D Dimensions in inches
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B E M 1 6 – 01
Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Top Diameter, Direct Buried, Mast Arm, Single, 6' Arm Length, Satin Aluminum Finish.

Wall Thickness
C = .156"
D = .188"

Butt Diameter
6 = 6"
7 = 7"
8 = 8"

Top Diameter
B = 4.5"
C = 6"

Base Style
E = Direct Buried

Arm Style
M = Mast

Arm Quantity
1 = Single

Arm Length
4 = 4'
6 = 6'
8 = 8'

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
### RTA Round Tapered Aluminum Pole with Arms
#### Single Mast — Breakaway T-Base

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arm Length</td>
<td>2&quot;</td>
</tr>
<tr>
<td>J Arm Length</td>
<td>8&quot;</td>
</tr>
<tr>
<td>Top Diameter</td>
<td>125° Wall</td>
</tr>
<tr>
<td>G Extruded Pole</td>
<td>6063-T6</td>
</tr>
<tr>
<td>H Tapered Door</td>
<td>Opening</td>
</tr>
<tr>
<td>I 9-3/4&quot; W Base</td>
<td>x 9-1/4&quot;</td>
</tr>
<tr>
<td>J 11-3/4&quot; H</td>
<td></td>
</tr>
<tr>
<td>K Aluminum Cover</td>
<td>and</td>
</tr>
<tr>
<td>L Stainless Steel</td>
<td>Bolt</td>
</tr>
<tr>
<td>M Hex Head Screw</td>
<td></td>
</tr>
<tr>
<td>N Grounding</td>
<td>Provisions</td>
</tr>
<tr>
<td>O 1/4&quot;-20NC</td>
<td></td>
</tr>
<tr>
<td>P 1/2&quot;-13NC</td>
<td></td>
</tr>
<tr>
<td>Q 1&quot; I. D. Rubber</td>
<td></td>
</tr>
<tr>
<td>R Grommet</td>
<td></td>
</tr>
<tr>
<td>S Transformer Base</td>
<td></td>
</tr>
<tr>
<td>T Pole Cap</td>
<td></td>
</tr>
<tr>
<td>U With S. S.</td>
<td>Screws</td>
</tr>
<tr>
<td>V Satin Aluminum</td>
<td>or Powder</td>
</tr>
<tr>
<td>W Coated Finish</td>
<td>per Customer</td>
</tr>
</tbody>
</table>

#### Pole
- Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

#### Base Style
- Cast Aluminum Transformer Base (T-Base) of Alloy 356-T6 with Aluminum Door and Stainless Steel Hex Head Screw. FHWA Approved Breakaway.

#### Handhole
- 7"-10" Butt Diameters - Tapered Door Opening (9-3/4" W Base x 9-1/4" W Top x 11-3/4" H) with Flush Mount Aluminum Cover and Stainless Steel Hex Head Screw. Grounding Provisions tapped 1/4"-20NC and 1/2"-13NC are provided.

#### Anchorage
- Base Anchorage includes four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10") of threaded end will be galvanized per ASTM A153.
- Top Connecting Hardware includes four (4) each 1"-8NC x 3-3/4" Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). A bolt circle template will be provided.

#### Vibration Damper
- When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Butt Diameter</th>
<th>Arm Length</th>
<th>Finish</th>
<th>Arm Quantity</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.156&quot;</td>
<td>.188&quot;</td>
<td>6'</td>
<td>BV</td>
<td>4</td>
<td>RTA06C8BFM16-**</td>
</tr>
<tr>
<td>0.156&quot;</td>
<td>.188&quot;</td>
<td>4'</td>
<td>BV</td>
<td>4</td>
<td>RTA06C8BFM14-**</td>
</tr>
<tr>
<td>0.156&quot;</td>
<td>.188&quot;</td>
<td>8'</td>
<td>BV</td>
<td>4</td>
<td>RTA06C8BFM18-**</td>
</tr>
<tr>
<td>0.188&quot;</td>
<td>.219&quot;</td>
<td>6'</td>
<td>BV</td>
<td>4</td>
<td>RTA06C8BFM16-**</td>
</tr>
<tr>
<td>0.188&quot;</td>
<td>.219&quot;</td>
<td>4'</td>
<td>BV</td>
<td>4</td>
<td>RTA06C8BFM14-**</td>
</tr>
<tr>
<td>0.188&quot;</td>
<td>.219&quot;</td>
<td>8'</td>
<td>BV</td>
<td>4</td>
<td>RTA06C8BFM18-**</td>
</tr>
<tr>
<td>0.219&quot;</td>
<td>.219&quot;</td>
<td>6'</td>
<td>BV</td>
<td>4</td>
<td>RTA06C8BFM16-**</td>
</tr>
<tr>
<td>0.219&quot;</td>
<td>.219&quot;</td>
<td>4'</td>
<td>BV</td>
<td>4</td>
<td>RTA06C8BFM14-**</td>
</tr>
<tr>
<td>0.219&quot;</td>
<td>.219&quot;</td>
<td>8'</td>
<td>BV</td>
<td>4</td>
<td>RTA06C8BFM18-**</td>
</tr>
</tbody>
</table>

### Wall Thickness
- **C** = .156"
- **D** = .188"
- **E** = .219"

### Butt Diameter
- **7** = 7"  
- **8** = 8"  
- **9** = 9"  
- **10** = 10"

### Top Diameter
- **B** = 4.5"  
- **C** = 6"

### Base Style
- **F** = Breakaway T-Base

### Arm Style
- **M** = Mast

### Arm Quantity
- **1** = Single

### Arm Length
- **4** = 4"  
- **6** = 6"  
- **8** = 8"

### Finish
- **01** = Satin Aluminum  
- **BA** = Black Powder Coat  
- **BH** = White Powder Coat  
- **BM** = Dark Bronze Powder Coat  
- **BV** = Dark Green Powder Coat  
- **GC** = Gray Powder Coat  
- **** = Specify Finish

**EPA Notes:**
Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
RTA Round Tapered Aluminum Pole with Arms
Double Mast — 4-Bolt Base

Dimensions in Inches

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

Satin Aluminum or Powder Coated Finish per Customer Specification.

WARNING: Do not install light pole without luminaire.
<table>
<thead>
<tr>
<th>Mfg.</th>
<th>Thickness</th>
<th>Butt Diameter</th>
<th>Arm Length</th>
<th>Limit. Weight</th>
<th>Maximum EPA Per Arm</th>
<th>Old Cat. Number</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>0.156''</td>
<td>6' 4' 55</td>
<td>55</td>
<td>5.6 4.0 3.6 2.6 2.0</td>
<td>22-082</td>
<td>RTA20C6B4M24-**</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.156''</td>
<td>6' 6' 45</td>
<td>45</td>
<td>5.8 4.0 3.5 2.4 1.6</td>
<td>22-085</td>
<td>RTA20C6B4M26-**</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.156''</td>
<td>6' 8' 55</td>
<td>55</td>
<td>5.6 3.6 3.2 2.1 1.4</td>
<td>22-088</td>
<td>RTA20C6B4M28-**</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.188''</td>
<td>6' 4' 55</td>
<td>55</td>
<td>5.0 3.4 3.0 2.1 1.4</td>
<td>22-002</td>
<td>RTA20D6B4M24-**</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.188''</td>
<td>6' 6' 60</td>
<td>60</td>
<td>7.8 5.6 5.0 3.7 2.8</td>
<td>22-005</td>
<td>RTA20D6B4M26-**</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.188''</td>
<td>6' 8' 55</td>
<td>55</td>
<td>7.0 4.8 4.2 3.0 2.1</td>
<td>22-007</td>
<td>RTA20D6B4M28-**</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.156''</td>
<td>7' 6' 60</td>
<td>60</td>
<td>8.4 6.2 5.7 4.4 3.4</td>
<td>22-005</td>
<td>RTA20C7B4M26-**</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.156''</td>
<td>7' 8' 70</td>
<td>70</td>
<td>7.6 5.4 4.8 3.6 2.7</td>
<td>22-007</td>
<td>RTA20C7B4M28-**</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.188''</td>
<td>7' 6' 60</td>
<td>60</td>
<td>8.6 6.8 6.2 5.3 4.1</td>
<td>22-015</td>
<td>RTA20D7B4M26-**</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.188''</td>
<td>7' 8' 45</td>
<td>45</td>
<td>5.8 4.1 3.6 2.3 1.4</td>
<td>22-017</td>
<td>RTA20D7B4M28-**</td>
<td></td>
</tr>
</tbody>
</table>

**Catalog Number System**

The catalog number for Hapco poles utilizes the following identification system.

- **R T A** = Round Tapered Aluminum Pole With Arms
- **4 M** = 4-Bolt Base
- **2 6** = 6" Arm Style
- **3 0 0** = Double Mast

<table>
<thead>
<tr>
<th>Catalog Number Example -</th>
<th><strong>RT A 3 0 D 8 B 4 M 2 6 - 0 1</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, 4-Bolt Base, Mast Arm, Double, 6” Arm Length, Satin Aluminum Finish.</td>
<td></td>
</tr>
</tbody>
</table>

**Wall Thickness**

- C = .156”
- D = .188”
- E = .219”
- F = .250”

**Butt Diameter**

- 6 = 6”
- 7 = 7”
- 8 = 8”
- 10 = 10”

**Top Diameter**

- B = 4.5”
- C = 6”

**Base Style**

- 4 = 4-Bolt Base

**Arm Style**

- M = Mast

**Arm Quantity**

- 2 = Double

**Arm Length**

- 4 = 4’
- 6 = 6’
- 8 = 8’

**Finish**

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

**EPA Notes:**

Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
**RTA Round Tapered Aluminum Pole with Arms**

**Double Mast — Direct Buried**

**Pole**

Shaft and arms will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**

6” Butt Diameter - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

7” + Butt Diameters - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8” -16NC Grounding Provision.

**Embed Detail**

Direct Buried Pole bottom section on 6”+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24” below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**WARNING:** Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

- **RTA** - Round Tapered Aluminum Pole with Arms
- **GC** = Gray Powder Coat
- **F** = .250”
- **E** = .219”
- **C** = .156”
- **W** = Specify Finish
- **D** = 6”
- **7** = 7”
- **8** = 8”
- **M** = Mast
- **2** = Double
- **4** = 4’
- **6** = 6’
- **8** = 8’
- **A** = 10”

Wall Thickness
C = .156”
D = .188”
E = .219”
F = .250”

Butt Diameter
6 = 6”
7 = 7”
8 = 8”

Top Diameter
B = 4.5”
C = 6”

Base Style
Direct Buried

Arm Style
M = Mast

Arm Quantity
2 = Double

Arm Length
4 = 4’
6 = 6’
8 = 8’
A = 10”

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 ASHTE LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
RTA Round Tapered Aluminum Pole with Arms
Double Mast — Breakaway T-Base

A Mounting Height

B Wall Thickness
Tapered Aluminum Tube
Alloy 6063-T6

C Butt Diameter
4-Bolt Base Flange
Aluminum Alloy 356-T6
With Aluminum Bolt Covers And Stainless Steel Hex Head Screws

D Top Diameter

E Elliptical Section
Extruded Aluminum Pole Plate
Alloy 6063-T6 With 1/2"-13NC Stainless Steel Hardware
(Wire Hole In Shaft With 1" I. D. Rubber Grommet)

F Bolt Circle

G Bolt Proj.

H Bolt Size

I Bolt Proj.

J Arm Length
2" NPS Slipfitter
(Options Available - See Accessory Specifications)

Dimensions in Inches

---|---|---|---|---|---
7 | 4.5 | 12 | 13.0625 | 3.5 | 1 x 36 x 4
8 | 4.5 | 15 | 15.375 | 3.5 | 1 x 36 x 4
10 | 6 | 15 | 15.375 | 3.5 | 1 x 48 x 4

Satin Aluminum or Powder Coated Finish per Customer Specification.

WARNING: Do not install light pole without luminaire.
<table>
<thead>
<tr>
<th>Brand</th>
<th>Mfg. Hgt.</th>
<th>Wall Thickness</th>
<th>Butt Diameter</th>
<th>J Arm Length</th>
<th>Finish</th>
<th>EPA Notes:</th>
<th>Catalog Number System</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>35</td>
<td>0.156&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA35D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>0.188&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA45D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>55</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA55D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA60D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA65D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA70D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA75D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA80D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>85</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA85D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA90D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA95D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA100D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>105</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA105D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>110</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA110D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>115</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA115D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>120</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA120D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>125</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA125D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>130</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA130D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>135</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA135D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>140</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA140D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>145</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA145D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>150</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA150D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>155</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA155D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>160</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA160D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>165</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA165D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>170</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA170D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>175</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA175D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>180</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA180D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>185</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA185D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>190</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA190D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>195</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA195D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>200</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA200D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>205</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA205D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>210</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA210D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>215</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA215D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>220</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA220D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>225</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA225D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>230</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA230D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>235</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA235D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>240</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA240D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>245</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA245D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>250</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA250D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>255</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA255D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>260</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA260D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>265</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA265D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>270</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA270D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>275</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA275D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>280</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA280D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>285</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA285D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>290</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA290D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>295</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA295D8BFM28-**</td>
</tr>
<tr>
<td></td>
<td>300</td>
<td>0.219&quot;</td>
<td>8&quot;</td>
<td>8'</td>
<td>10'</td>
<td>Specifying Finish</td>
<td>RTA300D8BFM28-**</td>
</tr>
</tbody>
</table>

EPA Notes:
Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory..
**RTA Round Tapered Aluminum Pole with Arms**

**Single Truss — 4-Bolt Base**

**J Arm Length**

- Tapered Aluminum Tube
  - .125" Wall Thickness
  - Alloy 6063-T6

**D Top Diameter**

- Aluminum Pole Cap
  - With S. S. Screws

**B Wall Thickness**

- Tapered Aluminum Tube
  - .145" Wall Thickness
  - Alloy 6063-T6

**C Butt Diameter**

- 4-Bolt Base
  - With Bolt Covers

**Extruded Aluminum Tube**

- .145" Wall Thickness
  - Alloy 6063-T6

**Pole Plate Alloy 6063-T6**

- With (4) 1/2"-13NC Stainless Steel Hex Head Bolts, Hex Nuts And Lockwashers
  - (Wire Hole In Shaft With 1" I. D. Rubber Grommet)

**Pole Plate Alloy 6063-T6**

- With (2) 3/8"-16NC Stainless Steel Hex Head Bolts, Hex Nuts And Lockwashers
  - Into Aluminum Rivnuts Installed In The Shaft

**Handhole**

- 0° - 90°
  - 270°
  - 180°

**Base Style**

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

**Anchorage Kit**

- Will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.
  - Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel).
  - A bolt circle template will be provided.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Dimensions in Inches**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5 and 6</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

**WARNING:** Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B 4 T 1 A – 01
Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Truss Arm, Single, 10' Arm Length, Satin Aluminum Finish.

Wall Thickness
C = .156"
D = .188"
E = .219"
F = .250"

Butt Diameter
6 = 6"
7 = 7"
8 = 8"
10 = 10"

Top Diameter
B = 4.5"
C = 6"

Base Style
4 = 4-Bolt Base

Arm Style
T = Truss

Arm Quantity
1 = Single

Arm Length
8 = 8'
A = 10'
C = 12'
E = 15'

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
**RTA**

**Round Tapered Aluminum Pole with Arms**

**Single Truss — Direct Buried**

**Pole**
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**
7"+ Butt Diameters -
Reinforced, 4" x 6"
curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-
16NC Grounding Provision.

**Embed Detail**
Direct Buried Pole bottom section on 6"+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24" below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Table: C BUTT DIA. D TOP DIA. E EMBED**

<table>
<thead>
<tr>
<th>C BUTT DIA.</th>
<th>D TOP DIA.</th>
<th>E EMBED</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>5&quot;</td>
</tr>
<tr>
<td>8</td>
<td>4.5 and 6</td>
<td>5&quot;</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6&quot;</td>
</tr>
</tbody>
</table>

C and D Dimensions in inches

---

**WARNING:** Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B E T 1 A – 01
Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Direct Buried, Truss Arm, Single, 10’ Arm Length, Satin Aluminum Finish.

Wall Thickness
C = .156”
D = .188”
E = .219”
F = .250”

Butt Diameter
7 = 7”
8 = 8”
1 = 10”

Top Diameter
B = 4.5”
C = 6”

Base Style
E = Direct Buried

Arm Style
T = Truss

Arm Quantity
1 = Single

Arm Length
8 = 8’
A = 10’
C = 12’
E = 15’

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
## Shaft and Arm Specifications

- Tapered door opening (9-3/4" W Base x 9-1/4" W Top x 11-3/4" H) with flush mount aluminum cover and stainless steel hex head screw. Grounding provisions tapped 1/4"-20NC and 1/2"-13NC are provided.

## Anchorage

- **Base Anchorage** includes four (4) L-shaped steel anchor bolts conforming to AASHTO M314-90 Grade 55, four (4) each heavy-duty flat washers, lock washers, and hex nuts (all components galv. steel). Ten inches (10") of threaded end will be galvanized per ASTM A153.

## Pole Specifications

- **Base Style** Cast aluminum transformer base (T-Base) of alloy 356-T6 with aluminum door and stainless steel hex head screw. FHWA approved breakaway.

## Handhole

- **7"-10" Butt Diameters** - Tapered door opening (9-3/4" W Base x 9-1/4" W Top x 11-3/4" H) with flush mount aluminum cover and stainless steel hex head screw. Grounding provisions tapped 1/4"-20NC and 1/2"-13NC are provided.

## Vibration Damper

- When determined necessary by Hapco, a vibration damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

### Table: Dimensions in Inches

<table>
<thead>
<tr>
<th>C (Butt Dia.)</th>
<th>D (Top Dia.)</th>
<th>F (Bolt Circle Dia.)</th>
<th>G (Base Sq.)</th>
<th>H (Bolt Proj.)</th>
<th>I (Bolt Size)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5 and 6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>4.5 and 6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

---

**WARNING:** Do not install light pole without luminaire.
| A | Mfg. Hnt. | B | Wall Thickness | C | Butt Diameter | J | Arm Length | L | Unit Weight | 90 | Maximum EPA | 100 | 110 | 120 | 130 | Old Cat. Number | Catalog Number |
| 25 | 0.125" | 7 | 8" | 10 | 40 | 5.0 | 3.8 | 3.4 | 2.8 | 2.2 | RTA25S8BFT18** |
| 25 | 0.156" | 7 | 8" | 60 | 4.9 | 3.8 | 3.4 | 2.7 | 2.2 | RTA25C7BFT18** |
| 25 | 0.156" | 7 | 10" | 40 | 3.6 | 2.6 | 2.4 | 1.8 | 1.4 | RTA25C7BFT1A** |
| 25 | 0.188" | 7 | 8" | 60 | 4.9 | 3.8 | 3.4 | 2.7 | 2.2 | RTA25D7BFT18** |
| 25 | 0.188" | 7 | 10" | 40 | 3.6 | 2.6 | 2.4 | 1.8 | 1.4 | RTA25D7BFT1A** |
| 25 | 0.188" | 7 | 12" | 40 | 3.8 | 2.8 | 2.4 | 1.8 | 1.4 | RTA25D7BFT1C** |
| 25 | 0.219" | 8 | 8" | 60 | 4.9 | 3.8 | 3.4 | 2.7 | 2.2 | RTA25D9BFT18** |
| 25 | 0.219" | 8 | 10" | 40 | 3.6 | 2.6 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1A** |
| 25 | 0.219" | 8 | 12" | 40 | 3.8 | 2.8 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1C** |
| 25 | 0.219" | 8 | 15" | 40 | 3.8 | 2.8 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1** |
| 25 | 0.250" | 8 | 8" | 60 | 4.9 | 3.8 | 3.4 | 2.7 | 2.2 | RTA25D9BFT18** |
| 25 | 0.250" | 8 | 10" | 40 | 3.6 | 2.6 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1A** |
| 25 | 0.250" | 8 | 12" | 40 | 3.8 | 2.8 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1C** |
| 25 | 0.250" | 8 | 15" | 40 | 3.8 | 2.8 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1** |
| 25 | 0.250" | 10 | 8" | 60 | 4.2 | 3.1 | 2.7 | 2.1 | 1.6 | RTA25D9BFT18** |
| 25 | 0.250" | 10 | 10" | 40 | 3.6 | 2.6 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1A** |
| 25 | 0.250" | 10 | 12" | 40 | 3.8 | 2.8 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1C** |
| 25 | 0.250" | 10 | 15" | 40 | 3.8 | 2.8 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1** |
| 25 | 0.250" | 10 | 18" | 40 | 3.6 | 2.6 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1A** |
| 25 | 0.250" | 10 | 20" | 40 | 3.8 | 2.8 | 2.4 | 1.8 | 1.4 | RTA25D9BFT1C** |

**Catalog Number System**

The catalog number for Hapco poles utilizes the following identification system.

- **RTA** - Round Tapered Aluminum Pole With Arms
- **F** - Breakaway T-Base
- **T** - Truss Arm, Single, 10' Arm Length, satin aluminum finish
- **8** - 8" Butt Diameter, 4.5" Top Diameter
- **D** - .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Truss Arm, Single, 10' Arm Length, satin aluminum finish.
- **A** - .156" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Truss Arm, Single, 10' Arm Length, satin aluminum finish.
- **C** - .125" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Truss Arm, Single, 10' Arm Length, satin aluminum finish.
- **B** - .125" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Truss Arm, Single, 10' Arm Length, satin aluminum finish.
- **E** - .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Truss Arm, Single, 10' Arm Length, satin aluminum finish.
- **F** - .250" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Truss Arm, Single, 10' Arm Length, satin aluminum finish.

**EPA Notes:**

Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

**Catalog Number Example -**

RTA 30 D 8 B F T 1 A – 01

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Truss Arm, Single, 10' Arm Length, Satin Aluminum Finish.

**Wall Thickness**

- B = .125"
- C = .156"
- D = .188"
- E = .219"
- F = .250"

**Butt Diameter**

- 7 = 7"
- 8 = 8"
- 9 = 10"

**Top Diameter**

- 8 = 8"
- B = 4.5"
- C = 6"

**Base Style**

- T = Breakaway T-Base

**Arm Style**

- T = Truss

**Arm Quantity**

- 1 = Single

**Arm Length**

- 8 = 8"
- A = 10"
- C = 12"
- E = 15"

**Finish**

- 01 = satin aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = dark bronze powder coat
- BV = dark green powder coat
- GC = Gray Powder Coat
- ** = Specify Finish

www.hapco.com
RTA

Round Tapered Aluminum Pole with Arms
Double Truss — 4-Bolt Base

**Pole**
Shaft and arms will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

**Base Style**
4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

**Handhole**
7”+ Butt Diameters - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC grounding provision.

**Anchorage**
Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Dimensions in Inches**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5 and 6</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

Satin Aluminum or Powder Coated Finish per Customer Specification.

**WARNING:** Do not install light pole without luminaire.
## Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

<table>
<thead>
<tr>
<th>WALL THICKNESS</th>
<th>TOP DIA.</th>
<th>ARM STYLE</th>
<th>ARM QUANT.</th>
<th>FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>8</td>
<td>10</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

### Catalog Number Example - RTA 30 D 8 B 4 T 2 A - 01
Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Truss Arm, Double, 10' Arm Length, Satin Aluminum Finish.

## Wall Thickness
- C = .156"
- D = .188"
- E = .219"
- F = .250"

## Butt Diameter
- 7 = 7"
- 8 = 8"
- 10 = 10"

## Top Diameter
- B = 4.5"
- C = 6"

## Base Style
- 4 = 4-Bolt Base

## Arm Style
- T = Truss

## Arm Quantity
- 2 = Double

## Arm Length
- 8 = 8'
- A = 10'
- C = 12'
- E = 15'

## Finish
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

** = Specify Finish

---

### EPA Notes:
Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

---

**www.hapco.com**

47
Round Tapered Aluminum Pole with Arms — Direct Buried

Shaft and arms will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**

7"+ Butt Diameters -
Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

**Embed Detail**

Direct Buried Pole bottom section on 6"+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24" below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Specifications**

<table>
<thead>
<tr>
<th>C Butt Dia.</th>
<th>D Top Dia.</th>
<th>E Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>8</td>
<td>4.5 and 6</td>
<td>5'</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6'</td>
</tr>
</tbody>
</table>

C and D Dimensions in Inches
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example - RTA 30 D 8 B E T 2 A – 01
Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, Direct Buried, Truss Arm, Double, 10’ Arm Length, Satin Aluminum Finish.

Wall Thickness

- C = .156”
- D = .188”
- E = .219”
- F = .250”

Butt Diameter

- 7 = 7”
- 8 = 8”
- 1 = 10”

Top Diameter

- B = 4.5”
- C = 6”

Base Style

- E = Direct Buried

Arm Style

- T = Truss

Arm Quantity

- 2 = Double

Arm Length

- 8 = 8’
- A = 10’
- C = 12’
- E = 15’

Finish

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

** = Specify Finish

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

**Catalog Number System**

**RTA - Round Tapered Aluminum Pole with Arms**

**Direct Buried**

**Double Truss**

RTA - Round Tapered Aluminum Pole with Arms

Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example - RTA 30 D 8 B E T 2 A – 01
Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, Direct Buried, Truss Arm, Double, 10’ Arm Length, Satin Aluminum Finish.

Wall Thickness

- C = .156”
- D = .188”
- E = .219”
- F = .250”

Butt Diameter

- 7 = 7”
- 8 = 8”
- 1 = 10”

Top Diameter

- B = 4.5”
- C = 6”

Base Style

- E = Direct Buried

Arm Style

- T = Truss

Arm Quantity

- 2 = Double

Arm Length

- 8 = 8’
- A = 10’
- C = 12’
- E = 15’

Finish

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

** = Specify Finish

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

**Catalog Number System**

**RTA - Round Tapered Aluminum Pole with Arms**

**Direct Buried**

**Double Truss**

RTA - Round Tapered Aluminum Pole with Arms

Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example - RTA 30 D 8 B E T 2 A – 01
Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, Direct Buried, Truss Arm, Double, 10’ Arm Length, Satin Aluminum Finish.

Wall Thickness

- C = .156”
- D = .188”
- E = .219”
- F = .250”

Butt Diameter

- 7 = 7”
- 8 = 8”
- 1 = 10”

Top Diameter

- B = 4.5”
- C = 6”

Base Style

- E = Direct Buried

Arm Style

- T = Truss

Arm Quantity

- 2 = Double

Arm Length

- 8 = 8’
- A = 10’
- C = 12’
- E = 15’

Finish

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

** = Specify Finish

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
### RTA
**Round Tapered Aluminum Pole with Arms**
**Double Truss — Breakaway T-Base**

**Dimensions in Inches**

**A Mounting Height**
- 3'-3" Rise
- 2" NPS Slip/fitter

**B Wall Thickness**
- Tapered Aluminum Tube Alloy 6063-T6

**C Butt Diameter**
- 7"-10" Butt Diameters — Tapered Door Opening
- (9-3/4" W Base x 9-1/4" W Top x 11-3/4" H) with Flush Mount Aluminum Cover and Stainless Steel Hex Head Screw. Grounding Provisions tapped 1/4"-20NC and 1/2"-13NC are provided.

**D Top Diameter**
- Extruded Aluminum Tube .145" Wall Thickness Alloy 6063-T6

**J Arm Length**
- Tapered Aluminum Tube .125" Wall Thickness Alloy 6063-T6

**Extruded Aluminum Tube**
- .145" Wall Thickness
- Pole Plate Alloy 6063-T6 With (4) 1/2"-13NC Stainless Steel Hex Head Bolts, Hex Nuts And Lockwashers (Wire Hole In Shaft With 1" I. D. Rubber Grommet)

**Pole Plate Alloy 6063-T6 With (2) 3/8"-16NC Stainless Steel Hex Head Bolts, Hex Nuts And Lockwashers Into Aluminum Rivnuts Installed In The Shaft**

**C But Diameter**
- 4-Bolt Base Flange Aluminum Alloy 356-T6 With Aluminum Bolt Covers And Stainless Steel Hex Head Screws

**Transformer Base**
- FHWA Approved Breakaway

**Base Anchorage includes**
- Four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10") of threaded end will be galvanized per ASTM A153.

**Top Connecting Hardware includes**
- Four (4) each 1"-8NC x 3-3/4" Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). A bolt circle template will be provided.

**Anchorage**
- Handhole

**Pole**
- Shaft and arms will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

**Base Style**
- Cast Aluminum Transformer Base (T-Base) of Alloy 356-T6 with Aluminum Door and Stainless Steel Hex Head Screw. FHWA Approved Breakaway.

**Handhole**
- 7" - 10" Butt Diameters — Tapered Door Opening
- (9-3/4" W Base x 9-1/4" W Top x 11-3/4" H) with Flush Mount Aluminum Cover and Stainless Steel Hex Head Screw.

**Anchorage**
- Pole Anchorage includes four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10") of threaded end will be galvanized per ASTM A153.

**Top Connecting Hardware includes**
- Four (4) each 1"-8NC x 3-3/4" Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). A bolt circle template will be provided.

**Vibration Damper**
- When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.
The catalog number for Hapco poles utilizes the following identification system.

Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

- **RTA** - Round Tapered Aluminum Pole With Arms
- **W** - Wall Thickness
- **D** - Diameter
- **B** - Breakaway T-Base
- **T** - Truss Arm Style
- **F** - Finish
- **L** - Length
- **A** - Arm Length

**Wall Thickness**
- C = .156" (Standard)
- D = .188" (Standard)
- E = .219" (Standard)
- F = .250" (Standard)
- G = .312" (Standard)

**Butt Diameter**
- 7" = 7"
- 8" = 8"
- 10" = 10"

**Top Diameter**
- B = 4.5"
- C = 6"

**Base Style**
- F = Breakaway T-Base

**Arm Style**
- T = Truss

**Arm Quantity**
- D = Double

**Arm Length**
- 8" = 8"
- A = 10"
- C = 12"
- E = 15"

**Finish**
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

**EPA Notes:**
Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 ASHTO LT-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.
### Round Tapered Aluminum Pole with Arms
**Single Davit — 4-Bolt Base**

**Shaft and Arm**
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

**Base Style**
- 4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

**Handhole**
- 6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.
- 7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

**Anchorage**
Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Dimensions in Inches**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

---

**WARNING:** Do not install light pole without luminaire.
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

**RTA** - Round Tapered Aluminum Pole with Arms

<table>
<thead>
<tr>
<th>RTA</th>
<th>4</th>
<th>D</th>
<th>1</th>
<th>6</th>
<th>0</th>
<th>1</th>
</tr>
</thead>
</table>

**RTA** - Catalog Number

- **R** = Round Tapered
- **T** = Aluminum
- **A** = Pole with Arms

**4** - 4-Bolt Base

**D** - Davit Arm, Single, 6" Arm Length, Satin Aluminum Finish

**1** - 6' Arm Length

**6** - Top Diameter

**0** - Wall Thickness

**1** - 7/8" Wall Thickness

**6** - Butted Diameter

**1** - 4" Butted Diameter

**A** - 10" Diameter

**1** - Single

**E** - .156" Wall Thickness

**F** - .125" Wall Thickness

**C** - .188" Wall Thickness

**G** - .219" Wall Thickness

**H** - .250" Wall Thickness

**A** = Black Powder Coat

**B** = Satin Aluminum

**C** = .125" Finish

**D** = .156" Finish

**E** = .188" Finish

**F** = .219" Finish

**G** = .250" Finish

### Catalog Number Example

- **RTA 30 D 8 B 4 D 1 6 - 01**

- **Wall Thickness**
  - C = .156"
  - D = .188"
  - E = .219"
  - F = .250"

- **Butt Diameter**
  - 6" = 6"
  - 7" = 7"
  - 8" = 8"
  - 10" = 10"

- **Top Diameter**
  - B = 4.5"
  - C = 6"

- **Base Style**
  - 4 = 4-Bolt Base

- **Arm Style**
  - D = Davit

- **Arm Quantity**
  - 1 = Single

- **Arm Length**
  - A = 10`

- **Finish**
  - 01 = Satin Aluminum
  - BA = Black Powder Coat
  - BH = White Powder Coat
  - BM = Dark Bronze Powder Coat
  - BV = Dark Green Powder Coat
  - GC = Gray Powder Coat

**EPA Notes:**

Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.
**RTA**

**Round Tapered Aluminum Pole with Arms**

**Single Davit — Direct Buried**

- **A Mounting Height**
- **B Wall Thickness**
  - Tapered Aluminum Tube
  - Alloy 6063-T6
- **C Butt Diameter**
- **D Top Diameter**
- **E Embed Length**
- **J Arm Length**
- **K Bend Radius**
- 0.188" Arm Wall Thickness
  - Aluminum Alloy 6063-T6
- 2" NPS Slipfitter
  - (Options Available - See Accessory Specifications)
- 1/2"-13NC S. S. Lockbolt
- Flush Joint

**Handhole**

- **6" Butt Diameter** - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.
- **7"+ Butt Diameters** - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

**Embed Detail**

- Direct Buried Pole
  - bottom section on 6" + butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24" below ground line.
  - Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of job site soil conditions.

**Vibration Damper**

- When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.**

**WARNING:** Do not install light pole without luminaire.
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

```
RTA 30 D 8 B E D 16 - 01
```

**Wall Thickness**
- C = .156"
- D = .188"
- E = .219"
- F = .250"

**Butt Diameter**
- 6" = 8'
- 7" = 8'
- 8" = 8'

**Top Diameter**
- B = 4.5"

**Base Style**
- E = Direct Buried

**Arm Style**
- D = Davit

**Arm Quantity**
- 1 = Single

**Arm Length**
- 4" = 4'
- 6" = 6'
- 8" = 8'
- A = 10'

**Finish**
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

### EPA Notes

Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory...

### Table

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Dimensions</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTA060BED14**</td>
<td>6' Arm</td>
<td>.188&quot; Wall Thickness, 8&quot; Butt Diameter, 4.5&quot; Top Diameter, Direct Buried, Davit Arm, Single, 6’ Arm Length, Satin Aluminum Finish.</td>
</tr>
<tr>
<td>RTA080BED16**</td>
<td>8' Arm</td>
<td>.156&quot; Wall Thickness, 8&quot; Butt Diameter, 4.5&quot; Top Diameter, Direct Buried, Davit Arm, Single, 8’ Arm Length, Satin Aluminum Finish.</td>
</tr>
<tr>
<td>RTA100BED18**</td>
<td>10' Arm</td>
<td>.125&quot; Wall Thickness, 8&quot; Butt Diameter, 4.5&quot; Top Diameter, Direct Buried, Davit Arm, Single, 10’ Arm Length, Satin Aluminum Finish.</td>
</tr>
</tbody>
</table>

**Maximum EPA:**

<table>
<thead>
<tr>
<th>Maximum EPA</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.2</td>
<td>6' Arm</td>
</tr>
<tr>
<td>12.0</td>
<td>8' Arm</td>
</tr>
<tr>
<td>15.1</td>
<td>10' Arm</td>
</tr>
</tbody>
</table>

**Catalog Number Example:**

RTA 30 D 8 B E D 16 - 01

**Wall Thickness:**
- C = .156"  
- D = .188"  
- E = .219"  
- F = .250"

**Butt Diameter:**
- 6" = 8'  
- 7" = 8'  
- 8" = 8'

**Top Diameter:**
- B = 4.5"

**Base Style:**
- E = Direct Buried

**Arm Style:**
- D = Davit

**Arm Quantity:**
- 1 = Single

**Arm Length:**
- 4" = 4'  
- 6" = 6'  
- 8" = 8'

**A = 10’**

**Finish:**
- 01 = Satin Aluminum  
- BA = Black Powder Coat  
- BH = White Powder Coat  
- BM = Dark Bronze Powder Coat  
- BV = Dark Green Powder Coat  
- GC = Gray Powder Coat  
- ** = Specify Finish

**EPA Notes:**

Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory...
RTA
Round Tapered Aluminum Pole with Arms
Single Davit — Breakaway T-Base

J Arm Length

K Bend Radius
2" NPS Slipfitter
(Options Available - See Accessory Specifications)

.188" Arm Wall Thickness
Aluminum Alloy 6063-T6

1/2"-13NC S. S. Lockbolt

Flush Joint

B Wall Thickness
Tapered Aluminum Tube
Alloy 6063-T6

C Butt Diameter
4-Bolt Base Flange
Aluminum Alloy 356-T6
With Aluminum Bolt Covers And Stainless Steel Hex Head Screws

D Top Diameter

Transformer Base
FHWA Approved Breakaway

Satın Aluminum or Powder Coated Finish per Customer Specification.

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

Dimensions in Inches
Catalog Number System
The catalog number for Hapco poles utilizes the following identification system.

```
RTA | WALL THICK. | BUTT | BASE STYLE | ARM QUANT. | FINISH
----|-------------|------|------------|------------|-------
30   | 0.156''     | 8    | 4'         | 6'         | 35    
35   | 0.156''     | 8    | 6'         | 8'         | 35    
40   | 0.156''     | 8    | 8'         | 10'        | 35    
45   | 0.156''     | 10   | 4'         | 5'         | 35    
50   | 0.156''     | 10   | 6'         | 7'         | 35    
55   | 0.156''     | 10   | 8'         | 9'         | 35    
60   | 0.156''     | 10   | 10'        | 11'        | 35    
```

**Wall Thickness**
- C = .156''
- D = .188''
- E = .219''
- F = .250''

**Butt Diameter**
- 7 = 7''
- 8 = 8''
- 11 = 10''

**Top Diameter**
- B = 4.5''
- C = 6''

**Base Style**
- F = Breakaway T-Base

**Arm Style**
- D = Davit

**Arm Quantity**
- 1 = Single

**Arm Length**
- 4 = 4'
- 6 = 6'
- 7 = 7'
- 8 = 8'
- A = 10'

**Finish**
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

**EPA Notes:**
Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.
RTA Round Tapered Aluminum Pole with Arms
Double Davit — 4-Bolt Base

WARNING: Do not install light pole without luminaire.

Pole
Shaft and arms will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Style
4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

Handhole
6” Butt Diameter - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

7”+ Butt Diameters - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC Grounding Provision.

Anchorage
Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

<table>
<thead>
<tr>
<th>J</th>
<th>Arm Length</th>
<th>K</th>
<th>Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>4’</td>
<td>3’</td>
<td>6’</td>
<td>3’</td>
</tr>
<tr>
<td>8’</td>
<td>5’</td>
<td>10’</td>
<td>5’</td>
</tr>
</tbody>
</table>

Dimensions in inches

Satin Aluminum or Powder Coated Finish per Customer Specification.
<table>
<thead>
<tr>
<th>Diameter (in.)</th>
<th>Arm Length (ft)</th>
<th>Round Tapered Aluminum Pole With Arms</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.156&quot;</td>
<td>6</td>
<td>42-031 R 30 D 8 B 4 D 26 - **</td>
</tr>
<tr>
<td>0.188&quot;</td>
<td>6</td>
<td>42-035 R 30 D 8 B 4 D 24 - **</td>
</tr>
<tr>
<td>0.219&quot;</td>
<td>6</td>
<td>42-039 R 30 D 8 B 4 D 22 - **</td>
</tr>
<tr>
<td>0.250&quot;</td>
<td>6</td>
<td>42-043 R 30 D 8 B 4 D 20 - **</td>
</tr>
<tr>
<td>0.250&quot;</td>
<td>4</td>
<td>42-051 R 30 D 8 B 4 D 18 - **</td>
</tr>
<tr>
<td>0.250&quot;</td>
<td>8</td>
<td>42-057 R 30 D 8 B 4 D 24 - **</td>
</tr>
<tr>
<td>0.250&quot;</td>
<td>10</td>
<td>42-063 R 30 D 8 B 4 D 22 - **</td>
</tr>
<tr>
<td>0.250&quot;</td>
<td>10</td>
<td>42-067 R 30 D 8 B 4 D 20 - **</td>
</tr>
</tbody>
</table>

**Catalog Number System**

The catalog number for Hapco poles utilizes the following identification system.

- **RTA** - Round Tapered Aluminum Pole With Arms
- **C** - .156" Diameter
- **D** - .188" Diameter
- **2** - Double Diameter
- **B** - Butt Diameter
- **4** - 4-Bolt Base
- **D** - Davit Arm
- **A** - 6" Arm Length

**Catalog Number Example**

- **RTA30D8B4D26-**
- **RTA25D6B4D24-**
- **RTA20D6B4D28-**

**EPA Notes**

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 ASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the maximum EPA, if weight is exceeded, or if other design life or code is required, please consult the factory.

**EPA Notes**

40

**Note:**

- **M** - Mounting
- **H** - Height
- **B** - Butt Diameter
- **D** - Davit Arm
- **A** - Arm Length
- **L** - Lavato Arm

**Wall Thickness**

- **C** = .156" Diameter
- **D** = .188" Diameter
- **E** = .219" Diameter
- **F** = .250" Diameter

**Butt Diameter**

- B = 6" Diameter
- 7 = 7" Diameter
- 8 = 8" Diameter
- 10 = 10" Diameter

**Top Diameter**

- B = 4.5" Diameter
- C = 6" Diameter

**Base Style**

- 4 = 4-Bolt Base

**Arm Style**

- D = Davit Arm

**Arm Quantity**

- 2 = Double Arm

**Arm Length**

- 4 = 4' Arm Length
- 6 = 6' Arm Length
- 8 = 8' Arm Length
- 10 = 10' Arm Length
**RTA**

Round Tapered Aluminum Pole with Arms
Double Davit — Direct Buried

- **Arm Length (J)**
- **Bend Radius (K)**
- **Top Diameter (D)**
- **Wall Thickness (B)**
- **Butt Diameter (C)**
- **Embed Length (E)**

**Handhole**
- 6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.
- 7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

**Embed Detail**
Direct Buried Pole bottom section on 6"+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24" below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Shaft and arms will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.**

<table>
<thead>
<tr>
<th>Butt Dia. (C)</th>
<th>Top Dia. (D)</th>
<th>Embed (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4'</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5'</td>
</tr>
</tbody>
</table>

C and D Dimensions in Inches

**WARNING:** Do not install light pole without luminaire.
The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B E D 2 6 – 01
Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Direct Buried, Davit Arm, Double, 6' Arm Length, Satin Aluminum Finish.

**EPA Notes:**
Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

**Wall Thickness**
C = .156"
D = .188"
E = .219"
F = .250"

**Butt Diameter**
6 = 6"
7 = 7"
8 = 8"

**Top Diameter**
B = 4.5"
C = 6.7"
D = 4.8"
E = 3.6"
F = 2.7"

**Top Diameter**
A = 10'

**Finish**
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
**RTA**

**Round Tapered Aluminum Pole with Arms**

**Double Davit — Breakaway T-Base**

- **C Butt Diameter**
  - 4-Bolt Base Flange
  - Aluminum Alloy 356-T6
  - With Aluminum Bolt Covers and Stainless Steel Hex Head Screws

- **D Top Diameter**
  - 1-5/8" Arm Wall Thickness
  - Tapered Aluminum Tube
  - Alloy 6063-T6

- **E Wall Thickness**
  - 1/2"-13NC S. S. Lockbolt

- **F Base Circle Diameter**
  - 1-1/2" O.D.

- **G Base Size**
  - 4-1/2" O.D.

- **H Bolt Proj.**
  - 2" NPS Slipfitter

- **I Bolt Size**
  - (Options Available - See Accessory Specifications)

- **J Arm Length**
  - 3°

- **K Bend Radius**
  - 2°

- **L Anchor Bolt**
  - 1/4"-20NC and 1/2"-13NC

- **M Bolt Circle**
  - 1/4"-20NC and 1/2"-13NC

- **N Bolt Projection**
  - 1/4"-20NC and 1/2"-13NC

- **O Handhole**
  - 0° - 90° - 270° - 180°

- **P Pole**
  - Shaft and arms will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

- **Q Base Style**
  - Cast Aluminum Transformer Base (T-Base) of Alloy 356-T6 with Aluminum Door and Stainless Steel Hex Head Screw. FHWA Approved Breakaway.

- **R Handhole**
  - 7"-10" Butt Diameters - Tapered Door Opening
  - (9-3/4" W Base x 9-1/4" W Top x 11-3/4" H) with Flush Mount Aluminum Cover and Stainless Steel Hex Head Screw.
  - Grounding Provisions tapped 1/4"-20NC and 1/2"-13NC are provided.

- **S Anchorage**
  - Base Anchorage includes four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10") of threaded end will be galvanized per ASTM A153.
  - Top Connecting Hardware includes four (4) each 1"-8NC x 3-3/4" Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel).
  - A bolt circle template will be provided.

- **T Vibration Damper**
  - When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

<table>
<thead>
<tr>
<th>C BUTT DIA.</th>
<th>D TOP DIA.</th>
<th>F BOLT CIR. DIA.</th>
<th>G BASE SQ.</th>
<th>H BOLT PROJ.</th>
<th>I BOLT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

Dimensions in inches

**WARNING:** Do not install light pole without luminaire.
The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example -**

RTA 30 D 8 B F D 2 6 – 01

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Breakaway T-Base, Davit Arm, Double, 6’ Arm Length, Satin Aluminum Finish.

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Butt Diameter</th>
<th>Top Diameter</th>
<th>Base Style</th>
<th>Arm Style</th>
<th>Arm Quantity</th>
<th>Arm Length</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>.156”</td>
<td>7”</td>
<td>4”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.188”</td>
<td>7”</td>
<td>6”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.219”</td>
<td>8”</td>
<td>8”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.250”</td>
<td>8”</td>
<td>10”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.219”</td>
<td>8”</td>
<td>10’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.250”</td>
<td>8”</td>
<td>8”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.250”</td>
<td>8”</td>
<td>6”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.250”</td>
<td>8”</td>
<td>4”</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>.250”</td>
<td>8”</td>
<td>10’</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**WALL THICKNESS**

- C = .156”
- D = .188”
- E = .219”
- F = .250”

**BUTT DIAMETER**

- 7 = 7”
- 8 = 8”
- 1 = 10”

**TOP DIAMETER**

- B = 4.5”

**BASE STYLE**

- F = Breakaway T-Base

**ARM STYLE**

- D = Davit

**ARM QUANTITY**

- 2 = Double

**ARM LENGTH**

- 4’
- 6’
- 8’
- 10’

**FINISH**

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LT-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
Round Tapered Aluminum Pole with Arms
Single Cross Arm — 4-Bolt Base

**Wall Thickness**
Tapered Aluminum Tube
Alloy 6063-T6

**Butt Diameter**

4-Bolt Base
With Bolt Covers

**Top Diameter**

Round Tapered Aluminum Pole with Arms
Single Cross Arm — 4-Bolt Base

**Anchorage**

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.

Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 up to .250&quot;</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .112&quot; +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12&quot;</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

*Two-Piece Pole Design*  Dimensions in inches

**Shaft**
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

**Base Style**
4-Bolt Cast Aluminum
Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

**Handhole**

6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the handhole.

7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

SATIN ALUMINUM OR POWDER COATED FINISH PER CUSTOMER SPECIFICATION.
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example -**

```
RTA 30 D 8 B 4 F 1 0 – 01
```

- **Round Tapered Aluminum, 30' Mounting Height,**
- **.188'' Wall Thickness,**
- **8'' Butt Diameter,**
- **4.5'' Top Diameter,**
- **4-Bolt Base,**
- **Cross Arm,**
- **Single,**
- **No Arm Length,**
- **Satin Aluminum Finish.**

### Wall Thickness

- C = .156''
- D = .188''
- E = .219''
- F = .250''
- G = .312''
- H = .375''

### Butt Diameter

- 6 = 6''
- 7 = 7''
- 8 = 8''
- 10 = 10''

### Top Diameter

- B = 4.5''
- C = 6''

### Base Style

- 4 = 4-Bolt Base

### Arm Style

- F = Cross Arm

### Arm Quantity

- 1 = Single

### Arm Length

- 0 = Standard Removable Tenon

### Finish

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

**Note:** *RTA* = Round Tapered Aluminum Pole with Arms.
**RTA**

**Round Tapered Aluminum Pole with Arms**

**Single Cross Arm — Direct Buried**

**Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.**

**Handhole**

**6” Butt Diameter** - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

**7”+ Butt Diameters** - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC Grounding Provision.

**Embed Detail**

Direct Buried Pole bottom section on 6”+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24” below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Table:**

<table>
<thead>
<tr>
<th>C Butt Dia.</th>
<th>D Top Dia.</th>
<th>E Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4’</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6’</td>
</tr>
</tbody>
</table>

C and D Dimensions in Inches.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B E F 10 – 01
Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Direct Buried, Cross Arm, Single, No Arm Length, Satin Aluminum Finish.

Wall Thickness
- C = .156”
- D = .188”
- E = .219”
- F = .250”
- G = .312”

Butt Diameter
- 6 = 6”
- 7 = 7”
- 8 = 8”
- 1 = 10”

Top Diameter
- B = 4.5”
- C = 6”

Base Style
- E = Direct Buried

Arm Style
- F = Cross Arm

Arm Quantity
- 1 = Single

Arm Length
- 0 = Standard Removable Tenon

Finish
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
RTA  Round Tapered Aluminum Pole with Arms
Single Cross Arm — Breakaway T-Base

A Mounting Height
B Wall Thickness
C Butt Diameter
D Top Diameter

4" Top Diameter
Single Cross Arm
Removable Tenon - 2" NPS Sch. 40 Pipe
Aluminum Alloy 6063-T6
Stainless Steel Hardware Included

D Top Diameter

C Butt Diameter
4-Bolt Base Flange
Aluminum Alloy 356-T6
With Aluminum Bolt Covers And Stainless Steel Hex Head Screws

Transformer Base
FHWA Approved Breakaway

Saturn Aluminum or Powder Coated Finish per Customer Specification.


<table>
<thead>
<tr>
<th>7</th>
<th>4.5</th>
<th>12</th>
<th>13.0625</th>
<th>3.5</th>
<th>1 x 36 x 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

Dimensions in inches

WARNING: Do not install light pole without luminaire.

Pole
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Style
Cast Aluminum Transformer Base (T-Base) of Alloy 356-T6 with Aluminum Door and Stainless Steel Hex Head Screw. FHWA Approved Breakaway.

Handhole
7”-10” Butt Diameters -
Tapered Door Opening
(9-3/4" W Base x 9-1/4"
W Top x 11-3/4" H) with
Flush Mount Aluminum
Cover and Stainless Steel
Hex Head Screw.
Grounding Provisions
tapped 1/4”-20NC and
1/2”-13NC are provided.

Anchorage
Base Anchorage includes four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10”) of threaded end will be galvanized per ASTM A153.

Top Connecting Hardware includes four (4) each 1”-8NC x 3-3/4” Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). A bolt circle template will be provided.

Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

www.hapco.com
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -

RTA 30 D 8 B F F 1 0 – 01

Round Tapered Aluminum, 30' Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Breakaway T-Base, Cross Arm, Single, No Arm Length, Satin Aluminum Finish.

Wall Thickness

D = .188”
E = .219”
F = .250”

Butt Diameter

7 = 7”
8 = 8”
1 = 10”

Top Diameter

B = 4.5”
C = 6”

Base Style

F = Breakaway T-Base

Arm Style

F = Cross Arm

Arm Quantity

1 = Single

Arm Length

0 = Standard Removable Tenon

Finish

01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:

Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
**RTA**

**Round Tapered Aluminum Pole with Arms**

**Double Cross Arm — 4-Bolt Base**

- **A Mounting Height**: Tapered Aluminum Tube
  - Alloy 6063-T6
  - Stainless Steel Hardware Included

- **B Wall Thickness**: Tapered Aluminum Tube
  - Alloy 6063-T6

- **C Butt Diameter**: 4-Bolt Base
  - With Bolt Covers

- **D Top Diameter**: Double Cross Arm - 180°
  - Arm and Tenons - 2" NPS Sch. 40 Pipe
  - Aluminum Alloy 6063-T6

---

**Dimensions in Inches**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5 and 6</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 Up to .250&quot;</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312&quot; +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12&quot;</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

*Two-Piece Pole Design*

---

**Pole**

Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

**Base Style**

- 4-Bolt Cast Aluminum
  - Base Flange of Alloy
  - 356-T6 with Aluminum
  - Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

**Handhole**

- 6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

- 7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

**Anchorage**

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.

Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**WARNING:** Do not install light pole without luminaire.
Catalog Number System
The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B 4 F 2 0 – 01
Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, 4-Bolt Base, Cross Arm, Double, Standard Arm Length, Satin Aluminum Finish.

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Butt Diameter</th>
<th>Top Diameter</th>
<th>Base Style</th>
<th>Arm Style</th>
<th>Arm Quantity</th>
<th>Arm Length</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.156”</td>
<td>6</td>
<td>45</td>
<td>4-Bolt</td>
<td>Cross</td>
<td>Double</td>
<td>Standard</td>
<td>Satin</td>
</tr>
<tr>
<td>0.188”</td>
<td>6</td>
<td>60</td>
<td>4-Bolt</td>
<td>Cross</td>
<td>Double</td>
<td>Standard</td>
<td>Black</td>
</tr>
<tr>
<td>0.156”</td>
<td>7</td>
<td>80</td>
<td>4-Bolt</td>
<td>Cross</td>
<td>Double</td>
<td>Standard</td>
<td>White</td>
</tr>
<tr>
<td>0.188”</td>
<td>7</td>
<td>100</td>
<td>4-Bolt</td>
<td>Cross</td>
<td>Double</td>
<td>Standard</td>
<td>Bronze</td>
</tr>
<tr>
<td>0.188”</td>
<td>8</td>
<td>100</td>
<td>4-Bolt</td>
<td>Cross</td>
<td>Double</td>
<td>Standard</td>
<td>Green</td>
</tr>
<tr>
<td>0.188”</td>
<td>8</td>
<td>100</td>
<td>4-Bolt</td>
<td>Cross</td>
<td>Double</td>
<td>Standard</td>
<td>Gray</td>
</tr>
</tbody>
</table>

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.
Round Tapered Aluminum Pole with Arms
Double Cross Arm — Direct Buried

**Pole**
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**
6” Butt Diameter - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

**Embed Detail**
Direct Buried Pole bottom section on 6”+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24” below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Dimensions**

<table>
<thead>
<tr>
<th>C BUTT DIA.</th>
<th>D TOP DIA.</th>
<th>E EMBED</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4’</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6’</td>
</tr>
</tbody>
</table>

C and D Dimensions in inches

---

WARNING: Do not install light pole without luminaire.
**Catalog Number System**

The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example** -

RTA 30 D 8 B E F 20 – 01

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, Direct Buried, Cross Arm, Double, Standard Arm Length, Satin Aluminum Finish.

<table>
<thead>
<tr>
<th>Mounting Height</th>
<th>Wall Thickness</th>
<th>Butt Diameter</th>
<th>Top Diameter</th>
<th>Base Style</th>
<th>Arm Style</th>
<th>Arm Quantity</th>
<th>Arm Length</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>0.156&quot;</td>
<td>6</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.188&quot;</td>
<td>6</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.156&quot;</td>
<td>7</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.188&quot;</td>
<td>7</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.188&quot;</td>
<td>7</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.188&quot;</td>
<td>7</td>
<td>95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.188&quot;</td>
<td>8</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.19&quot;</td>
<td>8</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.25&quot;</td>
<td>8</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.188&quot;</td>
<td>7</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.156&quot;</td>
<td>8</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.188&quot;</td>
<td>8</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.219&quot;</td>
<td>8</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.25&quot;</td>
<td>8</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.188&quot;</td>
<td>8</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.219&quot;</td>
<td>8</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.25&quot;</td>
<td>8</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0.188&quot;</td>
<td>7</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0.219&quot;</td>
<td>7</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0.25&quot;</td>
<td>7</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Wall Thickness**
- C = .156"
- D = .188"
- E = .219"
- F = .250"
- G = .312"

**Butt Diameter**
- 6 = 6"
- 7 = 7"
- 8 = 8"
- 9 = 10"

**Top Diameter**
- B = 4.5"
- C = 6"

**Base Style**
- E = Direct Buried

**Arm Style**
- F = Cross Arm

**Arm Quantity**
- 2 = Double

**Arm Length**
- 0 = Standard Length

**Finish**
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

**EPA Notes:**
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
Round Tapered Aluminum Pole with Arms
Double Cross Arm — Breakaway T-Base

**Dimensions in Inches**

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

**WARNING:** Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -

\[ \text{RTA 30 D 8 B F F 2 0 – 01} \]

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Cross Arm, Double, Standard Arm Length, Satin Aluminum Finish.

### Wall Thickness

- **D** = .188"
- **E** = .219"
- **F** = .250"

### Butt Diameter

- **7** = 7"
- **8** = 8"
- **10** = 10"

### Top Diameter

- **B** = 4.5"
- **C** = 6"

### Base Style

- **F** = Breakaway T-Base

### Arm Style

- **F** = Cross Arm

### Arm Quantity

- **2** = Double

### Arm Length

- **0** = Standard Length

### Finish

- **01** = Satin Aluminum
- **BA** = Black Powder Coat
- **BH** = White Powder Coat
- **BM** = Dark Bronze Powder Coat
- **BV** = Dark Green Powder Coat
- **GC** = Gray Powder Coat

**Specify Finish**

---

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

---

**Catalog Number Chart**

<table>
<thead>
<tr>
<th>A Mfg. Nr.</th>
<th>B Wall Thickness</th>
<th>C Butt Diameter</th>
<th>Lum. Weight</th>
<th>Maximum EPA Per Ton</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>.188&quot;</td>
<td>7</td>
<td>100</td>
<td>11.0 8.4 7.8 6.4 5.2</td>
<td>RTA20D7BFF20-**</td>
</tr>
<tr>
<td>20</td>
<td>.188&quot;</td>
<td>8</td>
<td>100</td>
<td>15.2 12.0 11.0 9.2 7.6</td>
<td>RTA20D8BFF20-**</td>
</tr>
<tr>
<td>25</td>
<td>.188&quot;</td>
<td>7</td>
<td>60</td>
<td>7.4 5.6 5.0 4.0 3.2</td>
<td>RTA25D7BFF20-**</td>
</tr>
<tr>
<td>25</td>
<td>.188&quot;</td>
<td>8</td>
<td>100</td>
<td>10.6 8.2 7.4 6.0 5.0</td>
<td>RTA25D8BFF20-**</td>
</tr>
<tr>
<td>25</td>
<td>.219&quot;</td>
<td>8</td>
<td>100</td>
<td>12.6 9.8 9.0 7.4 6.2</td>
<td>RTA25E8BFF20-**</td>
</tr>
<tr>
<td>30</td>
<td>.250&quot;</td>
<td>8</td>
<td>100</td>
<td>14.8 11.6 10.6 8.6 7.2</td>
<td>RTA25F8BFF20-**</td>
</tr>
<tr>
<td>30</td>
<td>.200&quot;</td>
<td>7</td>
<td>30</td>
<td>5.0 3.6 3.2 2.4 1.8</td>
<td>RTA30D7BFF20-**</td>
</tr>
<tr>
<td>30</td>
<td>.219&quot;</td>
<td>8</td>
<td>60</td>
<td>7.6 5.6 5.2 4.0 3.2</td>
<td>RTA30D8BFF20-**</td>
</tr>
<tr>
<td>30</td>
<td>.219&quot;</td>
<td>8</td>
<td>80</td>
<td>9.2 6.8 6.4 5.0 4.0</td>
<td>RTA30E8BFF20-**</td>
</tr>
<tr>
<td>30</td>
<td>.250&quot;</td>
<td>8</td>
<td>100</td>
<td>10.6 8.2 7.4 6.0 5.0</td>
<td>RTA30F8BFF20-**</td>
</tr>
<tr>
<td>30</td>
<td>.188&quot;</td>
<td>10</td>
<td>100</td>
<td>13.8 11.0 10.2 8.2 6.8</td>
<td>RTA30D1CFF20-**</td>
</tr>
<tr>
<td>30</td>
<td>.219&quot;</td>
<td>10</td>
<td>100</td>
<td>16.6 13.2 12.2 10.0 8.4</td>
<td>RTA30E1CFF20-**</td>
</tr>
<tr>
<td>30</td>
<td>.250&quot;</td>
<td>10</td>
<td>100</td>
<td>19.4 15.4 14.2 11.8 9.8</td>
<td>RTA30F1CFF20-**</td>
</tr>
<tr>
<td>35</td>
<td>.188&quot;</td>
<td>8</td>
<td>30</td>
<td>5.2 3.8 3.4 2.4 2.0</td>
<td>RTA35D8BFF20-**</td>
</tr>
<tr>
<td>35</td>
<td>.219&quot;</td>
<td>8</td>
<td>45</td>
<td>6.6 4.8 4.4 3.4 2.6</td>
<td>RTA35E8BFF20-**</td>
</tr>
<tr>
<td>35</td>
<td>.250&quot;</td>
<td>8</td>
<td>65</td>
<td>7.8 5.8 5.2 4.2 3.2</td>
<td>RTA35F8BFF20-**</td>
</tr>
<tr>
<td>35</td>
<td>.188&quot;</td>
<td>10</td>
<td>95</td>
<td>10.4 8.0 7.4 6.0 4.8</td>
<td>RTA35D1CFF20-**</td>
</tr>
<tr>
<td>35</td>
<td>.219&quot;</td>
<td>10</td>
<td>100</td>
<td>12.6 9.8 9.2 7.4 6.0</td>
<td>RTA35E1CFF20-**</td>
</tr>
<tr>
<td>35</td>
<td>.250&quot;</td>
<td>10</td>
<td>100</td>
<td>14.8 11.6 10.8 8.8 7.2</td>
<td>RTA35F1CFF20-**</td>
</tr>
<tr>
<td>40</td>
<td>.188&quot;</td>
<td>8</td>
<td>25</td>
<td>3.4 2.2 1.8 1.2 -</td>
<td>RTA40D8BFF20-**</td>
</tr>
<tr>
<td>40</td>
<td>.219&quot;</td>
<td>8</td>
<td>30</td>
<td>4.6 3.0 2.6 2.0 1.4</td>
<td>RTA40E8BFF20-**</td>
</tr>
<tr>
<td>40</td>
<td>.250&quot;</td>
<td>8</td>
<td>35</td>
<td>5.6 4.0 3.6 2.6 2.0</td>
<td>RTA40F8BFF20-**</td>
</tr>
<tr>
<td>40</td>
<td>.188&quot;</td>
<td>10</td>
<td>65</td>
<td>7.8 5.8 5.4 4.2 3.4</td>
<td>RTA40D1CFF20-**</td>
</tr>
<tr>
<td>40</td>
<td>.219&quot;</td>
<td>10</td>
<td>85</td>
<td>9.6 7.4 6.8 5.4 4.4</td>
<td>RTA40E1CFF20-**</td>
</tr>
<tr>
<td>40</td>
<td>.250&quot;</td>
<td>10</td>
<td>100</td>
<td>11.4 8.8 8.2 6.6 5.4</td>
<td>RTA40F1CFF20-**</td>
</tr>
<tr>
<td>45</td>
<td>.188&quot;</td>
<td>10</td>
<td>35</td>
<td>5.6 4.2 3.8 2.8 2.2</td>
<td>RTA45D1CFF20-**</td>
</tr>
<tr>
<td>45</td>
<td>.219&quot;</td>
<td>10</td>
<td>55</td>
<td>7.2 5.4 5.0 3.8 3.0</td>
<td>RTA45E1CFF20-**</td>
</tr>
<tr>
<td>45</td>
<td>.250&quot;</td>
<td>10</td>
<td>75</td>
<td>8.8 6.6 6.2 4.8 3.8</td>
<td>RTA45F1CFF20-**</td>
</tr>
</tbody>
</table>

---

[Image of a pole with dimensions and specifications]
RTA

Round Tapered Aluminum Pole with Arms
Triple Cross Arm 180° — 4-Bolt Base

A Mounting Height
B Wall Thickness
Tapered Aluminum Tube Alloy 6063-T6
C Butt Diameter
4-Bolt Base With Bolt Covers

Dimensions in Inches

<table>
<thead>
<tr>
<th>C BUTT DIA.</th>
<th>D TOP DIA.</th>
<th>F BOLT CIR. DIA.</th>
<th>G BASE SQ.</th>
<th>H BOLT PROJ.</th>
<th>I BOLT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 Up To .250&quot;</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312&quot; +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12&quot;</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

Satin Aluminum or Powder Coated Finish per Customer Specification.

6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16 NC Grounding Provision.

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

WARNING: Do not install light pole without luminaire.
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example** -

```
RTA 30 D 8 B 4 F 3 0 – 01
```

- **Round Tapered Aluminum**, 30' Mounting Height, 
- .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Cross Arm, Triple - 180°, 
- Standard Arm Length, Satin Aluminum Finish.

### Wall Thickness

- C = .156"
- D = .188"
- E = .219"
- F = .250"
- G = .312"
- H = .375"

### Butt Diameter

- 6 = 6"
- 7 = 7"
- 8 = 8"
- 9 = 10"
- 10 = 12"

### Top Diameter

- B = 4.5"
- C = 6"

### Base Style

- 4 = 4-Bolt Base

### Arm Style

- F = Cross Arm

### Arm Quantity

- 3 = Triple - 180°

### Arm Length

- 0 = Standard Length

### Finish

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

### EPA Notes:

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA, if weight is exceeded, or if other design life or code is required, please consult the factory.

---

**Catalog Number Example** -

```
RTA 30 D 8 B 4 F 3 0 – 01
```

- **Round Tapered Aluminum**, 30' Mounting Height, 
- .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Cross Arm, Triple - 180°, 
- Standard Arm Length, Satin Aluminum Finish.

### Wall Thickness

- C = .156"
- D = .188"
- E = .219"
- F = .250"
- G = .312"
- H = .375"

### Butt Diameter

- 6 = 6"
- 7 = 7"
- 8 = 8"
- 9 = 10"
- 10 = 12"

### Top Diameter

- B = 4.5"
- C = 6"

### Base Style

- 4 = 4-Bolt Base

### Arm Style

- F = Cross Arm

### Arm Quantity

- 3 = Triple - 180°

### Arm Length

- 0 = Standard Length

### Finish

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

---

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA, if weight is exceeded, or if other design life or code is required, please consult the factory.

---

**Catalog Number Example** -

```
RTA 30 D 8 B 4 F 3 0 – 01
```

- **Round Tapered Aluminum**, 30' Mounting Height, 
- .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Cross Arm, Triple - 180°, 
- Standard Arm Length, Satin Aluminum Finish.

### Wall Thickness

- C = .156"
- D = .188"
- E = .219"
- F = .250"
- G = .312"
- H = .375"

### Butt Diameter

- 6 = 6"
- 7 = 7"
- 8 = 8"
- 9 = 10"
- 10 = 12"

### Top Diameter

- B = 4.5"
- C = 6"

### Base Style

- 4 = 4-Bolt Base

### Arm Style

- F = Cross Arm

### Arm Quantity

- 3 = Triple - 180°

### Arm Length

- 0 = Standard Length

### Finish

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

---

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA, if weight is exceeded, or if other design life or code is required, please consult the factory.
**RTA**

Round Tapered Aluminum Pole with Arms
Triple Cross Arm 180° — Direct Buried

---

**A** Mounting Height

**B** Wall Thickness
Tapered Aluminum Tube
Alloy 6063-T6

**C** Butt Diameter

**D** Top Diameter

**E** Embed Length

---

**Pole**
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**
6” Butt Diameter - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

7” + Butt Diameters - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8” - 16NC Grounding Provision.

**Embed Detail**
Direct Buried Pole bottom section on 6” + butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24” below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Table**

<table>
<thead>
<tr>
<th>C: Butt Dia.</th>
<th>D: Top Dia.</th>
<th>E: Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4’</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6’</td>
</tr>
</tbody>
</table>

*Note: C and D Dimensions in Inches*
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B E F 3 0 – 01
Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Direct Buried, Cross Arm, Triple - 180°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness
C = .156"
D = .188"
E = .219"
F = .250"
G = .312"

Butt Diameter
6 = 6"
7 = 7"
8 = 8"
1 = 10"

Top Diameter
B = 4.5"
C = 6"

Base Style
E = Direct Buried

Arm Style
F = Cross Arm

Arm Quantity
3 = Triple - 180°

Arm Length
0 = Standard Length

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
**RTA**

**Round Tapered Aluminum Pole with Arms**

**Triple Cross Arm 180° — Breakaway T-Base**

---

**Dimensions in Inches**

<table>
<thead>
<tr>
<th>C</th>
<th>Butt Dia.</th>
<th>D</th>
<th>Top Dia.</th>
<th>F</th>
<th>BOLT Cir. DIA.</th>
<th>G</th>
<th>BASE SQ.</th>
<th>H</th>
<th>BOLT PROJ.</th>
<th>I</th>
<th>BOLT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**WARNING:** Do not install light pole without luminaire.
The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example** -
RTA 30 D 8 B F F 3 0 – 01
Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Cross Arm, Triple - 180°, Standard Arm Length, Satin Aluminum Finish.

### Wall Thickness
- D = .188"
- E = .219"
- F = .250"

### Butt Diameter
- 7 = 7"
- 8 = 8"
- 1 = 10"

### Top Diameter
- B = 4.5"
- C = 6"

### Base Style
- F = Breakaway T-Base

### Arm Style
- F = Cross Arm

### Arm Quantity
- 3 = Triple - 180°

### Arm Length
- 0 = Standard Length

### Finish
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

**EPA Notes:**
Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
**Dimensions in Inches**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 (up to .250&quot;)</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .125&quot; +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12&quot;</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

*Two-Piece Pole Design

**WARNING:** Do not install light pole without luminaire.
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example** -

```
RTA 30 D 8 B 4 F C 0 – 01
```

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Cross Arm, Triple - 120°, Standard Arm Length, Satin Aluminum Finish.

### Wall Thickness

- **C** = .156"
- **D** = .188"
- **E** = .219"
- **F** = .250"
- **G** = .312"
- **H** = .375"

### Butt Diameter

- **6** = 6"
- **7** = 7"
- **8** = 8"
- **10** = 10"
- **12** = 12"

### Top Diameter

- **B** = 4.5"
- **C** = 6"

### Base Style

- **F** = Cross Arm

### Arm Style

- **C** = Triple - 120°
- **0** = Standard Length

### Finish

- **01** = Satin Aluminum
- **BA** = Black Powder Coat
- **BH** = White Powder Coat
- **BM** = Dark Bronze Powder Coat
- **BV** = Dark Green Powder Coat
- **GC** = Gray Powder Coat
- **** = Specify Finish

---

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA, if weight is exceeded, or if other design life or code is required, please consult the factory.
Round Tapered Aluminum Pole with Arms
Triple Cross Arm 120° — Direct Buried

**Pole**
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**
6” Butt Diameter - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.
7”+ Butt Diameters - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC Grounding Provision.

**Embed Detail**

Direct Buried Pole bottom section on 6”+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24” below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

<table>
<thead>
<tr>
<th>C BUTT DIA.</th>
<th>D TOP DIA.</th>
<th>E EMBED</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4’</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6’</td>
</tr>
</tbody>
</table>

* C and D Dimensions in Inches

---

**WARNING:** Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -

RTA 30 D 8 B E F C 0 – 01
Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, Direct Buried, Cross Arm, Triple - 120°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness
- C = .156”
- D = .188”
- E = .219”
- F = .250”
- G = .312”

Butt Diameter
- 6 = 6”
- 7 = 7”
- 8 = 8”
- 1 = 10”

Top Diameter
- B = 4.5”
- C = 6”

Base Style
- E = Direct Buried

Arm Style
- F = Cross Arm

Arm Quantity
- C = Triple - 120°

Arm Length
- 0 = Standard Length

Finish
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA, if weight is exceeded, or if other design life or code is required, please consult the factory.
RTA

Round Tapered Aluminum Pole with Arms
Triple Cross Arm 120° — Breakaway T-Base

A Mounting Height

B Wall Thickness
Tapered Aluminum Tube
Alloy 6063-T6

C Butt Diameter
4-Bolt Base Flange
Aluminum Alloy 356-T6
With Aluminum Bolt Covers And Stainless Steel Hex Head Screws

Pole Cap - Aluminum
With Stainless Steel Screws

Triple Cross Arm - 120°
Arms and Tenons - 2" NPS Sch. 40 Pipe
Aluminum Alloy 6063-T6
Stainless Steel Hardware Included

D Top Diameter

120°
24" 3'-6"

1'-5"

4"

7"-10" Butt Diameters -
Tapered Door Opening
(9-3/4" W Base x 9-1/4"
W Top x 11-3/4" H) with
Flush Mount Aluminum
Cover and Stainless
Steel Hex Head Screw.
Grounding Provisions
tapped 1/4"-20NC and
1/2"-13NC are provided.

Transformer Base
FHWA Approved Breakaway

Cast Aluminum Transformer
Base (T-Base) of Alloy
356-T6 with Aluminum
Door and Stainless Steel
Hex Head Screw. FHWA
Approved Breakaway.

Base Anchorage includes
four (4) L-shaped Steel
Anchor Bolts conforming
to AASHTO M314-90
Grade 55, four (4) each
Heavy-Duty Flat Washers,
Lock Washers, and Hex
Nuts (all components Galv.
Steel). Ten inches (10")
of threaded end will be
galvanized per ASTM A153.

Top Connecting Hardware
includes four (4) each
1"-8NC x 3-3/4" Hex Head
Bolts, Flat Washers, Heavy-
Duty Flat Washers, Lock
Washers, and Hex Nuts
(all components Galv. Steel).
A bolt circle template will
be provided.

Vibration Damper
When determined necessary by Hapco, a Vibration
Damper will be factory-installed inside the pole shaft.
Customer specification of the damper is available.

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

Dimensions in Inches

WARNING: Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

**Example** - RTA 30 D 8 B F F C 0 – 01

- **RTA**: Round Tapered Aluminum
- **30**: Mounting Height
- **D**: .188” Wall Thickness
- **8**: Butt Diameter
- **B**: .250” Top Diameter
- **F**: Breakaway T-Base
- **F**: Cross Arm
- **C**: Triple - 120°
- **0**: Standard Arm Length
- **Finish**: Satin Aluminum

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>.188”</td>
<td>7</td>
<td>50</td>
<td>6.6 5.0 4.4 3.6 2.8</td>
<td>RTA20D7BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>.188”</td>
<td>8</td>
<td>85</td>
<td>9.2 7.4 6.6 5.2 4.2</td>
<td>RTA20D8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>.188”</td>
<td>7</td>
<td>30</td>
<td>4.2 3.0 2.6 2.0 1.4</td>
<td>RTA25D7BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>.188”</td>
<td>8</td>
<td>35</td>
<td>4.8 4.0 3.2 2.4 1.6</td>
<td>RTA25D8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>.219”</td>
<td>8</td>
<td>60</td>
<td>7.6 5.8 5.2 4.2 3.4</td>
<td>RTA25E8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>.250”</td>
<td>8</td>
<td>75</td>
<td>9.0 6.8 6.2 5.0 4.0</td>
<td>RTA25F8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>.188”</td>
<td>7</td>
<td>30</td>
<td>2.4 1.6 1.2 - -</td>
<td>RTA30D7BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>.188”</td>
<td>8</td>
<td>30</td>
<td>4.2 3.0 2.6 2.0 1.4</td>
<td>RTA30D8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>.219”</td>
<td>8</td>
<td>35</td>
<td>5.4 3.8 3.4 2.6 2.0</td>
<td>RTA30E8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>.250”</td>
<td>8</td>
<td>45</td>
<td>6.4 4.8 4.2 3.2 2.6</td>
<td>RTA30F8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>.188”</td>
<td>10</td>
<td>70</td>
<td>8.4 6.4 6.0 4.8 3.8</td>
<td>RTA30D1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>.188”</td>
<td>10</td>
<td>90</td>
<td>10.2 7.8 7.2 5.8 4.8</td>
<td>RTA30D1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>.250”</td>
<td>10</td>
<td>100</td>
<td>12.0 9.4 8.6 7.0 5.6</td>
<td>RTA30F1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>.188”</td>
<td>8</td>
<td>30</td>
<td>2.6 1.6 1.4 - -</td>
<td>RTA35D8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>.219”</td>
<td>8</td>
<td>30</td>
<td>3.6 2.4 2.0 1.4 -</td>
<td>RTA35E8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>.250”</td>
<td>8</td>
<td>30</td>
<td>4.4 3.2 2.8 2.0 1.4</td>
<td>RTA35F8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>.188”</td>
<td>10</td>
<td>45</td>
<td>6.2 4.6 4.2 3.2 2.6</td>
<td>RTA35D1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>.188”</td>
<td>10</td>
<td>60</td>
<td>7.6 5.8 5.4 4.2 3.2</td>
<td>RTA35E1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>.250”</td>
<td>10</td>
<td>75</td>
<td>9.0 7.0 6.4 5.0 4.0</td>
<td>RTA35F1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>.188”</td>
<td>8</td>
<td>30</td>
<td>1.4 - - - -</td>
<td>RTA40D8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>.219”</td>
<td>8</td>
<td>25</td>
<td>2.2 1.2 - - -</td>
<td>RTA40E8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>.250”</td>
<td>8</td>
<td>35</td>
<td>2.8 1.8 1.4 - -</td>
<td>RTA40F8BFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>.188”</td>
<td>10</td>
<td>35</td>
<td>4.4 3.2 2.8 2.0 1.4</td>
<td>RTA40D1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>.219”</td>
<td>10</td>
<td>35</td>
<td>5.6 4.2 3.8 2.8 2.2</td>
<td>RTA40E1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>.250”</td>
<td>10</td>
<td>50</td>
<td>6.8 5.2 4.6 3.6 2.8</td>
<td>RTA40F1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>.188”</td>
<td>10</td>
<td>25</td>
<td>3.0 2.0 1.8 1.2 -</td>
<td>RTA45D1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>.219”</td>
<td>10</td>
<td>25</td>
<td>4.0 2.8 2.6 1.8 1.2</td>
<td>RTA45E1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>.250”</td>
<td>10</td>
<td>30</td>
<td>5.2 3.8 3.4 2.6 1.8</td>
<td>RTA45F1CFFC0-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EPA Notes:**
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA, if weight is exceeded, or if other design life or code is required, please consult the factory.
RTA Round Tapered Aluminum Pole with Arms
Quad Cross Arm 180° — 4-Bolt Base

- **A** Mounting Height
- **B** Wall Thickness
  Tapered Aluminum Tube
  Alloy 6063-T6
- **C** Butt Diameter
  4-Bolt Base
  With Bolt Covers
- **D** Top Diameter
  Quad Cross Arm - 180°
  Arm and Tenons - 2" NPS Sch. 40 Pipe
  Aluminum Alloy 6063-T6

Stainless Steel Hardware Included

---

**Base Style**

4-Bolt Cast Aluminum
Base Flange of Alloy
356-T6 with Aluminum
Bolt Covers (Alloy 356-F)
and Stainless Steel Hex Head Attaching Screws.

**Handhole**

6” Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

7”+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

**Anchorage**

Anchorage Kit will include four (4)
L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of threaded end will be galvanized per ASTM A153.

Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel).

A bolt circle template will be provided.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Dimensions in Inches**

<table>
<thead>
<tr>
<th><strong>C Butt Dia.</strong></th>
<th><strong>D Top Dia.</strong></th>
<th><strong>F Bolt Cir. Dia.</strong></th>
<th><strong>G Base Sq.</strong></th>
<th><strong>H Bolt Proj.</strong></th>
<th><strong>I Bolt Size</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.50</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 Up To .250”</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312” +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12”</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

*Two-Piece Pole Design"
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

#### Catalog Number Example -

RTA 30 D 8 B 4 F 4 0 – 01

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, 4-Bolt Base, Cross Arm, Quad - 180°, Standard Arm Length, Satin Aluminum Finish.

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Butt Diameter</th>
<th>Arm Style</th>
<th>Arm Quantity</th>
<th>Arm Length</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>C = .156”</td>
<td>6</td>
<td>4</td>
<td>Quad - 180°</td>
<td>Standard</td>
<td>BA</td>
</tr>
<tr>
<td>D = .188”</td>
<td>7</td>
<td>F</td>
<td>Cross Arm</td>
<td>4</td>
<td>BA</td>
</tr>
<tr>
<td>E = .219”</td>
<td>8</td>
<td>F</td>
<td>Cross Arm</td>
<td>4</td>
<td>BA</td>
</tr>
<tr>
<td>F = .250”</td>
<td>10</td>
<td>4</td>
<td>Quad - 180°</td>
<td>Standard</td>
<td>BA</td>
</tr>
<tr>
<td>G = .312”</td>
<td>12</td>
<td>4</td>
<td>Quad - 180°</td>
<td>Standard</td>
<td>BA</td>
</tr>
<tr>
<td>H = .375”</td>
<td>12</td>
<td>4</td>
<td>Quad - 180°</td>
<td>Standard</td>
<td>BA</td>
</tr>
</tbody>
</table>

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

<table>
<thead>
<tr>
<th>Mtg. Hgt.</th>
<th>WINDOW W 1 2 3 4 5 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td></td>
</tr>
<tr>
<td>120</td>
<td></td>
</tr>
<tr>
<td>130</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mtg. Hgt.</th>
<th>Butt Dia.</th>
<th>Top Dia.</th>
<th>LUM. Wgt.</th>
<th>MAXIMUM EPA PER TOUGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>6</td>
<td>30</td>
<td>1.4</td>
<td>- - - -</td>
</tr>
<tr>
<td>20</td>
<td>6</td>
<td>30</td>
<td>2.2</td>
<td>1.2 - - -</td>
</tr>
<tr>
<td>20</td>
<td>7</td>
<td>25</td>
<td>3.0</td>
<td>2.0 1.6 1.0</td>
</tr>
<tr>
<td>20</td>
<td>7</td>
<td>25</td>
<td>4.0</td>
<td>2.8 2.6 1.8 1.2</td>
</tr>
<tr>
<td>20</td>
<td>8</td>
<td>40</td>
<td>6.2</td>
<td>4.6 4.2 3.2 2.4</td>
</tr>
<tr>
<td>25</td>
<td>7</td>
<td>30</td>
<td>1.4</td>
<td>- - - -</td>
</tr>
<tr>
<td>25</td>
<td>8</td>
<td>30</td>
<td>2.8</td>
<td>1.8 1.4 - -</td>
</tr>
<tr>
<td>25</td>
<td>8</td>
<td>35</td>
<td>3.8</td>
<td>2.6 2.2 1.6 -</td>
</tr>
<tr>
<td>25</td>
<td>8</td>
<td>35</td>
<td>5.0</td>
<td>3.6 3.2 2.2 1.6</td>
</tr>
<tr>
<td>25</td>
<td>8</td>
<td>35</td>
<td>6.0</td>
<td>4.4 3.8 3.0 2.2</td>
</tr>
<tr>
<td>30</td>
<td>8</td>
<td>30</td>
<td>1.2</td>
<td>- - - -</td>
</tr>
<tr>
<td>30</td>
<td>8</td>
<td>30</td>
<td>2.2</td>
<td>1.2 - - -</td>
</tr>
<tr>
<td>30</td>
<td>8</td>
<td>35</td>
<td>3.0</td>
<td>2.0 1.6 - -</td>
</tr>
<tr>
<td>30</td>
<td>8</td>
<td>35</td>
<td>3.8</td>
<td>2.6 2.2 1.6 -</td>
</tr>
<tr>
<td>30</td>
<td>10</td>
<td>30</td>
<td>5.6</td>
<td>4.0 3.6 2.8 2.0</td>
</tr>
<tr>
<td>30</td>
<td>10</td>
<td>40</td>
<td>6.8</td>
<td>5.2 4.6 3.6 2.8</td>
</tr>
<tr>
<td>30</td>
<td>10</td>
<td>60</td>
<td>8.2</td>
<td>6.2 5.6 4.4 3.4</td>
</tr>
<tr>
<td>35</td>
<td>8</td>
<td>35</td>
<td>1.6</td>
<td>- - - -</td>
</tr>
<tr>
<td>35</td>
<td>10</td>
<td>35</td>
<td>2.4</td>
<td>1.4 1.0 - -</td>
</tr>
<tr>
<td>35</td>
<td>10</td>
<td>35</td>
<td>4.8</td>
<td>3.4 3.2 2.2 1.6</td>
</tr>
<tr>
<td>35</td>
<td>10</td>
<td>35</td>
<td>6.0</td>
<td>4.4 4.0 3.0 2.2</td>
</tr>
<tr>
<td>40</td>
<td>8</td>
<td>25</td>
<td>1.2</td>
<td>- - - -</td>
</tr>
<tr>
<td>40</td>
<td>10</td>
<td>25</td>
<td>2.2</td>
<td>1.4 1.2 - -</td>
</tr>
<tr>
<td>40</td>
<td>10</td>
<td>25</td>
<td>3.2</td>
<td>2.2 1.8 1.2 -</td>
</tr>
<tr>
<td>40</td>
<td>10</td>
<td>25</td>
<td>4.2</td>
<td>3.0 2.6 1.8 1.2</td>
</tr>
<tr>
<td>40</td>
<td>10</td>
<td>35</td>
<td>6.0</td>
<td>4.4 4.0 3.0 2.2</td>
</tr>
<tr>
<td>45</td>
<td>10</td>
<td>25</td>
<td>1.2</td>
<td>- - - -</td>
</tr>
<tr>
<td>45</td>
<td>10</td>
<td>25</td>
<td>2.0</td>
<td>1.2 - - -</td>
</tr>
<tr>
<td>45</td>
<td>10</td>
<td>30</td>
<td>4.4</td>
<td>3.0 2.8 2.0 1.2</td>
</tr>
<tr>
<td>45</td>
<td>12</td>
<td>35</td>
<td>6.2</td>
<td>4.4 4.0 3.0 2.2</td>
</tr>
<tr>
<td>45</td>
<td>12</td>
<td>60</td>
<td>8.4</td>
<td>6.2 5.8 4.4 3.4</td>
</tr>
</tbody>
</table>

Base Style

4 = 4-Bolt Base

Arm Style

F = Cross Arm

Arm Quantity

4 = Quad - 180°

Arm Length

0 = Standard Length

Finish

01 = Satin Aluminum

BA = Black Powder Coat

BH = White Powder Coat

BM = Dark Bronze Powder Coat

BV = Dark Green Powder Coat

GC = Gray Powder Coat

** = Specify Finish

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
**RTA Round Tapered Aluminum Pole with Arms**

**Quad Cross Arm 180° — Direct Buried**

- **A Mounting Height**
- **B Wall Thickness**
- **C Butt Diameter**
- **D Top Diameter**
- **E Embed Length**

### Pole
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

### Handhole
- **6" Butt Diameter** - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.
- **7"+ Butt Diameters** - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

### Embed Detail
Direct Buried Pole bottom section on 6"+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24" below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

### Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

### Table: C and D Dimensions in Inches

<table>
<thead>
<tr>
<th>Butt Dia</th>
<th>Top Dia</th>
<th>Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4'</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6'</td>
</tr>
</tbody>
</table>

SATIN ALUMINUM OR POWDER COATED FINISH PER CUSTOMER SPECIFICATION.

**WARNING:** Do not install light pole without luminaire.
The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example -**

RTA 30 D 8 B E F 40 – 01

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Direct Buried, Cross Arm, Quad - 180°, Standard Arm Length, Satin Aluminum Finish.

**Wall Thickness**

- C = .156”
- D = .188”
- E = .219”
- F = .250”
- G = .312”

**Butt Diameter**

- 6 = 6”
- 7 = 7”
- 8 = 8”
- 10 = 10”

**Top Diameter**

- B = 4.5”
- C = 6”

**Base Style**

- E = Direct Buried

**Arm Style**

- F = Cross Arm

**Arm Quantity**

- 4 = Quad - 180°

**Arm Length**

- 0 = Standard Length

**Finish**

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

**EPA Notes:**

Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory..
Round Tapered Aluminum Pole with Arms
Quad Cross Arm 180° — Breakaway T-Base

Dimensions in Inches

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 Up To .250”</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312”</td>
<td>6</td>
<td>17.25</td>
<td>17.4375</td>
<td>3.5</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

WARNING: Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -

RTA 30 D 8 B F F 4 0 – 01
Round Tapered Aluminum, 30' Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Breakaway T-Base, Cross Arm, Quad - 180°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness
D = .188”
E = .219”
F = .250”
G = .312”

Butt Diameter
7 = 7”
8 = 8”
1 = 10”

Top Diameter
B = 4.5”
C = 6”

Base Style
F = Breakaway T-Base

Arm Style
F = Cross Arm

Arm Quantity
4 = Quad - 180°

Arm Length
0 = Standard Length

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

RTA - ROUND TAPERED ALUMINUM POLE WITH ARMS

Catalog Number System

<table>
<thead>
<tr>
<th>MTG.</th>
<th>WALL</th>
<th>BUTT</th>
<th>LUM.</th>
<th>MAXIMUM EPA Per Ton</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>0.188”</td>
<td>7</td>
<td>25</td>
<td>4.0 2.8 2.6 1.8 1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>0.188”</td>
<td>8</td>
<td>40</td>
<td>6.2 4.6 4.0 3.2 2.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.188”</td>
<td>7</td>
<td>25</td>
<td>2.2 1.4 1.0 - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.188”</td>
<td>8</td>
<td>25</td>
<td>3.8 2.6 2.4 1.6 1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.219”</td>
<td>8</td>
<td>25</td>
<td>5.0 3.6 3.2 2.2 1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>0.250”</td>
<td>8</td>
<td>35</td>
<td>5.9 4.2 3.8 2.8 2.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.188”</td>
<td>8</td>
<td>25</td>
<td>2.2 1.4 1.0 - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.219”</td>
<td>8</td>
<td>25</td>
<td>3.0 2.0 1.6 1.0 -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.250”</td>
<td>8</td>
<td>35</td>
<td>3.8 2.6 2.2 1.6 -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.188”</td>
<td>10</td>
<td>30</td>
<td>5.4 4.0 3.6 2.6 2.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.219”</td>
<td>10</td>
<td>45</td>
<td>6.8 5.0 4.6 3.6 2.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>0.250”</td>
<td>10</td>
<td>60</td>
<td>8.0 6.0 5.6 4.4 3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.219”</td>
<td>8</td>
<td>35</td>
<td>2.4 1.4 1.2 - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.250”</td>
<td>8</td>
<td>35</td>
<td>3.6 2.6 2.2 1.6 -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.188”</td>
<td>10</td>
<td>35</td>
<td>4.8 3.6 3.2 2.2 1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>0.250”</td>
<td>10</td>
<td>35</td>
<td>6.0 4.4 4.0 3.0 2.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0.250”</td>
<td>8</td>
<td>25</td>
<td>1.2 - - - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0.188”</td>
<td>10</td>
<td>25</td>
<td>2.4 1.4 1.2 - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0.219”</td>
<td>10</td>
<td>25</td>
<td>3.2 2.2 2.0 1.2 -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0.250”</td>
<td>10</td>
<td>25</td>
<td>4.2 3.0 2.6 1.8 1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>0.312”</td>
<td>10</td>
<td>35</td>
<td>6.0 4.4 4.0 3.0 2.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>0.188”</td>
<td>10</td>
<td>25</td>
<td>1.2 - - - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>0.219”</td>
<td>10</td>
<td>25</td>
<td>2.0 1.2 - - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>0.250”</td>
<td>10</td>
<td>35</td>
<td>2.8 1.8 1.6 - - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>0.312”</td>
<td>10</td>
<td>30</td>
<td>4.4 3.2 2.8 2.0 1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>0.250”</td>
<td>10</td>
<td>35</td>
<td>2.8 1.8 1.6 - - -</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

RTA - ROUND TAPERED ALUMINUM POLE WITH ARMS

QUAD CROSS ARM 180°
BREAKAWAY T-BASE
RTA Round Tapered Aluminum Pole with Arms Quad Cross Arm 90° — 4-Bolt Base

Quad Cross Arm - 90°
Arms & Tenons - 2" NPS Sch. 40 Pipe
Aluminum Alloy 6063-T6
Stainless Steel Hardware Included

Wall Thickness
Tapered Aluminum Tube
Alloy 6063-T6

Butt Diameter
4-Bolt Base
With Bolt Covers

Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

Handhole - 0°
180°
90°

Dimensions in Inches

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 up to .250&quot;</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .125&quot; +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12&quot;</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

*Two-Piece Pole Design

Satin Aluminum or Powder Coated Finish per Customer Specification.

WARNING: Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B 4 F D 0 – 01
Round Tapered Aluminum, 30' Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, 4-Bolt Base, Cross Arm, Quad - 90°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness
C = .156”
D = .188”
E = .219”
F = .250”
G = .312”
H = .375”

Butt Diameter
6 = 6”
7 = 7”
8 = 8”
1 = 10”
2 = 12”

Top Diameter
B = 4.5”
C = 6”

Base Style
4 = 4-Bolt Base

Arm Style
F = Cross Arm

Arm Quantity
D = Quad - 90°

Arm Length
0 = Standard Length

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
### Round Tapered Aluminum Pole with Arms

**Quad Cross Arm 90° — Direct Buried**

- **A Mounting Height**
- **B Wall Thickness**
  - Tapered Aluminum Tube
  - Alloy 6063-T6
- **C Butt Diameter**
- **D Top Diameter**
- **E Embed Length**
  - Wire Access Slots - 1-3/4" x 6"
  - 2@180°
  - 1' to 2' Flattened

**Pole**

Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**

- **6" Butt Diameter** - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.
- **7" Butt Diameters** - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

**Embed Detail**

Direct Buried Pole bottom section on 6"+ butt diameter poles will be partially flattened into an antirotational, oval cross section. Wire access will be provided 24" below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

### Dimensions

<table>
<thead>
<tr>
<th>C Butt Dia.</th>
<th>D Top Dia.</th>
<th>E Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4'</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6'</td>
</tr>
</tbody>
</table>

C and D Dimensions in Inches

**WARNING:** Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -

RTA 30 D 8 B E F D 0 – 01

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Direct Buried, Cross Arm, Quad - 90°, Standard Arm Length, Satin Aluminum Finish.

<table>
<thead>
<tr>
<th>Mfg. Ngt.</th>
<th>Wall Thickness</th>
<th>Butt Diameter</th>
<th>Top Diameter</th>
<th>Base Style</th>
<th>Arm Style</th>
<th>Arm Quantity</th>
<th>Arm Length</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>.156&quot;</td>
<td>6</td>
<td>30</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>20</td>
<td>.188&quot;</td>
<td>6</td>
<td>30</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>20</td>
<td>.156&quot;</td>
<td>7</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>20</td>
<td>.188&quot;</td>
<td>7</td>
<td>40</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>20</td>
<td>.188&quot;</td>
<td>8</td>
<td>65</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>25</td>
<td>.188&quot;</td>
<td>6</td>
<td>35</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>25</td>
<td>.156&quot;</td>
<td>7</td>
<td>30</td>
<td>.156&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>25</td>
<td>.188&quot;</td>
<td>7</td>
<td>30</td>
<td>.156&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>25</td>
<td>.156&quot;</td>
<td>8</td>
<td>30</td>
<td>.156&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>25</td>
<td>.188&quot;</td>
<td>8</td>
<td>35</td>
<td>.156&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>25</td>
<td>.188&quot;</td>
<td>8</td>
<td>35</td>
<td>.156&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>25</td>
<td>.219&quot;</td>
<td>8</td>
<td>50</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>25</td>
<td>.250&quot;</td>
<td>8</td>
<td>60</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>30</td>
<td>.188&quot;</td>
<td>7</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>30</td>
<td>.188&quot;</td>
<td>8</td>
<td>30</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>30</td>
<td>.188&quot;</td>
<td>8</td>
<td>30</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>30</td>
<td>.188&quot;</td>
<td>8</td>
<td>30</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>30</td>
<td>.19&quot;</td>
<td>8</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>30</td>
<td>.25&quot;</td>
<td>8</td>
<td>50</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>30</td>
<td>.25&quot;</td>
<td>10</td>
<td>55</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>30</td>
<td>.25&quot;</td>
<td>10</td>
<td>75</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>30</td>
<td>.25&quot;</td>
<td>10</td>
<td>90</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>35</td>
<td>.188&quot;</td>
<td>8</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>35</td>
<td>.188&quot;</td>
<td>8</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>35</td>
<td>.188&quot;</td>
<td>8</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>35</td>
<td>.188&quot;</td>
<td>8</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>35</td>
<td>.188&quot;</td>
<td>10</td>
<td>35</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>35</td>
<td>.188&quot;</td>
<td>10</td>
<td>35</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>35</td>
<td>.188&quot;</td>
<td>10</td>
<td>35</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>35</td>
<td>.188&quot;</td>
<td>10</td>
<td>35</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>35</td>
<td>.219&quot;</td>
<td>10</td>
<td>50</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>35</td>
<td>.25&quot;</td>
<td>10</td>
<td>60</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.188&quot;</td>
<td>8</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.188&quot;</td>
<td>8</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.188&quot;</td>
<td>8</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.188&quot;</td>
<td>8</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.188&quot;</td>
<td>10</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.188&quot;</td>
<td>10</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.188&quot;</td>
<td>10</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.188&quot;</td>
<td>10</td>
<td>25</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.25&quot;</td>
<td>10</td>
<td>40</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.25&quot;</td>
<td>10</td>
<td>40</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
<tr>
<td>40</td>
<td>.312&quot;</td>
<td>10</td>
<td>65</td>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td>0</td>
<td>BA</td>
</tr>
</tbody>
</table>

EPA Notes:
Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA, if weight is exceeded, or if other design life or code is required, please consult the factory.

Catalog Number System

<table>
<thead>
<tr>
<th>MOUNTING</th>
<th>WALL</th>
<th>TOP</th>
<th>BUtt</th>
<th>LUM</th>
<th>ARM</th>
<th>STYLE</th>
<th>QUANT</th>
<th>FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEIGHT</td>
<td>THICKNESS</td>
<td>DIAMETER</td>
<td>DIAMETER</td>
<td>DIAMETER</td>
<td>STYLE</td>
<td>QUANTITY</td>
<td>LENGTH</td>
<td>FINISH</td>
</tr>
</tbody>
</table>

Wall Thickness
C = .156"
D = .188"
E = .219"
F = .250"
G = .312"

Butt Diameter
6 = 6"
7 = 7"
8 = 8"
10 = 10"

Top Diameter
B = 4.5"
C = 6"

Base Style
E = Direct Buried

Arm Style
F = Cross Arm

Arm Quantity
D = Quad - 90°

Arm Length
0 = Standard Length

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

www.hapco.com
**RTA**
Round Tapered Aluminum Pole with Arms
Quad Cross Arm 90° — Breakaway T-Base

- **A** Mounting Height
- **B** Wall Thickness
  - Tapered Aluminum Tube
  - Alloy 6063-T6
- **C** Butt Diameter
  - 4-Bolt Base Flange
  - Aluminum Alloy 356-T6
  - With Aluminum Bolt Covers And Stainless Steel Hex Head Screws
- **D** Top Diameter
- Quad Cross Arm - 90°
  - Arms and Tenons - 2” NPS Sch. 40 Pipe
  - Aluminum Alloy 6063-T6
  - Stainless Steel Hardware Included

**Pole**
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

**Base Style**
- Cast Aluminum Transformer Base (T-Base) of Alloy 356-T6 with Aluminum Door and Stainless Steel Hex Head Screw. FHWA Approved Breakaway.

**Handhole**
- 7”-10” Butt Diameters -
  - Tapered Door Opening
  - (9-3/4” W Base x 9-1/4” W Top x 11-3/4” H) with Flush Mount Aluminum Cover and Stainless Steel Hex Head Screw. Grounding Provisions tapped 1/4”-20NC and 1/2”-13NC are provided.

**Anchorage**
- **Base Anchorage** includes four (4) each L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10”) of threaded end will be galvanized per ASTM A153.
- **Top Connecting Hardware** includes four (4) each 1”-8NC x 3-3/4” Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). A bolt circle template will be provided.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Dimensions in Inches**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 Up To .250”</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312”</td>
<td>6</td>
<td>17.25</td>
<td>17.4375</td>
<td>3.5</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

WARNING: Do not install light pole without luminaire.
The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example -**

RTA 30 D 8 B F F D 0 – 01

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Breakaway T-Base, Cross Arm, Quad - 90°, Standard Arm Length, Satin Aluminum Finish.

**Wall Thickness**

D = .188”
E = .219”
F = .250”
G = .312”

**Butt Diameter**

7 = 7”
8 = 8”
1 = 10”

**Top Diameter**

B = 4.5”
C = 6”

**Base Style**

F = Breakaway T-Base

**Arm Style**

F = Cross Arm

**Arm Quantity**

D = Quad - 90°

**Arm Length**

0 = Standard Length

**Finish**

01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
RTA Round Tapered Aluminum Pole with Arms
Double Bullhorn — 4-Bolt Base

**Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.**

**Base Style**

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

**Handhole**

6” Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

7”+ Butt Diameters - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC Grounding Provision.

**Anchorage**

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Dimensions in Inches**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 up to .250&quot;</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312&quot; +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12&quot;</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

*Two-Piece Pole Design
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example -**

RTA 30 D 8 B 4 B 20 – 01

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Bullhorn Arm, Double, Standard Arm Length, Satin Aluminum Finish.

<table>
<thead>
<tr>
<th>Wall Thickness</th>
<th>Butt Diameter</th>
<th>Top Diameter</th>
<th>Base Style</th>
<th>Arm Style</th>
<th>Arm Quantity</th>
<th>Arm Length</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>C = .156&quot;</td>
<td>6</td>
<td>4.5&quot;</td>
<td>4-Bolt</td>
<td>Bullhorn</td>
<td>Double</td>
<td>Standard</td>
<td>BA</td>
</tr>
<tr>
<td>D = .188&quot;</td>
<td>6</td>
<td>4.5&quot;</td>
<td>4-Bolt</td>
<td>Bullhorn</td>
<td>Double</td>
<td>Standard</td>
<td>BH</td>
</tr>
<tr>
<td>E = .219&quot;</td>
<td>8</td>
<td>4.5&quot;</td>
<td>4-Bolt</td>
<td>Bullhorn</td>
<td>Double</td>
<td>Standard</td>
<td>BM</td>
</tr>
<tr>
<td>F = .250&quot;</td>
<td>8</td>
<td>4.5&quot;</td>
<td>4-Bolt</td>
<td>Bullhorn</td>
<td>Double</td>
<td>Standard</td>
<td>BV</td>
</tr>
<tr>
<td>G = .312&quot;</td>
<td>8</td>
<td>4.5&quot;</td>
<td>4-Bolt</td>
<td>Bullhorn</td>
<td>Double</td>
<td>Standard</td>
<td>GC</td>
</tr>
<tr>
<td>H = .375&quot;</td>
<td>12</td>
<td>4.5&quot;</td>
<td>4-Bolt</td>
<td>Bullhorn</td>
<td>Double</td>
<td>Standard</td>
<td>**</td>
</tr>
</tbody>
</table>

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

<table>
<thead>
<tr>
<th>EPA</th>
<th>Maximum EPA Per Lumen</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>5.8 4.2 3.6 3.0 2.4</td>
</tr>
<tr>
<td>110</td>
<td>7.2 5.4 5.0 4.0 3.2</td>
</tr>
<tr>
<td>120</td>
<td>8.8 6.8 6.2 5.0 4.0</td>
</tr>
<tr>
<td>130</td>
<td>11.0 8.4 7.8 6.2 5.2</td>
</tr>
</tbody>
</table>

### Wall Thickness

- **C = .156"**
- **D = .188"**
- **E = .219"**
- **F = .250"**
- **G = .312"**
- **H = .375"**

### Butt Diameter

- **6 = 6"**
- **7 = 7"**
- **8 = 8"**
- **10 = 10"**
- **12 = 12"**

### Top Diameter

- **B = 4.5"**
- **C = 6"**

### Base Style

- **4 = 4-Bolt Base**

### Arm Style

- **B = Bullhorn Arm**

### Arm Quantity

- **2 = Double**

### Arm Length

- **0 = Standard Length**

### Finish

- **Satin Aluminum (BA)**
- **Black Powder Coat (BH)**
- **White Powder Coat (BM)**
- **Dark Bronze Powder Coat (BV)**
- **Dark Green Powder Coat (BV)**
- **Gray Powder Coat (GC)**
- **Specify Finish (**)**

www.hapco.com 101
RTA Round Tapered Aluminum Pole with Arms
Double Bullhorn — Direct Buried

Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**
- **6” Butt Diameter** - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.
- **7”+ Butt Diameters** - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8” - 16NC Grounding Provision.

**Embed Detail**
Direct Buried Pole bottom section on 6”+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24” below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**WARNING:** Do not install light pole without luminaire.
**Catalog Number System**

The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example:**

RTA 30 D 8 B E B 2 0 – 01

- **Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Direct Buried, Bullhorn Arm, Double, Standard Arm Length, Satin Aluminum Finish.**

### Wall Thickness

- C = .156”
- D = .188”
- E = .219”
- F = .250”
- G = .312”

### Butt Diameter

- 6 = 6”
- 7 = 7”
- 8 = 8”
- 10 = 10”

### Top Diameter

- B = 4.5”
- C = 6”

### Base Style

- E = Direct Buried

### Arm Style

- B = Bullhorn Arm

### Arm Quantity

- 2 = Double

### Arm Length

- 0 = Standard Length

### Finish

- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA; if weight is exceeded, or if other design life or code is required, please consult the factory.

**www.hapco.com**
### Round Tapered Aluminum Pole with Arms

**Double Bullhorn — Breakaway T-Base**

#### Pole
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

#### Base Style
- Cast Aluminum Transformer Base (T-Base) of Alloy 356-T6 with Aluminum Door and Stainless Steel Hex Head Screw. FHWA Approved Breakaway.

#### Handhole
**7"-10" Butt Diameters - Tapered Door Opening**
- (9-3/4" W Base x 9-1/4" W Top x 11-3/4" H) with Flush Mount Aluminum Cover and Stainless Steel Hex Head Screw. Grounding Provisions tapped 1/4"-20NC and 1/2"-13NC are provided.

#### Anchorage
**Base Anchorage** includes four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10") of threaded end will be galvanized per ASTM A153.

**Top Connecting Hardware** includes four (4) each 1"-8NC x 3-3/4" Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). A bolt circle template will be provided.

#### Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

### Table: Dimensions in Inches

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

---

**Dimensions in Inches**

---

**WARNING:** Do not install light pole without luminaire.
Catalog Number System
The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B F B 20 – 01
Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Bullhorn Arm, Double, Standard Arm Length, Satin Aluminum Finish.

### Wall Thickness
- D = .188"
- E = .219"
- F = .250"

### Butt Diameter
- 7 = 7"
- 8 = 8"
- 10 = 10"

### Top Diameter
- B = 4.5"
- C = 6"

### Base Style
- F = Breakaway T-Base

### Arm Style
- B = Bullhorn Arm

### Arm Quantity
- 2 = Double

### Arm Length
- 0 = Standard Length

### Finish
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
hapco.com 105
RTA Round Tapered Aluminum Pole with Arms
Triple Bullhorn 180° — 4-Bolt Base

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 (Up to .250&quot;)</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312&quot; +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12&quot;</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

Satin Aluminum or Powder Coated Finish per Customer Specification.

**Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.**

**Base Style**
4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

**Handhole**
6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

**Anchorage**
Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Dimensions in Inches**

---

WARNING: Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -

RTA 30 D 8 B 4 B 3 0 – 01

Round Tapered Aluminum, 30' Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, 4-Bolt Base, Bullhorn Arm, Triple - 180°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness

C = .156”
D = .188”
E = .219”
F = .250”
G = .312”
H = .375”

Butt Diameter

6 = 6”
7 = 7”
8 = 8”
10 = 10”
2 = 12”

Top Diameter

B = 4.5”
C = 6”

Base Style

4 = 4-Bolt Base

Arm Style

B = Bullhorn Arm

Arm Quantity

3 = Triple - 180°

Arm Length

0 = Standard Length

Finish

01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
RTA Round Tapered Aluminum Pole with Arms Triple Bullhorn 180° — Direct Buried

A Mounting Height
B Wall Thickness
C Butt Diameter
D Top Diameter
E Embed Length

Pole
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

Handhole
6” Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.
7”+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

Embed Detail
Direct Buried Pole bottom section on 6"+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24" below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

<table>
<thead>
<tr>
<th>Butt Dia.</th>
<th>Top Dia.</th>
<th>Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4'</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6'</td>
</tr>
</tbody>
</table>

C and D Dimensions in inches

WARNING: Do not install light pole without luminaire.
**RTA - ROUND TAPERED ALUMINUM POLE WITH ARMS**

**180° DIRECT BURIED**

**RTA - ROUND TAPERED ALUMINUM POLE WITH ARMS**

**TRIPLE BULLHORN 180°**

---

### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example -**

RTA 30 D 8 B E B 3 0 - 01

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, Direct Buried, Bullhorn Arm, Triple - 180°, Standard Arm Length, Satin Aluminum Finish.

---

#### Wall Thickness

<table>
<thead>
<tr>
<th>C</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>.156”</td>
<td>.156”</td>
</tr>
<tr>
<td>.188”</td>
<td>.188”</td>
</tr>
<tr>
<td>.219”</td>
<td>.219”</td>
</tr>
<tr>
<td>.250”</td>
<td>.250”</td>
</tr>
<tr>
<td>.256”</td>
<td>.256”</td>
</tr>
</tbody>
</table>

#### Butt Diameter

| 6 | 6”          |
| 7 | 7”          |
| 8 | 8”          |
| 10 | 10”        |

#### Top Diameter

<table>
<thead>
<tr>
<th>B</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5</td>
<td>4.5”</td>
</tr>
<tr>
<td>6</td>
<td>6”</td>
</tr>
<tr>
<td>7</td>
<td>7”</td>
</tr>
<tr>
<td>8</td>
<td>8”</td>
</tr>
</tbody>
</table>

#### Base Style

<table>
<thead>
<tr>
<th>E</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Buried</td>
<td>Direct Buried</td>
</tr>
</tbody>
</table>

#### Arm Style

<table>
<thead>
<tr>
<th>B</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bullhorn Arm</td>
<td>Bullhorn Arm</td>
</tr>
</tbody>
</table>

#### Arm Quantity

<table>
<thead>
<tr>
<th>3</th>
<th>Triple - 180°</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Standard Length</td>
</tr>
</tbody>
</table>

#### Finish

<table>
<thead>
<tr>
<th>BA</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Powder Coat</td>
<td>Black Powder Coat</td>
</tr>
<tr>
<td>White Powder Coat</td>
<td>White Powder Coat</td>
</tr>
<tr>
<td>Dark Bronze Powder Coat</td>
<td>Dark Bronze Powder Coat</td>
</tr>
<tr>
<td>Dark Green Powder Coat</td>
<td>Dark Green Powder Coat</td>
</tr>
<tr>
<td>Gray Powder Coat</td>
<td>Gray Powder Coat</td>
</tr>
</tbody>
</table>

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

---

**Catalog Number System**

<table>
<thead>
<tr>
<th>D</th>
<th>Type Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Satin Aluminum</td>
</tr>
<tr>
<td>02</td>
<td>Powder Coat</td>
</tr>
<tr>
<td>03</td>
<td>Black Powder Coat</td>
</tr>
<tr>
<td>04</td>
<td>White Powder Coat</td>
</tr>
<tr>
<td>05</td>
<td>Dark Bronze Powder Coat</td>
</tr>
<tr>
<td>06</td>
<td>Dark Green Powder Coat</td>
</tr>
<tr>
<td>07</td>
<td>Gray Powder Coat</td>
</tr>
</tbody>
</table>

---

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
RTA Round Tapered Aluminum Pole with Arms
Triple Bullhorn 180° — Breakaway T-Base

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

Dimensions in inches

**WARNING:** Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -

RTA 30 D 8 B F B 30 – 01

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Bullhorn Arm, Triple - 180°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness
D = .188"
E = .219"
F = .250"

Butt Diameter
7 = 7"
8 = 8"
1 = 10"

Top Diameter
B = 4.5"
C = 6"

Base Style
F = Breakaway T-Base

Arm Style
B = Bullhorn Arm

Arm Quantity
3 = Triple - 180°

Arm Length
0 = Standard Length

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
Round Tapered Aluminum Pole with Arms
Triple Bullhorn 120° — 4-Bolt Base

**Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.**

### Base Style

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

### Handhole

**6” Butt Diameter** - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

**7”+ Butt Diameters** - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC Grounding Provision.

### Anchorage

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

### Vibration Damper

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

### Dimensions in Inches

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 Up To .250”</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312” +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12”</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

*Two-Piece Pole Design*
The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example -**

RTA 30 D 8 B 4 B C 0 – 01
Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Bullhorn Arm, Triple - 120°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness
- C = .156"
- D = .188"
- E = .219"
- F = .250"
- G = .312"
- H = .375"

Butt Diameter
- 6 = 6"
- 7 = 7"
- 8 = 8"
- 1 = 10"
- 2 = 12"

Top Diameter
- B = 4.5"
- C = 6"

Base Style
- 4 = 4-Bolt Base

Arm Style
- B = Bullhorn Arm

Arm Quantity
- C = Triple - 120°

Arm Length
- 0 = Standard Length

Finish
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

**EPA Notes:**
Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
Round Tapered Aluminum Pole with Arms
Triple Bullhorn 120° — Direct Buried

**Pole**
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**

- **6” Butt Diameter** - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.
- **7”+ Butt Diameters** - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC Grounding Provision.

**Embed Detail**
Direct Buried Pole bottom section on 6”+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24” below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

Satin Aluminum or Powder Coated Finish per Customer Specification.

<table>
<thead>
<tr>
<th>C BUTT DIA.</th>
<th>D TOP DIA.</th>
<th>E EMBED</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4’</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6’</td>
</tr>
</tbody>
</table>

C and D Dimensions in inches

---

WARNING: Do not install light pole without luminaire.
**Catalog Number System**

The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example**

RTA 30 D 8 B E B C 0 – 01

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Direct Buried, Bullhorn Arm, Triple - 120°, Standard Arm Length, Satin Aluminum Finish.

---

### Wall Thickness

<table>
<thead>
<tr>
<th>Ngs.</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>.156”</td>
<td>.188”</td>
<td>.219”</td>
<td>.250”</td>
<td>.312”</td>
<td></td>
</tr>
</tbody>
</table>

### Butt Diameter

<table>
<thead>
<tr>
<th>Ngs.</th>
<th>B</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>6”</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10”</td>
<td></td>
</tr>
</tbody>
</table>

### Top Diameter

<table>
<thead>
<tr>
<th>Ngs.</th>
<th>B</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Base Style

<table>
<thead>
<tr>
<th>Ngs.</th>
<th>E</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Buried</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Arm Style

<table>
<thead>
<tr>
<th>Ngs.</th>
<th>B</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bullhorn Arm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Arm Quantity

<table>
<thead>
<tr>
<th>Ngs.</th>
<th>C</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple - 120°</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Arm Length

<table>
<thead>
<tr>
<th>Ngs.</th>
<th>L</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Length</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Finish

<table>
<thead>
<tr>
<th>Ngs.</th>
<th>Finish</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satin Aluminum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Powder Coat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Powder Coat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dark Bronze Powder Coat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dark Green Powder Coat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gray Powder Coat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specify Finish</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**EPA Notes:**

Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA if weight is exceeded, or if other design life or code is required, please consult the factory.

---

**RTA - Round Tapered Aluminum Pole with Arms**

**Direct Buried**

---

**TRIPLE BULLHORN 120°**

---

**www.hapco.com**

115
RTA Round Tapered Aluminum Pole with Arms
Triple Bullhorn 120° — Breakaway T-Base

Dimensions in Inches

C Butt Diameter
4-Bolt Base Flange
Aluminum Alloy 356-T6
With Aluminum Bolt Covers And Stainless Steel Hex Head Screws

D Top Diameter
Tapered Aluminum Tube
Alloy 6063-T6

B Wall Thickness
Aluminum Alloy Tube
Alloy 6063-T6

A Mounting Height
Transformer Base
FHWA Approved Breakaway

Pole
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Style
Cast Aluminum Transformer Base (T-Base) of Alloy 356-T6 with Aluminum Door and Stainless Steel Hex Head Screw. FHWA Approved Breakaway.

Handhole
7”-10” Butt Diameters -
Tapered Door Opening
(9-3/4” W Base x 9-1/4” W Top x 11-3/4” H) with Flush Mount Aluminum Cover and Stainless Steel Hex Head Screw. Grounding Provisions tapped 1/4”-20NC and 1/2”-13NC are provided.

Anchorage
Base Anchorage includes four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10”) of threaded end will be galvanized per ASTM A153.

Top Connecting Hardware includes four (4) each 1”-8NC x 3-3/4” Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). A bolt circle template will be provided.

Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

Satin Aluminum or Powder Coated Finish per Customer Specification.

Dimensions in inches

WARNING: Do not install light pole without luminaire.

www.hapco.com
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

#### Catalog Number Example -

**RTA 30 D 8 F B C 0 – 01**

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Bullhorn Arm, Triple - 120°, Standard Arm Length, Satin Aluminum Finish.

### Wall Thickness

<table>
<thead>
<tr>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Butt Diameter

<table>
<thead>
<tr>
<th>J</th>
<th>K</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>7&quot;</td>
<td>8&quot;</td>
<td>10&quot;</td>
</tr>
</tbody>
</table>

### Top Diameter

<table>
<thead>
<tr>
<th>M</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5&quot;</td>
<td>6&quot;</td>
<td></td>
</tr>
</tbody>
</table>

### Base Style

<table>
<thead>
<tr>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>F = Breakaway T-Base</td>
</tr>
</tbody>
</table>

### Arm Style

<table>
<thead>
<tr>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>B = Bullhorn Arm</td>
</tr>
</tbody>
</table>

### Arm Quantity

<table>
<thead>
<tr>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>C = Triple - 120°</td>
</tr>
</tbody>
</table>

### Arm Length

<table>
<thead>
<tr>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = Standard Length</td>
</tr>
</tbody>
</table>

### Finish

<table>
<thead>
<tr>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>01 = Satin Aluminum</strong></td>
</tr>
<tr>
<td>BA = Black Powder Coat</td>
</tr>
<tr>
<td>BH = White Powder Coat</td>
</tr>
<tr>
<td>BM = Dark Bronze Powder Coat</td>
</tr>
<tr>
<td>BV = Dark Green Powder Coat</td>
</tr>
<tr>
<td>GC = Gray Powder Coat</td>
</tr>
</tbody>
</table>

** = Specify Finish

---

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

---

[Catalog Number Table]

### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

#### Catalog Number Example -

**RTA 30 D 8 F B C 0 – 01**

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Breakaway T-Base, Bullhorn Arm, Triple - 120°, Standard Arm Length, Satin Aluminum Finish.

### Wall Thickness

<table>
<thead>
<tr>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>.188&quot;</td>
<td>.219&quot;</td>
<td>.250&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Butt Diameter

<table>
<thead>
<tr>
<th>J</th>
<th>K</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>7&quot;</td>
<td>8&quot;</td>
<td>10&quot;</td>
</tr>
</tbody>
</table>

### Top Diameter

<table>
<thead>
<tr>
<th>M</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5&quot;</td>
<td>6&quot;</td>
<td></td>
</tr>
</tbody>
</table>

### Base Style

<table>
<thead>
<tr>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>F = Breakaway T-Base</td>
</tr>
</tbody>
</table>

### Arm Style

<table>
<thead>
<tr>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>B = Bullhorn Arm</td>
</tr>
</tbody>
</table>

### Arm Quantity

<table>
<thead>
<tr>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>C = Triple - 120°</td>
</tr>
</tbody>
</table>

### Arm Length

<table>
<thead>
<tr>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = Standard Length</td>
</tr>
</tbody>
</table>

### Finish

<table>
<thead>
<tr>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>01 = Satin Aluminum</strong></td>
</tr>
<tr>
<td>BA = Black Powder Coat</td>
</tr>
<tr>
<td>BH = White Powder Coat</td>
</tr>
<tr>
<td>BM = Dark Bronze Powder Coat</td>
</tr>
<tr>
<td>BV = Dark Green Powder Coat</td>
</tr>
<tr>
<td>GC = Gray Powder Coat</td>
</tr>
</tbody>
</table>

** = Specify Finish

---

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
RTA Round Tapered Aluminum Pole with Arms
Quad Bullhorn 180° — 4-Bolt Base

Wall Thickness
Tapered Aluminum Tube
Alloy 6063-T6

Butt Diameter
4-Bolt Base
With Bolt Covers

Handhole
Quad Bullhorn - 180°
2" NPS Schedule 40 Pipe Arms
Aluminum Alloy 6063-T6
Stainless Steel Hardware Included

Dimensions in Inches

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUTT DIA.</td>
<td>TOP DIA.</td>
<td>BOLT CIR. DIA.</td>
<td>BASE SQ.</td>
<td>BOLT PROJ.</td>
<td>BOLT SIZE</td>
</tr>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 Up To .250&quot;</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312&quot; +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12&quot;</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

Satin Aluminum or Powder Coated Finish per Customer Specification.

Pole
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Style
4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

Handhole
6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

7" Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

Anchorage
Anchor Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.

Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

WARNING: Do not install light pole without luminaire.
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

**RTA** - ROUND TAPED ALUMINUM POLE WITH ARMS

#### Catalog Number Example -

**RTA 30 D 8 B 4 B 4 0 – 01**

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, 4-Bolt Base, Bullhorn Arm, Quad - 180°, Standard Arm Length, Satin Aluminum Finish.

### Wall Thickness

- **C** = 0.156”
- **D** = 0.188”
- **E** = 0.219”
- **F** = 0.250”
- **G** = 0.312”
- **H** = 0.375”

### Butt Diameter

- **6** = 6”
- **7** = 7”
- **8** = 8”
- **10** = 10”
- **12** = 12”

### Top Diameter

- **B** = 4.5”
- **C** = 6”

### Base Style

- **4** = 4-Bolt Base

### Arm Style

- **B** = Bullhorn Arm

### Arm Quantity

- **4** = Quad - 180°

### Arm Length

- **0** = Standard Length

### Finish

- **BA** = Black Powder Coat
- **BH** = White Powder Coat
- **BM** = Dark Bronze Powder Coat
- **BV** = Dark Green Powder Coat
- **GC** = Gray Powder Coat

**= Specify Finish**

---

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

---

**Catalog Number**

<table>
<thead>
<tr>
<th>WT</th>
<th>B</th>
<th>C</th>
<th>L</th>
<th>90</th>
<th>100</th>
<th>110</th>
<th>120</th>
<th>130</th>
<th><strong>Catalog Number</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>0.156&quot;</td>
<td>6</td>
<td>25</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA20C6B4B40-**</td>
</tr>
<tr>
<td>20</td>
<td>0.188&quot;</td>
<td>6</td>
<td>40</td>
<td>1.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA20D6B4B40-**</td>
</tr>
<tr>
<td>20</td>
<td>0.156&quot;</td>
<td>7</td>
<td>30</td>
<td>2.6</td>
<td>1.6</td>
<td>1.4</td>
<td>-</td>
<td>-</td>
<td>RTA20C7B4B40-**</td>
</tr>
<tr>
<td>20</td>
<td>0.188&quot;</td>
<td>7</td>
<td>30</td>
<td>3.8</td>
<td>2.6</td>
<td>2.2</td>
<td>1.4</td>
<td>-</td>
<td>RTA20D7B4B40-**</td>
</tr>
<tr>
<td>20</td>
<td>0.188&quot;</td>
<td>8</td>
<td>35</td>
<td>6.0</td>
<td>4.4</td>
<td>3.8</td>
<td>2.8</td>
<td>2.0</td>
<td>RTA20D8B4B40-**</td>
</tr>
<tr>
<td>25</td>
<td>0.156&quot;</td>
<td>7</td>
<td>25</td>
<td>1.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA25C7B4B40-**</td>
</tr>
<tr>
<td>25</td>
<td>0.188&quot;</td>
<td>7</td>
<td>40</td>
<td>1.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA25D7B4B40-**</td>
</tr>
<tr>
<td>25</td>
<td>0.156&quot;</td>
<td>8</td>
<td>30</td>
<td>2.4</td>
<td>1.4</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>RTA25C8B4B40-**</td>
</tr>
<tr>
<td>25</td>
<td>0.188&quot;</td>
<td>8</td>
<td>30</td>
<td>3.6</td>
<td>2.4</td>
<td>2.0</td>
<td>1.2</td>
<td>-</td>
<td>RTA25D8B4B40-**</td>
</tr>
<tr>
<td>25</td>
<td>0.219&quot;</td>
<td>8</td>
<td>30</td>
<td>4.6</td>
<td>3.2</td>
<td>2.8</td>
<td>2.0</td>
<td>1.4</td>
<td>RTA25E8B4B40-**</td>
</tr>
<tr>
<td>25</td>
<td>0.250&quot;</td>
<td>8</td>
<td>30</td>
<td>5.6</td>
<td>4.0</td>
<td>3.6</td>
<td>2.6</td>
<td>1.8</td>
<td>RTA25F8B4B40-**</td>
</tr>
<tr>
<td>30</td>
<td>0.156&quot;</td>
<td>8</td>
<td>25</td>
<td>1.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA30C8B4B40-**</td>
</tr>
<tr>
<td>30</td>
<td>0.188&quot;</td>
<td>8</td>
<td>40</td>
<td>1.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA30D8B4B40-**</td>
</tr>
<tr>
<td>30</td>
<td>0.219&quot;</td>
<td>8</td>
<td>30</td>
<td>2.8</td>
<td>1.6</td>
<td>1.4</td>
<td>-</td>
<td>-</td>
<td>RTA30E8B4B40-**</td>
</tr>
<tr>
<td>30</td>
<td>0.250&quot;</td>
<td>8</td>
<td>25</td>
<td>3.6</td>
<td>2.4</td>
<td>2.0</td>
<td>1.2</td>
<td>-</td>
<td>RTA30F8B4B40-**</td>
</tr>
<tr>
<td>30</td>
<td>0.188&quot;</td>
<td>10</td>
<td>25</td>
<td>5.2</td>
<td>3.8</td>
<td>3.4</td>
<td>2.4</td>
<td>1.6</td>
<td>RTA30D1C8B4B0-**</td>
</tr>
<tr>
<td>30</td>
<td>0.219&quot;</td>
<td>10</td>
<td>40</td>
<td>6.6</td>
<td>4.8</td>
<td>4.4</td>
<td>3.2</td>
<td>2.4</td>
<td>RTA30E1C8B4B0-**</td>
</tr>
<tr>
<td>30</td>
<td>0.250&quot;</td>
<td>10</td>
<td>55</td>
<td>8.0</td>
<td>5.8</td>
<td>5.4</td>
<td>4.0</td>
<td>3.0</td>
<td>RTA30F1C8B4B0-**</td>
</tr>
<tr>
<td>35</td>
<td>0.19&quot;</td>
<td>8</td>
<td>30</td>
<td>1.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA35C8B4B40-**</td>
</tr>
<tr>
<td>35</td>
<td>0.250&quot;</td>
<td>8</td>
<td>25</td>
<td>2.0</td>
<td>1.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA35D8B4B40-**</td>
</tr>
<tr>
<td>35</td>
<td>0.188&quot;</td>
<td>10</td>
<td>25</td>
<td>3.4</td>
<td>2.2</td>
<td>2.0</td>
<td>1.2</td>
<td>-</td>
<td>RTA35D1C8B4B0-**</td>
</tr>
<tr>
<td>35</td>
<td>0.219&quot;</td>
<td>10</td>
<td>30</td>
<td>4.6</td>
<td>3.2</td>
<td>2.8</td>
<td>2.0</td>
<td>1.2</td>
<td>RTA35E1C8B4B0-**</td>
</tr>
<tr>
<td>35</td>
<td>0.250&quot;</td>
<td>10</td>
<td>30</td>
<td>5.8</td>
<td>4.2</td>
<td>3.6</td>
<td>2.6</td>
<td>1.8</td>
<td>RTA35F1C8B4B0-**</td>
</tr>
<tr>
<td>40</td>
<td>0.188&quot;</td>
<td>10</td>
<td>35</td>
<td>2.0</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA40D1C8B4B0-**</td>
</tr>
<tr>
<td>40</td>
<td>0.250&quot;</td>
<td>10</td>
<td>35</td>
<td>4.0</td>
<td>2.6</td>
<td>2.2</td>
<td>1.4</td>
<td>-</td>
<td>RTA40E1C8B4B0-**</td>
</tr>
<tr>
<td>40</td>
<td>0.312&quot;</td>
<td>10</td>
<td>30</td>
<td>5.8</td>
<td>4.2</td>
<td>3.8</td>
<td>2.6</td>
<td>1.8</td>
<td>RTA40G1C8B4B0-**</td>
</tr>
<tr>
<td>45</td>
<td>0.219&quot;</td>
<td>10</td>
<td>35</td>
<td>1.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA45E1C8B4B0-**</td>
</tr>
<tr>
<td>45</td>
<td>0.250&quot;</td>
<td>10</td>
<td>25</td>
<td>2.6</td>
<td>1.6</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>RTA45F1C8B4B0-**</td>
</tr>
<tr>
<td>45</td>
<td>0.312&quot;</td>
<td>10</td>
<td>35</td>
<td>4.2</td>
<td>2.8</td>
<td>2.4</td>
<td>1.6</td>
<td>-</td>
<td>RTA45G1C8B4B0-**</td>
</tr>
<tr>
<td>45</td>
<td>0.312&quot;</td>
<td>12</td>
<td>55</td>
<td>8.2</td>
<td>6.0</td>
<td>5.4</td>
<td>4.2</td>
<td>3.0</td>
<td>RTA45H2C8B4B0-**</td>
</tr>
<tr>
<td>45</td>
<td>0.375&quot;</td>
<td>12</td>
<td>65</td>
<td>9.2</td>
<td>6.9</td>
<td>6.2</td>
<td>4.7</td>
<td>3.6</td>
<td>RTA45I2C8B4B0-**</td>
</tr>
</tbody>
</table>

---

http://www.hapco.com

**www.hapco.com**
Round Tapered Aluminum Pole with Arms
Quad Bullhorn 180° — Direct Buried

**Pole**

Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**

6” Butt Diameter - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

7”+ Butt Diameters - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC Grounding Provision.

**Embed Detail**

Direct Buried Pole bottom section on 6”+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24” below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**WARNING:** Do not install light pole without luminaire.

<table>
<thead>
<tr>
<th>C Butt Dia.</th>
<th>D Top Dia.</th>
<th>E Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4’</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5’</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6’</td>
</tr>
</tbody>
</table>

C and D Dimensions in Inches

Satin Aluminum or Powder Coated Finish per Customer Specification.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B E B 4 0 – 01
Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, Direct Buried, Bullhorn Arm, Quad - 180°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness
C = .156"
D = .188"
E = .219"
F = .250"
G = .312"

Butt Diameter
6 = 6"
7 = 7"
8 = 8"
10 = 10"

Top Diameter
B = 4.5"
C = 6"

Base Style
E = Direct Buried

Arm Style
B = Bullhorn Arm

Arm Quantity
4 = Quad - 180°

Arm Length
0 = Standard Length

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
**RTA**

Round Tapered Aluminum Pole with Arms
Quad Bullhorn 180° — Breakaway T-Base

---

**Pole**
 Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

**Base Style**
 Cast Aluminum Transformer Base (T-Base) of Alloy 356-T6 with Aluminum Door and Stainless Steel Hex Head Screw. FHWA Approved Breakaway.

**Handhole**
7”-10” Butt Diameters - Tapered Door Opening
(9-3/4” W Base x 9-1/4” W Top x 11-3/4” H) with Flush Mount Aluminum Cover and Stainless Steel Hex Head Screw. Grounding Provisions tapped 1/4”-20NC and 1/2”-13NC are provided.

**Anchorage**
Base Anchorage includes four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10”) of threaded end will be galvanized per ASTM A153.
Top Connecting Hardware includes four (4) each 1”-8NC x 3-3/4” Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). A bolt circle template will be provided.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

**Dimensions in Inches**

<table>
<thead>
<tr>
<th>C</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

---

**WARNING:** Do not install light pole without luminaire.
The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RTA 30 D 8 B F B 4 0 – 01
Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Breakaway T-Base, Bullhorn Arm, Quad - 180°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness
D = .188”
E = .219”
F = .250”
G = .312”

Butt Diameter
7 = 7”
8 = 8”
10 = 10”

Top Diameter
B = 4.5”
C = 6”

Base Style
F = Breakaway T-Base

Arm Style
B = Bullhorn Arm

Arm Quantity
4 = Quad - 180°

Arm Length
0 = Standard Length

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
**RTA**

**Round Tapered Aluminum Pole with Arms**

**Quad Bullhorn 90° — 4-Bolt Base**

**A Mounting Height**

**B Wall Thickness**
Tapered Aluminum Tube
Alloy 6063-T6

**C Butt Diameter**
4-Bolt Base
With Bolt Covers

**D Top Diameter**

**Quad Bullhorn - 90°**
2" NPS Schedule 40 Pipe Arms
Aluminum Alloy 6063-T6
Stainless Steel Hardware Included

**Handhole**
6” Butt Diameter - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

**7”+ Butt Diameters -**
Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC Grounding Provision.

**Butt Size**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 Up To .250”</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312” +</td>
<td>6</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
<tr>
<td>12”</td>
<td>6</td>
<td>16 - 18</td>
<td>17</td>
<td>3.75</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

*Satin Aluminum or Powder Coated Finish per Customer Specification.*

---

**Pole**
Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

**Base Style**
4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

**Handhole**
6” Butt Diameter - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

**Anchorage**
Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

---

*Two-Piece Pole Design*
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -

RTA 30 D 8 B 4 B D 0 – 01

Round Tapered Aluminum, 30' Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, 4-Bolt Base, Bullhorn Arm, Quad - 90°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness
C = .156”
D = .188”
E = .219”
F = .250”
G = .312”
H = .375”

Butt Diameter
6 = 6”
7 = 7”
8 = 8”
1 = 10”
2 = 12”

Top Diameter
B = 4.5”
C = 6”

Base Style
4 = 4-Bolt Base

Arm Style
B = Bullhorn Arm

Arm Quantity
D = Quad - 90°

Arm Length
0 = Standard Length

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
**RTA**

**Round Tapered Aluminum Pole with Arms**

**Quad Bullhorn 90° — Direct Buried**

- **A Mounting Height**
- **B Wall Thickness**
  - Tapered Aluminum Tube
  - Alloy 6063-T6
- **C Butt Diameter**
  - 6" Butt Diameter - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.
  - 7"+ Butt Diameters - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.
- **D Top Diameter**
- **E Embed Length**
  - Wire Access Slots - 1-3/4" x 6" 2@180°
  - 1' to 2' Flattened
  - 3" to 6"

**Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.**

**Handhole**

**6" Butt Diameter** - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

**7"+ Butt Diameters** - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

**Embed Detail**

Direct Buried Pole bottom section on 6"+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24" below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**WARNING:** Do not install light pole without luminaire.

---

**Table:**

<table>
<thead>
<tr>
<th>C Butt Dia.</th>
<th>D Top Dia.</th>
<th>E Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>4.5</td>
<td>4'</td>
</tr>
<tr>
<td>7</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>5'</td>
</tr>
<tr>
<td>10</td>
<td>6</td>
<td>6'</td>
</tr>
</tbody>
</table>

*C and D Dimensions in Inches*
# Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example -**

RTA 30 D 8 B E B D 0 – 01

Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Top Diameter, Direct Buried, Bullhorn Arm, Quad - 90°, Standard Arm Length, Satin Aluminum Finish.

## Wall Thickness

<table>
<thead>
<tr>
<th>Mfg. Ngt.</th>
<th>Wall Thickness</th>
<th>C</th>
<th>90 100 110 120 130</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>.156”</td>
<td>6</td>
<td>25</td>
<td>2.0 1.2 - - - -</td>
</tr>
<tr>
<td>20</td>
<td>.188”</td>
<td>6</td>
<td>35</td>
<td>2.8 1.8 1.6 - -</td>
</tr>
<tr>
<td>20</td>
<td>.156”</td>
<td>7</td>
<td>35</td>
<td>3.8 2.6 2.2 1.6</td>
</tr>
<tr>
<td>20</td>
<td>.188”</td>
<td>7</td>
<td>25</td>
<td>5.2 3.6 3.2 2.4</td>
</tr>
<tr>
<td>20</td>
<td>.188”</td>
<td>8</td>
<td>55</td>
<td>7.6 5.6 5.0 3.8</td>
</tr>
<tr>
<td>25</td>
<td>.188”</td>
<td>6</td>
<td>25</td>
<td>1.2 - - - - - -</td>
</tr>
<tr>
<td>25</td>
<td>.156”</td>
<td>7</td>
<td>25</td>
<td>2.0 1.0 - - - -</td>
</tr>
<tr>
<td>25</td>
<td>.188”</td>
<td>7</td>
<td>35</td>
<td>3.0 1.8 1.6 - -</td>
</tr>
<tr>
<td>25</td>
<td>.156”</td>
<td>8</td>
<td>30</td>
<td>3.4 2.4 2.0 1.4</td>
</tr>
<tr>
<td>25</td>
<td>.188”</td>
<td>8</td>
<td>35</td>
<td>4.8 3.4 3.0 2.2</td>
</tr>
<tr>
<td>25</td>
<td>.219”</td>
<td>8</td>
<td>35</td>
<td>6.2 4.4 4.0 3.0</td>
</tr>
<tr>
<td>25</td>
<td>.250”</td>
<td>8</td>
<td>50</td>
<td>7.2 5.4 4.8 3.6</td>
</tr>
</tbody>
</table>

## Butt Diameter

<table>
<thead>
<tr>
<th>Mfg. Ngt.</th>
<th>Butt Diameter</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>.156”</td>
<td>6</td>
<td>25</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>25</td>
<td>.188”</td>
<td>7</td>
<td>35</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>30</td>
<td>.156”</td>
<td>8</td>
<td>25</td>
<td>2.0</td>
<td>1.0</td>
</tr>
<tr>
<td>30</td>
<td>.188”</td>
<td>8</td>
<td>35</td>
<td>3.0</td>
<td>1.8</td>
</tr>
<tr>
<td>30</td>
<td>.188”</td>
<td>10</td>
<td>45</td>
<td>5.0</td>
<td>3.4</td>
</tr>
<tr>
<td>30</td>
<td>.219”</td>
<td>8</td>
<td>35</td>
<td>4.0</td>
<td>2.6</td>
</tr>
<tr>
<td>30</td>
<td>.250”</td>
<td>8</td>
<td>35</td>
<td>5.0</td>
<td>3.4</td>
</tr>
<tr>
<td>30</td>
<td>.250”</td>
<td>10</td>
<td>60</td>
<td>8.4</td>
<td>5.4</td>
</tr>
<tr>
<td>30</td>
<td>.250”</td>
<td>10</td>
<td>80</td>
<td>9.8</td>
<td>7.6</td>
</tr>
<tr>
<td>35</td>
<td>.188”</td>
<td>8</td>
<td>35</td>
<td>1.4</td>
<td>-</td>
</tr>
<tr>
<td>35</td>
<td>.188”</td>
<td>8</td>
<td>25</td>
<td>2.4</td>
<td>1.4</td>
</tr>
<tr>
<td>35</td>
<td>.250”</td>
<td>8</td>
<td>40</td>
<td>3.2</td>
<td>2.0</td>
</tr>
<tr>
<td>35</td>
<td>.188”</td>
<td>10</td>
<td>35</td>
<td>4.8</td>
<td>3.4</td>
</tr>
<tr>
<td>35</td>
<td>.188”</td>
<td>10</td>
<td>50</td>
<td>7.4</td>
<td>5.4</td>
</tr>
<tr>
<td>35</td>
<td>.219”</td>
<td>10</td>
<td>35</td>
<td>6.2</td>
<td>4.4</td>
</tr>
<tr>
<td>35</td>
<td>.250”</td>
<td>10</td>
<td>50</td>
<td>7.4</td>
<td>5.4</td>
</tr>
<tr>
<td>40</td>
<td>.219”</td>
<td>8</td>
<td>25</td>
<td>1.2</td>
<td>-</td>
</tr>
<tr>
<td>40</td>
<td>.250”</td>
<td>8</td>
<td>40</td>
<td>1.8</td>
<td>-</td>
</tr>
<tr>
<td>40</td>
<td>.188”</td>
<td>10</td>
<td>25</td>
<td>3.2</td>
<td>2.2</td>
</tr>
<tr>
<td>40</td>
<td>.219”</td>
<td>10</td>
<td>25</td>
<td>4.4</td>
<td>3.0</td>
</tr>
<tr>
<td>40</td>
<td>.250”</td>
<td>10</td>
<td>25</td>
<td>5.6</td>
<td>4.0</td>
</tr>
<tr>
<td>40</td>
<td>.312”</td>
<td>10</td>
<td>50</td>
<td>7.6</td>
<td>5.6</td>
</tr>
</tbody>
</table>

## Top Diameter

<table>
<thead>
<tr>
<th></th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>25</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>30</td>
<td>6.8</td>
<td>5.0</td>
<td>4.6</td>
<td>3.4</td>
</tr>
<tr>
<td>30</td>
<td>8.4</td>
<td>6.4</td>
<td>5.8</td>
<td>4.4</td>
</tr>
<tr>
<td>30</td>
<td>9.8</td>
<td>7.6</td>
<td>6.8</td>
<td>5.4</td>
</tr>
<tr>
<td>35</td>
<td>1.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>35</td>
<td>2.4</td>
<td>1.4</td>
<td>1.2</td>
<td>-</td>
</tr>
<tr>
<td>35</td>
<td>3.2</td>
<td>2.0</td>
<td>1.6</td>
<td>-</td>
</tr>
<tr>
<td>35</td>
<td>4.8</td>
<td>3.4</td>
<td>3.0</td>
<td>2.2</td>
</tr>
<tr>
<td>35</td>
<td>7.4</td>
<td>5.4</td>
<td>5.0</td>
<td>3.8</td>
</tr>
<tr>
<td>40</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>40</td>
<td>1.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>40</td>
<td>3.2</td>
<td>2.2</td>
<td>1.8</td>
<td>1.2</td>
</tr>
<tr>
<td>40</td>
<td>4.4</td>
<td>3.0</td>
<td>2.8</td>
<td>1.8</td>
</tr>
<tr>
<td>40</td>
<td>5.6</td>
<td>4.0</td>
<td>3.6</td>
<td>2.6</td>
</tr>
</tbody>
</table>

## Base Style

<table>
<thead>
<tr>
<th></th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct Buried</td>
<td>.250”</td>
<td>.312”</td>
</tr>
</tbody>
</table>

## Arm Style

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bullhorn Arm</td>
<td>6”</td>
</tr>
</tbody>
</table>

## Arm Quantity

<table>
<thead>
<tr>
<th></th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quad - 90°</td>
</tr>
</tbody>
</table>

## Arm Length

<table>
<thead>
<tr>
<th></th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard Length</td>
</tr>
</tbody>
</table>

## Finish

<table>
<thead>
<tr>
<th></th>
<th>01</th>
<th>BA</th>
<th>BH</th>
<th>BM</th>
<th>BV</th>
<th>GC</th>
</tr>
</thead>
</table>

**EPA Notes:**

Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
RTA
Round Tapered Aluminum Pole with Arms
Quad Bullhorn 90° — Breakaway T-Base

Dimensions in Inches

- C Butt Diameter
  - 4-Bolt Base Flange
  - Aluminum Alloy 356-T6
  - With Aluminum Bolt Covers And Stainless Steel Hex Head Screws

- D Top Diameter
  - 2" NPS Schedule 40 Pipe Arms
  - Aluminum Alloy 6063-T6
  - Stainless Steel Hardware Included

- B Wall Thickness
  - Tapered Aluminum Tube
  - Alloy 6063-T6

- A Mounting Height
  - 1'-5"

- E Quad Bullhorn
  - 90°
  - 2" NPS Schedule 40 Pipe Arms
  - Aluminum Alloy 6063-T6

- F Base
  - Square
  - Bolt Circle
  - Bolt Proj.
  - Bolt Size

<table>
<thead>
<tr>
<th>C BUTT DIA.</th>
<th>D TOP DIA.</th>
<th>F BOLT CIR. DIA.</th>
<th>G BOLT BASE SQ.</th>
<th>H BOLT PROJ.</th>
<th>I BOLT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>4.5</td>
<td>12</td>
<td>13.0625</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>4.5</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 Up To .250&quot;</td>
<td>6</td>
<td>15</td>
<td>15.375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312&quot;</td>
<td>6</td>
<td>17.25</td>
<td>17.4375</td>
<td>3.5</td>
<td>1 x 48 x 4</td>
</tr>
</tbody>
</table>

- G Base Square
  - 270°

- H Bolt Proj.
  - 90°
  - Handhole - 0°

- I Bolt Size

- Vibration Damper
  - When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

- Pole
  - Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

- Base Style
  - Cast Aluminum Transformer Base (T-Base) of Alloy 356-T6 with Aluminum Door and Stainless Steel Hex Head Screw. FHWA Approved Breakaway.

- Handhole
  - 7°-10° Butt Diameters -
    - Tapered Door Opening
      - (9-3/4" W Base x 9-1/4" W Top x 11-3/4" H) with Flush Mount Aluminum Cover and Stainless Steel Hex Head Screw.
      - Grounding Provisions tapped 1/4"-20NC and 1/2"-13NC are provided.

- Anchorage
  - Base Anchorage includes four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55, four (4) each Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). Ten inches (10") of threaded end will be galvanized per ASTM A153.

- Top Connecting Hardware includes four (4) each 1"-8NC x 3-3/4" Hex Head Bolts, Flat Washers, Heavy-Duty Flat Washers, Lock Washers, and Hex Nuts (all components Galv. Steel). A bolt circle template will be provided.

- Transformer Base
  - FHWA Approved Breakaway

- Satin Aluminum or Powder Coated Finish per Customer Specification.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -

RTA 30 D 8 B F B D 0 – 01
Round Tapered Aluminum, 30’ Mounting Height, .188” Wall Thickness, 8” Butt Diameter, 4.5” Top Diameter, Breakaway T-Base, Bullhorn Arm, Quad - 90°, Standard Arm Length, Satin Aluminum Finish.

Wall Thickness
D = .188”
E = .219”
F = .250”
G = .312”

Butt Diameter
7 = 7”
8 = 8”
1 = 10”

Top Diameter
B = 4.5”
C = 6”

Base Style
F = Breakaway T-Base

Arm Style
B = Bullhorn Arm

Arm Quantity
D = Quad - 90°

Arm Length
0 = Standard Length

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

<table>
<thead>
<tr>
<th>Mfg. Hgt.</th>
<th>B - Wall Thickness</th>
<th>C - Butt Diameter</th>
<th>Lmr. Weight</th>
<th>90</th>
<th>Maximum EPA Per Ton</th>
<th>100</th>
<th>110</th>
<th>120</th>
<th>130</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>.188”</td>
<td>7</td>
<td>25</td>
<td>4.0</td>
<td>2.8</td>
<td>2.4</td>
<td>1.8</td>
<td>1.2</td>
<td>1.2</td>
<td>RTA20D7BFBD0-**</td>
</tr>
<tr>
<td>20</td>
<td>.188”</td>
<td>8</td>
<td>40</td>
<td>6.0</td>
<td>4.4</td>
<td>4.0</td>
<td>3.0</td>
<td>2.2</td>
<td>2.2</td>
<td>RTA20D8BFBD0-**</td>
</tr>
<tr>
<td>25</td>
<td>.188”</td>
<td>7</td>
<td>25</td>
<td>6.0</td>
<td>2.2</td>
<td>1.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA25D7BFBD0-**</td>
</tr>
<tr>
<td>25</td>
<td>.188”</td>
<td>8</td>
<td>35</td>
<td>8.0</td>
<td>6.0</td>
<td>4.2</td>
<td>3.0</td>
<td>2.2</td>
<td>2.2</td>
<td>RTA25D8BFBD0-**</td>
</tr>
<tr>
<td>25</td>
<td>.219”</td>
<td>8</td>
<td>35</td>
<td>10.0</td>
<td>8.0</td>
<td>6.0</td>
<td>4.2</td>
<td>3.0</td>
<td>2.2</td>
<td>RTA25E8BFBD0-**</td>
</tr>
<tr>
<td>25</td>
<td>.250”</td>
<td>8</td>
<td>35</td>
<td>12.0</td>
<td>10.0</td>
<td>8.0</td>
<td>6.0</td>
<td>4.2</td>
<td>3.0</td>
<td>RTA25F8BFBD0-**</td>
</tr>
<tr>
<td>30</td>
<td>.188”</td>
<td>8</td>
<td>25</td>
<td>2.2</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA30D8BFBD0-**</td>
</tr>
<tr>
<td>30</td>
<td>.219”</td>
<td>8</td>
<td>35</td>
<td>3.0</td>
<td>2.0</td>
<td>1.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA30E8BFBD0-**</td>
</tr>
<tr>
<td>30</td>
<td>.250”</td>
<td>8</td>
<td>35</td>
<td>3.8</td>
<td>2.6</td>
<td>1.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA30F8BFBD0-**</td>
</tr>
<tr>
<td>30</td>
<td>.188”</td>
<td>10</td>
<td>30</td>
<td>5.4</td>
<td>4.0</td>
<td>3.6</td>
<td>2.6</td>
<td>1.8</td>
<td>1.8</td>
<td>RTA30D1CFBD0-**</td>
</tr>
<tr>
<td>30</td>
<td>.219”</td>
<td>10</td>
<td>45</td>
<td>8.8</td>
<td>6.0</td>
<td>4.6</td>
<td>3.4</td>
<td>2.6</td>
<td>2.6</td>
<td>RTA30E1CFBD0-**</td>
</tr>
<tr>
<td>30</td>
<td>.250”</td>
<td>10</td>
<td>60</td>
<td>8.0</td>
<td>6.0</td>
<td>5.4</td>
<td>4.2</td>
<td>3.2</td>
<td>3.2</td>
<td>RTA30F1CFBD0-**</td>
</tr>
<tr>
<td>35</td>
<td>.219”</td>
<td>8</td>
<td>35</td>
<td>1.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA35E8BFBD0-**</td>
</tr>
<tr>
<td>35</td>
<td>.250”</td>
<td>8</td>
<td>25</td>
<td>2.4</td>
<td>1.4</td>
<td>1.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA35F8BFBD0-**</td>
</tr>
<tr>
<td>35</td>
<td>.188”</td>
<td>10</td>
<td>30</td>
<td>3.6</td>
<td>2.6</td>
<td>2.2</td>
<td>1.4</td>
<td>-</td>
<td>-</td>
<td>RTA35D1CFBD0-**</td>
</tr>
<tr>
<td>35</td>
<td>.219”</td>
<td>10</td>
<td>35</td>
<td>4.8</td>
<td>3.4</td>
<td>3.0</td>
<td>2.2</td>
<td>1.4</td>
<td>1.4</td>
<td>RTA35E1CFBD0-**</td>
</tr>
<tr>
<td>35</td>
<td>.250”</td>
<td>10</td>
<td>35</td>
<td>5.8</td>
<td>4.4</td>
<td>3.8</td>
<td>2.8</td>
<td>2.0</td>
<td>2.0</td>
<td>RTA35F1CFBD0-**</td>
</tr>
<tr>
<td>40</td>
<td>.250”</td>
<td>8</td>
<td>25</td>
<td>2.4</td>
<td>1.4</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA40D8BFBD0-**</td>
</tr>
<tr>
<td>40</td>
<td>.188”</td>
<td>10</td>
<td>25</td>
<td>3.2</td>
<td>2.2</td>
<td>1.8</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>RTA40E1CFBD0-**</td>
</tr>
<tr>
<td>40</td>
<td>.250”</td>
<td>10</td>
<td>25</td>
<td>4.2</td>
<td>3.0</td>
<td>2.6</td>
<td>1.8</td>
<td>1.2</td>
<td>1.2</td>
<td>RTA40F1CFBD0-**</td>
</tr>
<tr>
<td>45</td>
<td>.188”</td>
<td>10</td>
<td>25</td>
<td>6.0</td>
<td>4.4</td>
<td>4.0</td>
<td>3.0</td>
<td>2.2</td>
<td>2.2</td>
<td>RTA45D1CFBD0-**</td>
</tr>
<tr>
<td>45</td>
<td>.219”</td>
<td>10</td>
<td>25</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA45E1CFBD0-**</td>
</tr>
<tr>
<td>45</td>
<td>.312”</td>
<td>10</td>
<td>25</td>
<td>2.0</td>
<td>1.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA45F1CFBD0-**</td>
</tr>
<tr>
<td>45</td>
<td>.188”</td>
<td>10</td>
<td>25</td>
<td>2.8</td>
<td>1.8</td>
<td>1.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>RTA45G1CFBD0-**</td>
</tr>
<tr>
<td>45</td>
<td>.312”</td>
<td>10</td>
<td>25</td>
<td>4.4</td>
<td>3.0</td>
<td>2.8</td>
<td>1.8</td>
<td>1.2</td>
<td>1.2</td>
<td>RTA45G1CFBD0-**</td>
</tr>
</tbody>
</table>
Round Straight Aluminum Pole
No Arm — 4-Bolt Base

The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

### Pole

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

### Handhole

**4”-6” Butt Diameters** - 2” x 4” Handhole with curved Lap Style Aluminum Door and two (2) SS Self-Tapping Attaching Screws. A Grounding Provision incorporating a tapped 1/4”-20NC hole is provided opposite the Handhole.

**6” Butt Diameter** - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 256-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.

**7”+ Butt Diameters** - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 256-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-12NC Grounding Provision.

### Anchorage

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of threaded end will be galvanized per ASTM A153.

Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

### Vibration Damper

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

### Mounting Designation

**Side Drill Mount**

For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

**Tenon Mount**

For Tenon Mount applications specify both Tenon diameter (2.375”, 2.875”, 3.5”, etc.) and length (3”, 4”, etc.).

---

**Dimensions in Inches**

- **C** Butt Dia.
- **D** Top Dia.
- **F** Bolt Cir. Dia.
- **G** Base Sq.
- **H** Bolt Proj.
- **I** Bolt Size

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>6.5 - 8</td>
<td>7.5</td>
<td>2</td>
<td>.75 x 17 x 3</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>7.5 - 8</td>
<td>7.5</td>
<td>2</td>
<td>.75 x 17 x 3</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>9 - 10</td>
<td>9.75</td>
<td>2.75</td>
<td>.75 x 30 x 3*</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>10 - 11</td>
<td>10.5</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>11 - 12</td>
<td>11.25</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>12.5 - 14</td>
<td>12.75</td>
<td>2.75</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>10 Up To 250°</td>
<td>10</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1 x 48 x 4</td>
</tr>
<tr>
<td>10 .312”</td>
<td>10</td>
<td>14 - 15</td>
<td>14</td>
<td>3.25</td>
<td>1.25 x 48 x 6</td>
</tr>
</tbody>
</table>

---

*Satin Aluminum or Powder Coated Finish per Customer Specification.*

---

**WARNING:** Do not install light pole without luminaire.
<table>
<thead>
<tr>
<th>A Mfg. Ngt.</th>
<th>B Wall Thickness</th>
<th>C Butt Diameter</th>
<th>Total Lgl. Weight</th>
<th>Old Cat. Number</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>08</td>
<td>0.125”</td>
<td>4</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>0.125”</td>
<td>4</td>
<td>100</td>
<td>8.1 6.2 5.7 4.6 3.7</td>
<td>78-003 RSA10B4-4-**</td>
</tr>
<tr>
<td>12</td>
<td>0.125”</td>
<td>7</td>
<td>100</td>
<td>6.0 4.4 4.0 3.1 2.3</td>
<td>78-004 RSA12B4-4-**</td>
</tr>
<tr>
<td>14</td>
<td>0.125”</td>
<td>4</td>
<td>100</td>
<td>8.1 6.2 5.7 4.6 3.7</td>
<td>78-005 RSA14B4-4-**</td>
</tr>
<tr>
<td>16</td>
<td>0.125”</td>
<td>6</td>
<td>100</td>
<td>15.8 12.4 11.6 9.6 8.2</td>
<td>78-012 RSA16B5-4-**</td>
</tr>
<tr>
<td>18</td>
<td>0.125”</td>
<td>6</td>
<td>100</td>
<td>18.6 14.6 13.6 11.2 9.5</td>
<td>78-015 RSA18B5-4-**</td>
</tr>
<tr>
<td>20</td>
<td>0.125”</td>
<td>8</td>
<td>100</td>
<td>25.3 20.6 18.8 15.2 12.6</td>
<td>78-022 RSA20B8-4-**</td>
</tr>
<tr>
<td>22</td>
<td>0.125”</td>
<td>8</td>
<td>100</td>
<td>33.6 27.4 24.4 19.6 15.8</td>
<td>78-029 RSA22B8-4-**</td>
</tr>
<tr>
<td>24</td>
<td>0.125”</td>
<td>6</td>
<td>100</td>
<td>34.9 27.8 25.6 21.4 16.9</td>
<td>78-034 RSA24B6-4-**</td>
</tr>
<tr>
<td>26</td>
<td>0.125”</td>
<td>8</td>
<td>100</td>
<td>34.4 27.6 25.6 21.4 18.0</td>
<td>78-035 RSA26B8-4-**</td>
</tr>
<tr>
<td>28</td>
<td>0.125”</td>
<td>6</td>
<td>100</td>
<td>34.4 27.6 25.6 21.4 18.0</td>
<td>78-035 RSA26B8-4-**</td>
</tr>
<tr>
<td>30</td>
<td>0.125”</td>
<td>7</td>
<td>100</td>
<td>30.0 23.8 21.6 17.4 14.2</td>
<td>78-036 RSA30B7-4-**</td>
</tr>
<tr>
<td>32</td>
<td>0.125”</td>
<td>9</td>
<td>100</td>
<td>32.4 26.0 24.4 20.4 17.2</td>
<td>78-037 RSA32B9-4-**</td>
</tr>
<tr>
<td>34</td>
<td>0.125”</td>
<td>9</td>
<td>100</td>
<td>32.0 25.7 23.7 20.4 17.2</td>
<td>78-037 RSA32B9-4-**</td>
</tr>
<tr>
<td>36</td>
<td>0.125”</td>
<td>8</td>
<td>100</td>
<td>34.5 27.6 25.6 21.4 18.0</td>
<td>78-036 RSA32B9-4-**</td>
</tr>
<tr>
<td>38</td>
<td>0.125”</td>
<td>7</td>
<td>100</td>
<td>33.0 25.0 23.2 20.4 17.2</td>
<td>78-037 RSA32B9-4-**</td>
</tr>
<tr>
<td>40</td>
<td>0.125”</td>
<td>9</td>
<td>100</td>
<td>35.0 28.0 26.0 22.0 18.8</td>
<td>78-038 RSA40B9-4-**</td>
</tr>
<tr>
<td>42</td>
<td>0.125”</td>
<td>9</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>44</td>
<td>0.125”</td>
<td>8</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>46</td>
<td>0.125”</td>
<td>7</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>48</td>
<td>0.125”</td>
<td>6</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>50</td>
<td>0.125”</td>
<td>8</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>52</td>
<td>0.125”</td>
<td>6</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>54</td>
<td>0.125”</td>
<td>7</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>56</td>
<td>0.125”</td>
<td>6</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>58</td>
<td>0.125”</td>
<td>8</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>60</td>
<td>0.125”</td>
<td>7</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>62</td>
<td>0.125”</td>
<td>6</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>64</td>
<td>0.125”</td>
<td>8</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>66</td>
<td>0.125”</td>
<td>6</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
<tr>
<td>68</td>
<td>0.125”</td>
<td>7</td>
<td>100</td>
<td>36.0 29.0 27.2 23.2 20.0</td>
<td>78-039 RSA42B9-4-**</td>
</tr>
</tbody>
</table>

Effective Projected Area (EPA) in square feet. EPA's calculated using www.hapco.com

Round Straight Aluminum, 30’ Mounting Height, Catalog Number Example -

RSA 30 D 8 - 4 – 01
Round Straight Aluminum, 8” Butt Diameter, No Taper, 4-Bolt Base, Satin Aluminum Finish.

Wall Thickness
B = .125”
C = .156”
D = .188”
E = .219”
F = .250”
G = .312”

Butt Diameter
4 = 4”
5 = 5”
6 = 6”
7 = 7”
8 = 8”
9 = 9”
10 = 10”

Top Diameter
- = No Taper

Base Style
4 = 4-Bolt Base

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet, EPA’s calculated using wind velocity (mph) indicated in accordance with 2009 AASHO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA, if weight is exceeded, or if other design life or code is required, please consult the factory.
Round Straight Aluminum Pole
No Arm — 3-Bolt Base

Pole
The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

Base Style
3-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Spun Aluminum Base Cover and Stainless Steel Hex Head Attaching Screw.

Handhole
4”-5” Butt Diameters - 2” x 4” Handhole with curved Lap Style Aluminum Door and two (2) Stainless Steel Self-Tapping Attaching Screws. A Grounding Provision incorporating a tapped 1/4”-20NC hole is provided opposite the Handhole.

Anchorage
Anchorage Kit will include three (3) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of Threaded End will be Galvanized per ASTM A153. Kits will contain three (3) Hex Nuts, three (3) Lock Washers, and three (3) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

Vibration Damper
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

Mounting Designation
Side Drill Mount
For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

Tenon Mount
For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3”, 4”, etc.).

Dimensions in Inches

<table>
<thead>
<tr>
<th>C BUTT DIA.</th>
<th>D TOP DIA.</th>
<th>F BOLT CIR. DIA.</th>
<th>G COVER DIA.</th>
<th>H BOLT PROJ.</th>
<th>I BOLT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>7</td>
<td>9.0625</td>
<td>2</td>
<td>.75 x 17 x 3</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>8</td>
<td>10.375</td>
<td>2</td>
<td>.75 x 17 x 3</td>
</tr>
</tbody>
</table>

WARNING: Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

<table>
<thead>
<tr>
<th>Mfg. Hgt.</th>
<th>Wall Thickness</th>
<th>Butt Diameter</th>
<th>Total Lim. Weight</th>
<th>90</th>
<th>100</th>
<th>110</th>
<th>120</th>
<th>130</th>
<th>Old Cat. Number</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>0.125”</td>
<td>4</td>
<td>100</td>
<td>15.6</td>
<td>12.4</td>
<td>11.6</td>
<td>9.6</td>
<td>8.0</td>
<td>76S-001</td>
<td>RSA06B4-3-**</td>
</tr>
<tr>
<td>08</td>
<td>0.125”</td>
<td>4</td>
<td>100</td>
<td>10.6</td>
<td>8.4</td>
<td>7.7</td>
<td>6.3</td>
<td>5.1</td>
<td>76S-002</td>
<td>RSA08B4-3-**</td>
</tr>
<tr>
<td>10</td>
<td>0.125”</td>
<td>5</td>
<td>100</td>
<td>15.0</td>
<td>11.8</td>
<td>11.0</td>
<td>9.0</td>
<td>7.6</td>
<td>76S-003</td>
<td>RSA10B5-3-**</td>
</tr>
<tr>
<td>12</td>
<td>0.125”</td>
<td>4</td>
<td>60</td>
<td>5.6</td>
<td>4.2</td>
<td>3.7</td>
<td>2.8</td>
<td>2.1</td>
<td>76S-004</td>
<td>RSA12B4-3-**</td>
</tr>
<tr>
<td>12</td>
<td>0.156”</td>
<td>5</td>
<td>100</td>
<td>11.4</td>
<td>8.8</td>
<td>8.2</td>
<td>6.7</td>
<td>5.6</td>
<td>76S-000</td>
<td>RSA12B5-3-**</td>
</tr>
<tr>
<td>12</td>
<td>0.188”</td>
<td>5</td>
<td>100</td>
<td>14.6</td>
<td>11.4</td>
<td>10.6</td>
<td>8.8</td>
<td>7.4</td>
<td>76S-001</td>
<td>RSA12C5-3-**</td>
</tr>
<tr>
<td>14</td>
<td>0.125”</td>
<td>4</td>
<td>40</td>
<td>4.1</td>
<td>2.9</td>
<td>2.5</td>
<td>1.7</td>
<td>1.1</td>
<td>76S-005</td>
<td>RSA14B4-3-**</td>
</tr>
<tr>
<td>14</td>
<td>0.125”</td>
<td>5</td>
<td>100</td>
<td>8.8</td>
<td>6.6</td>
<td>6.0</td>
<td>4.9</td>
<td>4.1</td>
<td>76S-010</td>
<td>RSA14B5-3-**</td>
</tr>
<tr>
<td>14</td>
<td>0.156”</td>
<td>5</td>
<td>100</td>
<td>11.4</td>
<td>8.8</td>
<td>8.0</td>
<td>6.6</td>
<td>5.5</td>
<td>76S-017</td>
<td>RSA14C5-3-**</td>
</tr>
<tr>
<td>14</td>
<td>0.188”</td>
<td>5</td>
<td>100</td>
<td>14.2</td>
<td>10.8</td>
<td>10.0</td>
<td>8.4</td>
<td>7.0</td>
<td>76S-004</td>
<td>RSA14D5-3-**</td>
</tr>
<tr>
<td>16</td>
<td>0.125”</td>
<td>4</td>
<td>55</td>
<td>2.8</td>
<td>1.7</td>
<td>1.4</td>
<td></td>
<td></td>
<td>76S-006</td>
<td>RSA16B4-3-**</td>
</tr>
<tr>
<td>16</td>
<td>0.125”</td>
<td>5</td>
<td>96</td>
<td>6.8</td>
<td>4.8</td>
<td>4.4</td>
<td>3.5</td>
<td>2.9</td>
<td>76S-011</td>
<td>RSA16B5-3-**</td>
</tr>
<tr>
<td>16</td>
<td>0.156”</td>
<td>5</td>
<td>100</td>
<td>9.0</td>
<td>6.6</td>
<td>6.2</td>
<td>5.0</td>
<td>4.1</td>
<td>76S-029</td>
<td>RSA16C5-3-**</td>
</tr>
<tr>
<td>16</td>
<td>0.188”</td>
<td>5</td>
<td>100</td>
<td>11.4</td>
<td>8.6</td>
<td>7.8</td>
<td>6.4</td>
<td>5.4</td>
<td>76S-030</td>
<td>RSA16D5-3-**</td>
</tr>
<tr>
<td>18</td>
<td>0.125”</td>
<td>5</td>
<td>55</td>
<td>5.0</td>
<td>3.4</td>
<td>3.0</td>
<td>2.4</td>
<td>1.9</td>
<td>76S-007</td>
<td>RSA18B5-3-**</td>
</tr>
<tr>
<td>18</td>
<td>0.156”</td>
<td>5</td>
<td>96</td>
<td>6.9</td>
<td>4.9</td>
<td>4.4</td>
<td>3.6</td>
<td>2.9</td>
<td>76S-031</td>
<td>RSA18C5-3-**</td>
</tr>
<tr>
<td>18</td>
<td>0.188”</td>
<td>5</td>
<td>100</td>
<td>8.8</td>
<td>6.4</td>
<td>6.0</td>
<td>4.8</td>
<td>3.9</td>
<td>76S-004</td>
<td>RSA18D5-3-**</td>
</tr>
<tr>
<td>20</td>
<td>0.125”</td>
<td>5</td>
<td>40</td>
<td>3.6</td>
<td>2.1</td>
<td>1.9</td>
<td>1.3</td>
<td>0.9</td>
<td>76S-008</td>
<td>RSA20B5-3-**</td>
</tr>
<tr>
<td>20</td>
<td>0.156”</td>
<td>5</td>
<td>55</td>
<td>5.3</td>
<td>3.5</td>
<td>3.1</td>
<td>2.4</td>
<td>1.9</td>
<td>76S-033</td>
<td>RSA20C5-3-**</td>
</tr>
<tr>
<td>20</td>
<td>0.188”</td>
<td>5</td>
<td>85</td>
<td>6.9</td>
<td>4.8</td>
<td>4.4</td>
<td>3.4</td>
<td>2.8</td>
<td>76S-034</td>
<td>RSA20M5-3-**</td>
</tr>
</tbody>
</table>

** = Specify Finish

Catalog Number Example -

RSA 20 D 5 - 3 - 01
Round Straight Aluminum, 20' Mounting Height, .188" Wall Thickness, 5" Butt Diameter, No Taper, 3-Bolt Base, Satin Aluminum Finish.

Wall Thickness
- B = .125"
- C = .156"
- D = .188"

Butt Diameter
- 4 = 4"
- 5 = 5"

Top Diameter
- No Taper

Base Style
- 3 = 3-Bolt Base

Finish
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat

EPA Notes:
Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.
RSA Round Straight Aluminum Pole
No Arm — Direct Buried

The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated to produce a T6 temper.

**Handhole**

- **4”-5” Butt Diameter** - 2-1/2” x 5” Handhole with curved Lap Style Aluminum Door and two (2) SS Self-Tapping Attaching Screws. A Grounding Provision is provided as part of the handhole.
- **6” Butt Diameter** - Reinforced, 3” x 5” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8” diameter hole is provided opposite the Handhole.
- **7”+ Butt Diameters** - Reinforced, 4” x 6” curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8”-16NC Grounding Provision.

**Embed Detail**

Direct Buried Pole bottom section on 6”+ butt diameter poles will be partially flattened into an anti-rotational, oval cross section. Wire access will be provided 24” below ground line. Soil conditions vary by site. Foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Vibration Damper**

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Mounting Designation**

- **Side Drill Mount**
  For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

- **Tenon Mount**
  For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3”, 4”, etc.).

**WARNING:** Do not install light pole without luminaire.

---

**Table:**

<table>
<thead>
<tr>
<th>C Butt Dia.</th>
<th>D Top Dia.</th>
<th>E Embed</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>3’</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>3’</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>4’</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>5’</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>5’</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>6’</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>6’</td>
</tr>
</tbody>
</table>

C and D Dimensions in Inches

---

Satin Aluminum or Powder Coated Finish per Customer Specification.
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

<table>
<thead>
<tr>
<th>RSA</th>
<th>Round Straight Aluminum Pole</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHAFT ASSEMBLY</td>
<td>WALL THICK.</td>
</tr>
<tr>
<td>R= Round</td>
<td>S= Straight</td>
</tr>
</tbody>
</table>

#### RSA 30 D 8 - E - 01

- **Wall Diameter:** 30" Mounting Height, .188" Wall Thickness, 8" Butt Diameter, No Taper, Direct Buried, Satin Aluminum Finish.

#### Wall Thickness

- **B** = .125"
- **C** = .156"
- **D** = .188"
- **E** = .219"
- **F** = .250"
- **G** = .312"

#### Butt Diameter

- **A** = 4"
- **B** = 5"
- **C** = 6"
- **D** = 7"
- **E** = 8"
- **F** = 9"
- **G** = 10"

#### Top Diameter

- **A** = No Taper

#### Base Style

- **E** = Direct Buried

#### Finish

- **01** = Satin Aluminum
- **BA** = Black Powder Coat
- **BH** = White Powder Coat
- **BM** = Dark Bronze Powder Coat
- **BV** = Dark Green Powder Coat
- **GC** = Gray Powder Coat

**** = Specify Finish

---

### EPA Notes:

Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

---

www.hapco.com 135
**Round Straight Aluminum Pole**

**No Arm — Hinged Base**

- **Pole**: The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

- **Base Style**: Hinged Cast Aluminum Base Flange of Alloy 356-T6 with 2-Piece Cast Aluminum Base Cover and Stainless Steel Tamper-Resistant Attaching Screws.

- **Handhole**: 4”–5” Butt Diameters - 2” x 4” Handhole with curved Lap Style Aluminum Door and two (2) Stainless Steel Self-Tapping Attaching Screws. A Grounding Provision incorporating a tapped 11/4”-20NC hole is provided opposite the Handhole.

- **Anchorage**: Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10”) of Threaded End will be Galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

- **Vibration Damper**: When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Mounting Designation**

**Side Drill Mount**
For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

**Tenon Mount**
For Tenon Mount applications specify both Tenon diameter (2.375”, 2.875”, 3.5”, etc.) and length (3”, 4”, etc.).
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
RSA 20 C 5 - H - 01
Round Straight Aluminum, 20' Mounting Height, .156" Wall Thickness, 5" Butt Diameter, No Taper, Hinged Base, Satin Aluminum Finish.

Wall Thickness
B = .125"
C = .156"
D = .188"

Butt Diameter
4 = 4"
5 = 5"

Top Diameter
- = No Taper

Base Style
H = Hinged Base

Finish
01 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
**RSA**

**Round Straight Aluminum Pole**

**No Arm — Beehive Base**

**Pole Cap**
- Aluminum
- With Stainless Steel Screws
  (Tenon Option Available - See Mounting Designation)

**D Top Diameter**

**B Wall Thickness**
- Straight Aluminum Tube
- Alloy 6063-T6

**C Butt Diameter**

**A Mounting Height**
- 15-1/2" Beehive Base

**Dimensions in Inches**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>9</td>
<td>13.125</td>
<td>1.75</td>
<td>.75 x 17 x 3</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>9</td>
<td>13.125</td>
<td>1.75</td>
<td>.75 x 17 x 3</td>
</tr>
</tbody>
</table>

**Pole**
The pole shaft will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

**Base Style**
- Beehive Cast
- Aluminum Transformer
- Base of Alloy 356-T6
- with Aluminum Door and Stainless Steel Attaching Screw.

**Handhole**
**4”-5” Butt Diameters**
- Contoured 7-1/2” W x 7-1/4” H
- Door Opening with
- Flush Mount Aluminum Door
- (Alloy 43F) and Stainless Steel Hex Head Screw.
- A Grounding Provision incorporating a 3/8” diameter hole is provided.

**Anchorage**
- Anchor Kit will include three (3) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of Threaded End will be Galvanized per ASTM A153.
- Kits will contain three (3) Hex Nuts, three (3) Lock Washers, and three (3) Flat Washers (all components Galvanized Steel).
- A bolt circle template will be provided.

**Vibration Damper**
When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.

**Mounting Designation**
- **Side Drill Mount**
  For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

- **Tenon Mount**
  For Tenon Mount applications specify both Tenon diameter (2.375”, 2.875”, 3.5”, etc.) and length (3", 4", etc.).

**WARNING:** Do not install light pole without luminaire.
The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example** -
RSA 20 D 5 - V - 01
Round Straight Aluminum, 20' Mounting Height, .188" Wall Thickness, 5" Butt Diameter, No Taper, Beehive Base, Satin Aluminum Finish.

**Wall Thickness**
- B = .125"
- D = .188"

**Butt Diameter**
- 4 = 4"
- 5 = 5"

**Top Diameter**
- = No Taper

**Base Style**
- V = Beehive Base

**Finish**
- 01 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- ** = Specify Finish

**EPA Notes:**
Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

Catalog Number System

MOUNTING   BUTT  BASE SHAFT WALL TOP FINISH
HEIGHT DIAM. STYLE DIAM. THICK. DIA.

**RSA - ROUND STRAIGHT ALUMINUM POLE**
No Arm

BEEHIVE BASE

www.hapco.com
The pole shaft will be constructed of seamless extruded tube of 6XXX Series Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld.

**Base Style**
4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Snap-In Bolt Covers.

**Handhole**
- **4"-5" Butt Squares**
  - 2" x 4" Handhole with square Lap Style Aluminum Door and two (2) Stainless Steel Self-Tapping Attaching Screws. A Grounding Provision incorporating a tapped 1/4"-20NC Grounding Provision is provided opposite the Handhole.
- **6"+ Butt Square**
  - 3" x 5" Handhole with square Lap Style Aluminum Door and two (2) Stainless Steel Self-Tapping Attaching Screws. A Grounding Provision incorporating a tapped 1/4"-20NC Grounding Provision is provided opposite the Handhole.

**Anchorage**
Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153. Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.

**Vibration Damper**
If determined necessary by Hapco, a top-mount, field installed First Mode Vibration Damper will be provided. Customer specification of the damper is available.

**Mounting Designation**
For Side Drill Mount applications specify luminaire type, quantity and orientation. A luminaire drilling template must be supplied at time of order.

**Tenon Mount**
For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3", 4", etc.).

**Dimensions in Inches**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>8.5 - 9.5</td>
<td>9,875</td>
<td>1.5</td>
<td>.75 x 17 x 3</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>10.5 - 11.5</td>
<td>11,125</td>
<td>2</td>
<td>.75 x 30 x 3</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>12 - 13</td>
<td>12.75</td>
<td>2.25</td>
<td>1 x 36 x 4</td>
</tr>
<tr>
<td>6.625</td>
<td>6.625</td>
<td>13 - 14</td>
<td>13.5</td>
<td>2.25</td>
<td>1 x 36 x 4</td>
</tr>
</tbody>
</table>

**WARNING:** Do not install light pole without luminaire.
### Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

**Catalog Number Example** - 
SSA 20 D 5 - 4 – BA

Square Straight Aluminum, 20’ Mounting Height, .188” Wall Thickness, 5” Butt Square, No Taper, 4-Bolt Base, Black Powder Coat Finish.

<table>
<thead>
<tr>
<th>A Mfg. N.</th>
<th>B Wall Thickness</th>
<th>C Butt Diameter</th>
<th>TOTAL Lim. Weight</th>
<th>90</th>
<th>MAXIMUM EPA</th>
<th>MOUNTING HEIGHT</th>
<th>BUTT SQ.</th>
<th>BASE STYLE</th>
<th>ASSEMBLY THICK.</th>
<th>TOP FINISH</th>
<th>45°</th>
<th>CAT. NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>08 125**</td>
<td>4</td>
<td>100</td>
<td>23.2 18.4 17.2 14.2 11.8</td>
<td>11-043</td>
<td>SSA08B4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 125**</td>
<td>4</td>
<td>100</td>
<td>17.6 13.8 12.8 10.4 8.6</td>
<td>11-063</td>
<td>SSA10B4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 125**</td>
<td>4</td>
<td>100</td>
<td>26.2 20.8 19.4 16.0 13.2</td>
<td>11-064</td>
<td>SSA12B4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 188*</td>
<td>4</td>
<td>100</td>
<td>13.8 10.6 9.8 7.8 6.2</td>
<td>11-063</td>
<td>SSA12B4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 188*</td>
<td>5</td>
<td>100</td>
<td>21.0 16.4 15.2 12.4 10.2</td>
<td>11-064</td>
<td>SSA12D4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 125**</td>
<td>4</td>
<td>85</td>
<td>35.0 27.6 25.6 20.8 17.2</td>
<td>11-067</td>
<td>SSA12D5-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 188*</td>
<td>4</td>
<td>100</td>
<td>10.8 8.2 7.6 5.8 4.6</td>
<td>11-103</td>
<td>SSA14B4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 188*</td>
<td>5</td>
<td>100</td>
<td>17.0 13.2 12.0 9.6 7.8</td>
<td>11-104</td>
<td>SSA14D4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 188*</td>
<td>5</td>
<td>100</td>
<td>28.6 22.4 19.4 15.6 13.3</td>
<td>11-107</td>
<td>SSA14D5-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 125**</td>
<td>4</td>
<td>70</td>
<td>9.8 7.2 6.6 5.0 3.8</td>
<td>11-123</td>
<td>SSA15B4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 188*</td>
<td>4</td>
<td>100</td>
<td>15.4 11.8 10.8 8.6 6.8</td>
<td>11-124</td>
<td>SSA15D4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 188*</td>
<td>5</td>
<td>100</td>
<td>26.0 20.2 18.6 15.0 12.0</td>
<td>11-127</td>
<td>SSA15D5-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 125**</td>
<td>4</td>
<td>55</td>
<td>8.8 6.4 5.8 4.4 3.2</td>
<td>11-143</td>
<td>SSA16B4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 188*</td>
<td>4</td>
<td>100</td>
<td>13.8 10.6 9.6 7.6 6.0</td>
<td>11-144</td>
<td>SSA16D4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 188*</td>
<td>5</td>
<td>100</td>
<td>23.8 18.4 16.8 13.4 10.8</td>
<td>11-147</td>
<td>SSA16D5-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 125**</td>
<td>4</td>
<td>25</td>
<td>6.8 4.8 4.2 3.0 2.0</td>
<td>11-163</td>
<td>SSA18B4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 188*</td>
<td>4</td>
<td>80</td>
<td>11.2 8.4 7.6 5.8 4.4</td>
<td>11-164</td>
<td>SSA18D4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 250**</td>
<td>4</td>
<td>100</td>
<td>15.2 11.6 10.6 8.4 6.6</td>
<td>11-165</td>
<td>SSA18F4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 188*</td>
<td>5</td>
<td>100</td>
<td>19.4 14.8 13.4 10.4 8.2</td>
<td>11-167</td>
<td>SSA18D5-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 125**</td>
<td>4</td>
<td>40</td>
<td>5.0 3.4 2.8 1.8 -</td>
<td>11-183</td>
<td>SSA20B4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 188*</td>
<td>4</td>
<td>50</td>
<td>9.0 6.6 5.8 4.2 3.0 8</td>
<td>11-184</td>
<td>SSA20D4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 250**</td>
<td>4</td>
<td>90</td>
<td>12.4 9.4 8.4 6.4 4.8</td>
<td>11-185</td>
<td>SSA20F4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 188*</td>
<td>5</td>
<td>100</td>
<td>15.8 11.8 10.6 8.0 6.0</td>
<td>11-187</td>
<td>SSA20D5-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 250**</td>
<td>5</td>
<td>100</td>
<td>22.0 16.8 15.2 11.8 9.2</td>
<td>11-188</td>
<td>SSA20F5-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 188*</td>
<td>6</td>
<td>100</td>
<td>24.8 18.8 17.0 13.2 10.2</td>
<td>11-190</td>
<td>SSA20D6-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 250**</td>
<td>6</td>
<td>100</td>
<td>34.2 26.4 22.0 19.0 15.2</td>
<td>11-191</td>
<td>SSA20F6-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 188*</td>
<td>5</td>
<td>45</td>
<td>9.4 6.2 5.4 3.4 1.8</td>
<td>11-247</td>
<td>SSA25D4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 250**</td>
<td>5</td>
<td>65</td>
<td>14.0 10.0 8.8 6.2 4.4</td>
<td>11-248</td>
<td>SSA25F4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 188*</td>
<td>6</td>
<td>60</td>
<td>15.4 10.8 9.4 6.6 4.2</td>
<td>11-250</td>
<td>SSA25D6-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 250**</td>
<td>6</td>
<td>100</td>
<td>22.4 16.4 14.8 11.0 8.0</td>
<td>11-251</td>
<td>SSA25F6-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 188*</td>
<td>6.625</td>
<td>100</td>
<td>28.8 21.4 19.2 14.6 11.0</td>
<td>11-254</td>
<td>SSA25FJ-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 188*</td>
<td>6</td>
<td>40</td>
<td>8.8 5.0 4.0 1.6</td>
<td>11-290</td>
<td>SSA30D4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 250**</td>
<td>6</td>
<td>25</td>
<td>14.4 9.6 8.4 5.2 3.0</td>
<td>11-291</td>
<td>SSA30F4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 250**</td>
<td>6.625</td>
<td>55</td>
<td>19.0 13.0 11.4 7.6 4.6</td>
<td>11-294</td>
<td>SSA30FJ-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35 250**</td>
<td>6</td>
<td>70</td>
<td>8.0 4.0 3.0 - -</td>
<td>11-331</td>
<td>SSA35F4-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35 250**</td>
<td>6.625</td>
<td>50</td>
<td>11.4 6.6 5.2 2.0 -</td>
<td>11-334</td>
<td>SSA35FJ-4-**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EPA Notes:**
Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

### No Arm

**Catalog Number Example** - 
SSA 20 D 5 - 4 – BA

Square Straight Aluminum, 20’ Mounting Height, .188” Wall Thickness, 5” Butt Square, No Taper, 4-Bolt Base, Black Powder Coat Finish.

**Wall Thickness**
B = .125”  
D = .188”  
F = .250”

**Butt Square**
4 = 4”  
5 = 5”  
6 = 6”  
J = 6-5/8”

**Top Square**
- = No Taper

**Base Style**
4 = 4-Bolt Base

**Finish**
02 = Satin Aluminum  
BA = Black Powder Coat  
BH = White Powder Coat  
BM = Dark Bronze Powder Coat  
BV = Dark Green Powder Coat  
GC = Gray Powder Coat  
** = Specify Finish

**www.hapco.com**

141
SSA
Square Straight Aluminum Pole
No Arm — Hinged Base

Pole Cap - Aluminum With Stainless Steel Screws
(Tenon Options Available - See Mounting Designation)

D Top Square

B Wall Thickness
Straight Aluminum Tube
Alloy 6XXX Series

Round Corners
Shaft
Cross Section

Lowering Direction
Handhole 0°
Hinged Base
Cross Section

Handhole

C Butt Square
Hinged Base
With Cover

Satin Aluminum or Powder Coated Finish per Customer Specification.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>4</td>
<td>7.5 - 9</td>
<td>10.75</td>
<td>2</td>
<td>.75 x 17 x 3</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>9</td>
<td>10.75</td>
<td>2</td>
<td>.75 x 30 x 3</td>
</tr>
</tbody>
</table>

Dimensions in Inches

WARNING: Do not install light pole without luminaire.
Catalog Number System

The catalog number for Hapco poles utilizes the following identification system.

Catalog Number Example -
SSA 20 D 5 - H – BA
Square Straight Aluminum, 20' Mounting Height, .188" Wall Thickness, 5" Butt Square, No Taper, Hinged Base, Black Powder Coat Finish.

Wall Thickness
B = .125"
D = .188"

Butt Square
4 = 4"
5 = 5"

Top Square
- = No Taper

Base Style
H = Hinged Base

Finish
02 = Satin Aluminum
BA = Black Powder Coat
BH = White Powder Coat
BM = Dark Bronze Powder Coat
BV = Dark Green Powder Coat
GC = Gray Powder Coat
** = Specify Finish

EPA Notes:
Effective Projected Area (EPA) in square feet, EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.

www.hapco.com
Cross Arms

Cross Arms are engineered and manufactured of Aluminum Alloy 6063 components and are heat-treated after weld to a T6 temper. Stainless Steel Mounting Hardware is included. Standard Cross Arms are constructed of 2” NPS (2-3/8” O.D.) Schedule 40 Pipe. Custom designs including varying Pipe Arm diameters and Arm dimensions are available. Please contact Hapco for more information.

For Hapco’s extensive offering of Pole and Cross Arm Assemblies, see Pages 64-99.

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
<th>Pipe Arm Diameter</th>
<th>Bracket EPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>63-002</td>
<td>Single Cross Arm</td>
<td>2” NPS (2.375” O.D)</td>
<td></td>
</tr>
<tr>
<td>63-004</td>
<td>Double Cross Arm – 180°</td>
<td>2” NPS (2.375” O.D)</td>
<td>0.65 ft²</td>
</tr>
<tr>
<td>63-006</td>
<td>Triple Cross Arm – 180°</td>
<td>2” NPS (2.375” O.D)</td>
<td>1.25 ft²</td>
</tr>
<tr>
<td>63-008</td>
<td>Quad Cross Arm – 180°</td>
<td>2” NPS (2.375” O.D)</td>
<td>1.85 ft²</td>
</tr>
<tr>
<td>63-010</td>
<td>Triple Cross Arm – 120°</td>
<td>2” NPS (2.375” O.D)</td>
<td>1.25 ft²   (Shielded)</td>
</tr>
<tr>
<td>63-012</td>
<td>Quad Cross Arm – 90°</td>
<td>2” NPS (2.375” O.D)</td>
<td>1.40 ft²   (Shielded)</td>
</tr>
</tbody>
</table>

63-002
Single Cross Arm (Bolt-On Tenon 4” Tall)

63-004
Double Cross Arm – 180°

63-006
Triple Cross Arm – 180°

63-008
Quad Cross Arm – 180°

63-010
Triple Cross Arm – 120°

63-012
Quad Cross Arm – 90°
Bullhorn Arms

Bullhorn Arms are engineered and manufactured of Aluminum Alloy 6063 components and are heat-treated after weld to a T6 temper. Stainless Steel Mounting Hardware is included. Standard Bullhorns are constructed of 2” NPS (2-3/8” O.D.) Schedule 40 Pipe. Center Hub information is noted. Custom designs including varying Pipe Arm diameters, Arm dimensions, and Center Hub sizes to accommodate varying Tenons are available. Please contact Hapco for more information.

For Hapco’s extensive offering of Pole and Bullhorn Arm Assemblies, see Pages 100-129.

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
<th>Pipe Arm Diameter</th>
<th>Use With Tenon Size</th>
<th>Bracket EPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>77255</td>
<td>Double Bullhorn – 180°</td>
<td>2” NPS (2.375” O.D.)</td>
<td>2” NPS (2.375” O.D.)</td>
<td>0.90 ft^2</td>
</tr>
<tr>
<td>77282</td>
<td>Triple Bullhorn – 180°</td>
<td>2” NPS (2.375” O.D.)</td>
<td>2” NPS (2.375” O.D.)</td>
<td>1.60 ft^2</td>
</tr>
<tr>
<td>77283</td>
<td>Quad Bullhorn – 180°</td>
<td>2” NPS (2.375” O.D.)</td>
<td>2.5” NPS (2.875” O.D.)</td>
<td>2.14 ft^2</td>
</tr>
<tr>
<td>77280</td>
<td>Triple Bullhorn – 120°</td>
<td>2” NPS (2.375” O.D.)</td>
<td>2.5” NPS (2.875” O.D.)</td>
<td>1.55 ft^2 (Shielded)</td>
</tr>
<tr>
<td>77281</td>
<td>Quad Bullhorn – 90°</td>
<td>2” NPS (2.375” O.D.)</td>
<td>2.5” NPS (2.875” O.D.)</td>
<td>2.04 ft^2 (Shielded)</td>
</tr>
</tbody>
</table>
Hapco offers a variety of Banner Arms in both standard and breakaway designs for use in both single and double sided applications. We have the Engineering expertise to design the safest and most efficient pole/banner arm combinations to match your project requirements.

Standard options are listed below *(Single Side Option Shown)*. Contact Hapco for technical information and custom banner arm options.

**Adjustable Banner Arms**

**BannerSaver™**

BannerSaver™ banner arms are designed with spring-loaded technology that reduces stress on both banners and poles. Wind tunnel tested to reduce 87% of windload, the use of BannerSaver™ arms allow more cost efficient pole designs while increasing the life of the banner.

*Rivnut attachment options available.

**Cast Band Mount**

Cast Band Mount banner arms provide aesthetically-pleasing banner arm attachments that are adjustable for banner size and placement and are easily removable when not in use.

**Fixed Banner Arms**

**Accessory Design Orientation**

When specifying Pole Accessories, it is important to provide Hapco the correct design orientation. This diagram provides the degree specification of accessories located at various positions on the pole relative to the pole door.
### Accessories

#### Finials

F0001 - Finial
F0002 - Finial
F0004 - Finial
F0005 - Finial
F0007 - Finial
F0010 - Finial

#### Plant Holders

HOLD12001 - Single
HOLD12002 - Double
Plant Holder

HOLD12101 - Single
HOLD12102 - Double
Plant Holder

HOLD12301 - Single
HOLD12302 - Double
Plant Holder

HOLD12401 - Single
HOLD12402 - Double
Plant Holder

HOLD12101 - Single
HOLD12102 - Double
Plant Holder

HOLD12201 - Single
HOLD12202 - Double
Plant Holder

HOLD12301 - Single
HOLD12302 - Double
Plant Holder

HOLD12401 - Single
HOLD12402 - Double
Plant Holder

#### Miscellaneous

JH24000 - J-Hook
H31000 - Hooks

FH32000 - Flag Holder

SS33000 - Street Sign Bracket

SB34000 - Sign Bracket

52925 - Pipe Arm

85826 - Floodlight Bracket

SBC25001 - One Piece (Shown)
SBC25002 - Two Piece
Spun Base Cover - Round Poles

SBC26002 - Two Piece
Base Cover - Square Poles
Standard Pole Modifications

Handholes
Standard handhole modifications are detailed below. Custom handhole options may be available (contact Hapco for additional information).

Modification No. 151
4” x 6” Reinforced Handhole
This industry-standard handhole size is included as a standard in many of the poles in this catalog. The opening is oval in shape and measures 4” x 6”, with the major dimension along the vertical axis. The hole in the shaft wall is reinforced with a frame of aluminum alloy 356-T6, which projects slightly through the wall and is completely joined to the shaft with a fillet weld, the minimum size of which is 5/16”. The opening is protected by a snug-fitting cover attached by means of two (2) Stainless Steel hex head screws. The external contour of the reinforcing frame and cover, although projecting slightly for sound welding, is curved to conform to the roundness of the shaft. The cover has a surface finish which is identical to that of the shaft. The standard location of the handhole is centered 18” above the bottom of the shaft and will be located 90 degrees clockwise from the plane of the bracket, as viewed from above.

Modification No. 152
4” x 8” Reinforced Handhole
Except for the size, the specification are the same as the above. Note: This size handhole cannot be furnished with poles having a shaft diameter less than 7”.

Modification No. 153
3” x 5” Reinforced Handhole
This modification is used on 6” butt diameter poles only. Except for the dimensions and the fact that the frame is fastened to the shaft by two fillet welds, the specifications are the same as Modification No. 151.

Modification No. 154
3” X 5” Unreinforced Handhole
This is an oval hole, 3” x 5”, cut in the pole shaft. It is provided with a curved cover to fit the exterior surface of the pole. The cover is attached with two self-tapping stainless steel Phillips-head screws. It is used in applications where strength requirements permit, such as in pedestal poles. The center of the handhole is usually 18” above the ground line.

Modification No. 155
2” x 4” Unreinforced Handhole -
Except for the size, the specifications are the same as Modification No. 154.

Receptacle Outlet Boxes
Receptacle Outlet Boxes are available with and without receptacles to provide current for external circuits.

The Receptacle Outlet is an assembly similar in size and dimension to the standard “FS” outlet box. It is made of cast-aluminum Alloy 43 and is completely welded to the shaft around the perimeter of the box. When ordered without the receptacle, the Modification No. 183 box is furnished with a blank cover attached with four machine screws.

Modification No. 185 contains a gasketed cover attached to the box with two machine screws. It incorporates a spring-actuated access door and a double three-wire, G.F.C.I. receptacle rated at 20 amperes, 125 volts, weather resistant (WR) rated and UL approved.

Modification No. 183
Receptacle Outlet Box Only Without Receptacle

Modification No. 185
Receptacle Outlet Box With Duplex G.F.C.I. Receptacle

Slipfitter Tenon (for Brackets)
Tenons are available for luminaires which cannot be used with the standard Hapco 2” pipe-size tenon. The 1 1/4” pipe-size tenon is 6” long and is welded into the end of the bracket arm with a circumferential weld. Custom tenon options are available (contact Hapco for additional information).

Modification No. 140
1-1/4” Pipe-Size Slipfitter Tenon
Vibration Isolating Arm

Traffic crossing bridges and overpasses can set up vibrations that can literally shake apart lighting fixtures mounted on these structures. Premature lamp failure is the most common result. Fixtures or brackets can also tear loose and, in some cases, light fixtures can fall off their bracket. Early replacement of these kinds of lighting systems before their expected life-cycle can quickly add up to significant expenditures.

At Hapco, we have responded to this challenge by developing a patented spring suspension and friction damping system that isolates the luminaire from the vertical vibration of the pole. In tests, our damped arm significantly reduces free vibration - from 110 cycles for a standard, non-damping arm to 10 cycles for the damped system.

Other lab and field tests support these results, including findings from a specific installation site that has been monitored from December of 1994. For a report on these findings or any additional information about the Vibration Isolating Arm, please contact Hapco.

*Arm Shipped Preset at Hole “B”

U.S. Patent No. 5601274
Wind-Induced Vibration

There are two common types of wind-induced vibration observed in poles… First Mode Vibration and Second Mode Vibration.

First Mode Vibration
In first mode vibration, sometimes referred to as sway, the maximum deflection occurs at the top of the pole. First mode oscillation typically occurs at a low frequency of approximately one cycle per second. Normal deflection of this shape usually is not harmful to the pole or luminaire, but first mode oscillating vibration will cause damage and failure.

Second Mode Vibration
Second mode vibration can be the most damaging form of vibration. It occurs approximately at the midpoint of the pole with the deflection off center equal from side-to-side. It occurs at a higher frequency, typically three to six cycles per second. Second mode vibration occurs when the wind synchronizes with the pole’s natural frequency of vibration. This is known as resonance. As the steady low level wind moves past the pole, vortices are shed alternately from either side of the structural shaft causing displacement oscillations in a direction perpendicular to that of the wind. Vortices are a swirling motion or pattern of the wind. The most serious situation arises when the vortex-shedding frequency synchronizes with the natural period of vibration in the pole, which can ultimately fatigue the pole to structural failure.

Light Pole Design
Pole design requires consideration of field conditions such as wind speed (sustained/gusts), pole height, appendages and local conditions. Wind induced vibration is a local, site-specific condition that may be overlooked by those selecting a pole because it is difficult to predict accurately. Poles which perform satisfactory in many installations all across the country may experience destructive vibration at a select location for no apparent reason. Typically, poles are designed or selected based on AASHTO (American Association of State Highway and Transportation Officials) criteria. The standards and codes take into account direct wind pressures on the pole and luminaire, the associated bending, shear, axial and torsional stresses on the pole, secondary moment effects (the pole and fixture being off center of the pole base when the wind deflects the pole) and the effect of heat on the base material in the area adjacent to the weld.

Variables
Each job site has different variables that may contribute to structural fatigue vibration. These pole variables should be taken into consideration, along with environmental and structural factors, to determine if the potential for vibration exists.

- Total Load (EPA) and Shaft Length – Light loading, less than 2.0 EPA, and shaft lengths at or above 25 feet can significantly increase the probability of destructive vibration.
- Shape – Straight Square Poles historically experience more effects of destructive first mode vibration. Round poles historically experience more effects of destructive second mode vibration. However, no shape is exempt.
- Installation Procedures – Poles are designed to carry a load, and a pole cannot be installed before the luminaire is mounted. Never install a pole without the intended luminaire in place.
- Parking Deck Installation – Influences from surrounding structures and transferred vibration generated by moving vehicles.
- Near or at Airports – Little or no objects to break the wind currents and the presence of turbulence created by aircraft.
- Bridge Installation – Little or no objects to break the wind currents and the transfer of vibration generated by moving vehicles.
- Mountain Foothill Areas – Air currents traveling from the higher elevations can create steady damaging winds.
- Large Expanse of Flat Ground or Water – In tandem with little or no structures, the wind currents will not be disrupted which sets up the possibility for low steady winds and destructive vibration.
- Steady Low Level Winds – The upper Midwest and Plains States have shown this trend.

This is not a complete list. Other factors can influence the effects of wind.
**Vibration Dampers**

**Hapco is the industry-recognized pioneer on the research of wind induced vibration in aluminum poles. Our decades of research and testing has led to several patents in this category, giving Hapco Engineers the knowledge and background to assure our customers the safest, longest lasting pole designs.**

We have learned from experience that poles supporting certain types of post-top mounted fixtures are more susceptible to first and second mode vibration. The rectangular or “shoebox” shaped luminaires, for example, seem to encourage second mode vibration, while more aerodynamic lightweight fixtures encourage first mode vibration. Any oscillation should be dealt with as soon as it becomes apparent to prevent damage to the pole or luminaire.

**Hapco Damper Solutions**

To minimize the effects of first or second mode vibration, Hapco has developed dampers which very effectively quell wind induced vibration of lighting poles.

**Free Vibration Test Curves**

![Free Vibration of Test Pole with No Added Damping](image)

![Free Vibration of Test Pole with Impact Damper](image)

**First Mode Damper**

Hapco’s patented First Mode Vibration Damper is field installed at the top of square poles. This damper very effectively reduces first mode vibration of square lighting poles. Due to potential vibration fatigue issues that can be associated with moderate wind conditions, First Mode Dampers are recommended for square poles with mounting heights greater than 25’ and for square poles with light loading fixtures less than 2.0 EPA. Fatigue related pole failures are not an indication of substandard material, workmanship or design of the pole and is not covered under Hapco’s standard warranty.

**Second Mode Damper**

The Hapco Second Mode Damper was awarded the industry’s first patent in the vibration damping category in 1972. It is attached to the pole at approximately the midpoint of the pole, and can be factory bolted inside the pole or field mounted on the inside or outside of an existing pole.

Based on past experience, some Hapco poles include factory-installed Second Mode Vibration Dampers as a standard component. If the poles you intend to order are to be bridge mounted, used as camera poles, or may be subject to unusual site conditions, wide open terrain, steady or high energy prevailing winds, or other site conditions as mentioned, please make Hapco aware of these conditions. Or, if your installed poles are exhibiting oscillation, contact Hapco to pursue a damping solution that may include installing a Hapco Second Mode Damper on the poles.

**Locations with high average wind speeds are more prone to pole vibration problems than locations with high maximum wind speeds. Areas of high average wind speeds can be identified on the U.S. Department of Energy Residential Scale 30 Meter Wind Map which can be accessed at the U.S. Department of Energy website ([http://apps2.eere.energy.gov/wind/windexchange/windmaps/residential_scale.asp](http://apps2.eere.energy.gov/wind/windexchange/windmaps/residential_scale.asp)).**

*Contact factory for First Mode Dampers for use on round poles.*
Hapco’s standard offering of Aluminum Brackets include options for use with Wood, Metal and Concrete poles. Expertly engineered to Hapco’s exacting specifications, these brackets are manufactured using the highest quality Aluminum Alloy 6063-T6, guaranteeing our customers the longest lasting, most aesthetic brackets in the industry.

Customized designs of luminaire brackets are also available. Our Engineering and Manufacturing expertise can provide you with prompt, competitive service on custom luminaire bracket designs for projects with special requirements. For more information, consult your local sales representative or contact Hapco customer service.

### Metal Pole - Style 84

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>A Bracket Length (ft.)</th>
<th>B Bracket Rise (in.)</th>
<th>Member Size (in.)</th>
<th>Bracket Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPB84-001</td>
<td>4</td>
<td>30</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>MPB84-003</td>
<td>6</td>
<td>30</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>MPB84-004</td>
<td>6</td>
<td>30</td>
<td>3.5</td>
<td>12</td>
</tr>
<tr>
<td>MPB84-006</td>
<td>8</td>
<td>30</td>
<td>3.5</td>
<td>14</td>
</tr>
<tr>
<td>MPB84-007</td>
<td>8</td>
<td>30</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>MPB84-009</td>
<td>10</td>
<td>30</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>MPB84-010</td>
<td>10</td>
<td>30</td>
<td>4.5</td>
<td>21</td>
</tr>
</tbody>
</table>

Extruded Bands for Metal Poles available in 4.5", 6", 6.625", 8", 9" and 10" I.D.  

*Maximum Effective Projected Area (EPA) of fixture in square feet based on luminaire weight shown.

### Metal Pole - Style 85

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>A Bracket Length (ft.)</th>
<th>B Bracket Rise (in.)</th>
<th>C Pole Space (in.)</th>
<th>Upper Member Size (in.)</th>
<th>Lower Member Size (in.)</th>
<th>Bracket Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPB85-001</td>
<td>8</td>
<td>39</td>
<td>21</td>
<td>3</td>
<td>1.5</td>
<td>20</td>
</tr>
<tr>
<td>MPB85-004</td>
<td>10</td>
<td>39</td>
<td>21</td>
<td>3</td>
<td>1.5</td>
<td>25</td>
</tr>
<tr>
<td>MPB85-007</td>
<td>12</td>
<td>39</td>
<td>21</td>
<td>3.5</td>
<td>1.5</td>
<td>33</td>
</tr>
<tr>
<td>MPB85-011</td>
<td>15</td>
<td>39</td>
<td>21</td>
<td>4</td>
<td>2</td>
<td>41</td>
</tr>
</tbody>
</table>

Extruded Bands for Metal Poles available in 4.5", 6", 6.625", 8", 9" and 10" I.D.  

*Maximum Effective Projected Area (EPA) of fixture in square feet based on luminaire weight shown.

### Concrete Pole - Style 84

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>A Bracket Length (ft.)</th>
<th>B Bracket Rise (in.)</th>
<th>Member Size (in.)</th>
<th>Bracket Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPB84-001</td>
<td>4</td>
<td>30</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>CPB84-003</td>
<td>6</td>
<td>30</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>CPB84-004</td>
<td>6</td>
<td>30</td>
<td>3.5</td>
<td>12</td>
</tr>
<tr>
<td>CPB84-006</td>
<td>8</td>
<td>30</td>
<td>3.5</td>
<td>14</td>
</tr>
<tr>
<td>CPB84-007</td>
<td>8</td>
<td>30</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>CPB84-009</td>
<td>10</td>
<td>30</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>CPB84-010</td>
<td>10</td>
<td>30</td>
<td>4.5</td>
<td>21</td>
</tr>
</tbody>
</table>

6.25" Octagonal Pole Bands and other mounting options are available. Contact Hapco for more information.

*Maximum Effective Projected Area (EPA) of fixture in square feet based on luminaire weight shown.

### Concrete Pole - Style 85

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>A Bracket Length (ft.)</th>
<th>B Bracket Rise (in.)</th>
<th>C Pole Space (in.)</th>
<th>Upper Member Size (in.)</th>
<th>Lower Member Size (in.)</th>
<th>Bracket Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPB85-001</td>
<td>8</td>
<td>39</td>
<td>21</td>
<td>3</td>
<td>1.5</td>
<td>20</td>
</tr>
<tr>
<td>CPB85-004</td>
<td>10</td>
<td>39</td>
<td>21</td>
<td>3</td>
<td>1.5</td>
<td>25</td>
</tr>
<tr>
<td>CPB85-007</td>
<td>12</td>
<td>39</td>
<td>21</td>
<td>3.5</td>
<td>1.5</td>
<td>33</td>
</tr>
<tr>
<td>CPB85-011</td>
<td>15</td>
<td>39</td>
<td>21</td>
<td>4</td>
<td>2</td>
<td>41</td>
</tr>
</tbody>
</table>

*Maximum Effective Projected Area (EPA) of fixture in square feet based on luminaire weight shown.
Aluminum Brackets - Wood Poles

Wood Pole - Style 81

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>A</th>
<th>Bracket Length (ft.)</th>
<th>B</th>
<th>Bracket Rise (In.)</th>
<th>Member Size (In.)</th>
<th>Bracket Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>81-001</td>
<td>2.5</td>
<td>17</td>
<td>1.25</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81-002</td>
<td>4</td>
<td>23</td>
<td>1.25</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81-003</td>
<td>4</td>
<td>22</td>
<td>1.25</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81-004</td>
<td>6</td>
<td>28</td>
<td>1.25</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81-005</td>
<td>4</td>
<td>22</td>
<td>2</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81-006</td>
<td>6</td>
<td>28</td>
<td>2</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81-007</td>
<td>8</td>
<td>30</td>
<td>2</td>
<td>13</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Wood Pole - Style 82

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>A</th>
<th>Bracket Length (ft.)</th>
<th>B</th>
<th>Bracket Rise (In.)</th>
<th>Member Size (In.)</th>
<th>Bracket Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>82-001</td>
<td>6</td>
<td>28</td>
<td>1.25</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82-002</td>
<td>8</td>
<td>30</td>
<td>1.25</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82-003</td>
<td>6</td>
<td>28</td>
<td>2</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>82-004</td>
<td>8</td>
<td>30</td>
<td>2</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Wood Pole - Style 83

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>A</th>
<th>Bracket Length (ft.)</th>
<th>B</th>
<th>Bracket Rise (In.)</th>
<th>Member Size (In.)</th>
<th>Bracket Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>83-001</td>
<td>8</td>
<td>30</td>
<td>1.25</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83-002</td>
<td>10</td>
<td>30</td>
<td>1.25</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83-003</td>
<td>12</td>
<td>30</td>
<td>1.25</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83-004</td>
<td>14</td>
<td>30</td>
<td>1.25</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83-005</td>
<td>16</td>
<td>30</td>
<td>1.25</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83-006</td>
<td>8</td>
<td>30</td>
<td>2</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83-007</td>
<td>10</td>
<td>30</td>
<td>2</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83-008</td>
<td>12</td>
<td>30</td>
<td>2</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83-009</td>
<td>14</td>
<td>30</td>
<td>2</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>83-010</td>
<td>16</td>
<td>30</td>
<td>2</td>
<td>33</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Wood Pole - Style 84

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>A</th>
<th>Bracket Length (ft.)</th>
<th>B</th>
<th>Bracket Rise (In.)</th>
<th>Member Size (In.)</th>
<th>Bracket Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>84-001</td>
<td>4</td>
<td>30</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84-003</td>
<td>6</td>
<td>30</td>
<td>3</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84-004</td>
<td>6</td>
<td>30</td>
<td>3.5</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84-006</td>
<td>8</td>
<td>30</td>
<td>3.5</td>
<td>14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84-007</td>
<td>8</td>
<td>30</td>
<td>4</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84-009</td>
<td>10</td>
<td>30</td>
<td>4</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84-010</td>
<td>10</td>
<td>30</td>
<td>4.5</td>
<td>21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Wood Pole - Style 85

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>A</th>
<th>Bracket Length (ft.)</th>
<th>B</th>
<th>Bracket Rise (In.)</th>
<th>Pole Space (In.)</th>
<th>Upper Member Size (In.)</th>
<th>Lower Member Size (In.)</th>
<th>Bracket Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>85-001</td>
<td>8</td>
<td>39</td>
<td>21</td>
<td>3</td>
<td>1.5</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85-004</td>
<td>10</td>
<td>39</td>
<td>21</td>
<td>3</td>
<td>1.5</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85-007</td>
<td>12</td>
<td>39</td>
<td>21</td>
<td>3.5</td>
<td>1.5</td>
<td>33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85-011</td>
<td>15</td>
<td>39</td>
<td>21</td>
<td>4</td>
<td>2</td>
<td>41</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Maximum Effective Projected Area (EPA) of fixture in square feet based on luminaire weight shown.
Hapco offers a variety of Aluminum Bracket option for use with Wood, Metal and Concrete poles (example categories shown at right). Expertly engineered to Hapco’s exacting specifications, our brackets are manufactured using the highest quality Aluminum Alloy 6063-T6, guaranteeing our customers the longest lasting, safest and most aesthetic brackets in the industry.

Customized designs of luminaire brackets are also available. Our Engineering and Manufacturing expertise can provide you with prompt, competitive service on custom luminaire bracket designs for projects with special requirements. For more information, consult your local sales representative or contact Hapco customer service.

Hapco was an early pioneer in Traffic Signal Pole and Arm Design. In cooperation with a traffic signal manufacturer, we initiated the first wind tunnel tests on elliptical arm shapes to insure more efficient designs and have conducted decades of testing in our on-site R&D labs.
Traffic Series

Traffic Signal Poles

Hapco Traffic Signal Poles and Arms are designed to meet your specific job requirements. Design specifications are determined as a result of the arm length, size and type of signal specified for the project along with the potential wind gust velocities in your geographic location. The experience possessed by Hapco allows us to design a pole and traffic control arm that is exact for your needs. Our Traffic Series products provide our customers all of the advantages of aluminum coupled with the safety and peace of mind afforded by a Hapco design.

Traffic Pedestal Poles

Hapco’s standard Traffic Pedestal Poles are presented below. Custom Pedestal designs for projects with special requirements are available. For more information, consult your local sales representative or contact Hapco customer service.

### Style 121 - 4-Bolt Base

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Nominal Mounting Height (ft.)</th>
<th>Butt Dia. (in.)</th>
<th>Top Dia. (in.)</th>
<th>Wall Thickness (in.)</th>
<th>Bolt Circle (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTA121-001</td>
<td>8</td>
<td>6</td>
<td>4.5</td>
<td>0.125</td>
<td>9 - 10</td>
</tr>
<tr>
<td>RTA121-002</td>
<td>10</td>
<td>6</td>
<td>4.5</td>
<td>0.125</td>
<td>9 - 10</td>
</tr>
<tr>
<td>RTA121-003</td>
<td>12</td>
<td>6</td>
<td>4.5</td>
<td>0.125</td>
<td>9 - 10</td>
</tr>
<tr>
<td>RTA121-004</td>
<td>14</td>
<td>6</td>
<td>4.5</td>
<td>0.125</td>
<td>9 - 10</td>
</tr>
</tbody>
</table>

### Style 122 - T-Base

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Nominal Mounting Height (ft.)</th>
<th>Butt Dia. (in.)</th>
<th>Top Dia. (in.)</th>
<th>Wall Thickness (in.)</th>
<th>Bolt Circle (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRB122-001</td>
<td>8</td>
<td>6</td>
<td>4.5</td>
<td>0.125</td>
<td>10</td>
</tr>
<tr>
<td>SRB122-002</td>
<td>10</td>
<td>6</td>
<td>4.5</td>
<td>0.125</td>
<td>10</td>
</tr>
<tr>
<td>SRB122-003</td>
<td>12</td>
<td>6</td>
<td>4.5</td>
<td>0.125</td>
<td>10</td>
</tr>
<tr>
<td>SRB122-004</td>
<td>14</td>
<td>6</td>
<td>4.5</td>
<td>0.125</td>
<td>10</td>
</tr>
</tbody>
</table>
**Base and Anchorage Details**

### 4-Bolt Base — Round Poles

<table>
<thead>
<tr>
<th>Base Details</th>
<th>Anchor Bolt Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>Butt Dia.</td>
<td>Bolt Circle</td>
</tr>
<tr>
<td>4</td>
<td>6.5 - 8</td>
</tr>
<tr>
<td>5</td>
<td>7.5 - 8</td>
</tr>
<tr>
<td>6 (7/8” Bolt)</td>
<td>9 - 10</td>
</tr>
<tr>
<td>6 (1&quot; Bolt)</td>
<td>9 - 10</td>
</tr>
<tr>
<td>7</td>
<td>10 - 11</td>
</tr>
<tr>
<td>8</td>
<td>11 - 12</td>
</tr>
<tr>
<td>9</td>
<td>12.5 - 14</td>
</tr>
<tr>
<td>10 Up to .250”</td>
<td>14 - 15</td>
</tr>
<tr>
<td>10 .312” &amp; Larger</td>
<td>14 - 15</td>
</tr>
<tr>
<td>12</td>
<td>16 - 18</td>
</tr>
</tbody>
</table>

### 3-Bolt Base — Round Poles

<table>
<thead>
<tr>
<th>Base Details</th>
<th>Anchor Bolt Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>Butt Dia.</td>
<td>Bolt Circle</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
</tr>
</tbody>
</table>

### Hinged Base — Round Poles

<table>
<thead>
<tr>
<th>Base Details</th>
<th>Anchor Bolt Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>Butt Dia.</td>
<td>Bolt Circle</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>8.5</td>
</tr>
</tbody>
</table>

### 4-Bolt Base — Square Poles

<table>
<thead>
<tr>
<th>Base Details</th>
<th>Anchor Bolt Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>Butt Sq.</td>
<td>Bolt Circle</td>
</tr>
<tr>
<td>4</td>
<td>8.5 - 9.5</td>
</tr>
<tr>
<td>5</td>
<td>10.5 - 11.5</td>
</tr>
<tr>
<td>6</td>
<td>12 - 13</td>
</tr>
<tr>
<td>6.625</td>
<td>13 - 14</td>
</tr>
</tbody>
</table>

### Hinged Base — Square Poles

<table>
<thead>
<tr>
<th>Base Details</th>
<th>Anchor Bolt Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>Butt Sq.</td>
<td>Bolt Circle</td>
</tr>
<tr>
<td>4</td>
<td>7.5 - 9</td>
</tr>
<tr>
<td>5</td>
<td>7.5 - 9</td>
</tr>
</tbody>
</table>
### Base and Anchorage Details

**Beehive — Round Poles**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>AA Height</th>
<th>F Bolt Circle Dia.</th>
<th>G Bolt Circle Dia.</th>
<th>AA Height</th>
<th>Bolt Qty.</th>
<th>H Bolt Proj.</th>
<th>I Bolt Size</th>
<th>Catalog #</th>
</tr>
</thead>
<tbody>
<tr>
<td>70501</td>
<td>17</td>
<td>15</td>
<td>15.375</td>
<td>13 - 13.5</td>
<td>3</td>
<td>3.5</td>
<td>1 X 36 X 4</td>
<td>271-001</td>
</tr>
<tr>
<td>70512</td>
<td>17</td>
<td>12</td>
<td>13.0625</td>
<td>10 - 12</td>
<td>4</td>
<td>3.5</td>
<td>1 X 36 X 4</td>
<td>271-001</td>
</tr>
<tr>
<td>70521</td>
<td>17</td>
<td>17.25</td>
<td>17.4375</td>
<td>14.5 - 15</td>
<td>4</td>
<td>3.5</td>
<td>1 X 36 X 4</td>
<td>271-001</td>
</tr>
<tr>
<td>78235</td>
<td>9</td>
<td>15</td>
<td>15.375</td>
<td>14.5 - 15</td>
<td>4</td>
<td>3.5</td>
<td>1 X 36 X 4</td>
<td>271-001</td>
</tr>
<tr>
<td>78451</td>
<td>9</td>
<td>12</td>
<td>12.75</td>
<td>10.5 - 12</td>
<td>4</td>
<td>3.5</td>
<td>1 X 36 X 4</td>
<td>271-001</td>
</tr>
</tbody>
</table>

**Breakaway Transformer Base**

<table>
<thead>
<tr>
<th>Catalog #</th>
<th>AA Height</th>
<th>F Bolt Circle Dia.</th>
<th>G Bolt Circle Dia.</th>
<th>AA Height</th>
<th>Bolt Qty.</th>
<th>H Bolt Proj.</th>
<th>I Bolt Size</th>
<th>Catalog #</th>
</tr>
</thead>
<tbody>
<tr>
<td>70501</td>
<td>17</td>
<td>15</td>
<td>15.375</td>
<td>13 - 13.5</td>
<td>4</td>
<td>3.5</td>
<td>1 X 36 X 4</td>
<td>271-001</td>
</tr>
<tr>
<td>70512</td>
<td>17</td>
<td>12</td>
<td>13.0625</td>
<td>10 - 12</td>
<td>4</td>
<td>3.5</td>
<td>1 X 36 X 4</td>
<td>271-001</td>
</tr>
<tr>
<td>70521</td>
<td>17</td>
<td>17.25</td>
<td>17.4375</td>
<td>14.5 - 15</td>
<td>4</td>
<td>3.5</td>
<td>1 X 36 X 4</td>
<td>271-001</td>
</tr>
<tr>
<td>78235</td>
<td>9</td>
<td>15</td>
<td>15.375</td>
<td>14.5 - 15</td>
<td>4</td>
<td>3.5</td>
<td>1 X 36 X 4</td>
<td>271-001</td>
</tr>
<tr>
<td>78451</td>
<td>9</td>
<td>12</td>
<td>12.75</td>
<td>10.5 - 12</td>
<td>4</td>
<td>3.5</td>
<td>1 X 36 X 4</td>
<td>271-001</td>
</tr>
</tbody>
</table>

### Anchor Bolts

Steel Anchor Bolts conform to AASHTO M314-90 Grade 55. The threaded end will be galvanized a minimum of 10" per ASTM A153 and contain a right angle hook at the unthreaded end.

**Notes:**

1. Each catalog number refers to a complete set of bolts. Each bolt will include one nut, one lockwasher, and one flatwasher (all hardware components of galvanized steel).
2. To use two nuts per bolt for leveling, change the suffix to “-002" (Example 271-002). “-002” Kits will contain two nuts, two flatwashers, and one lockwasher per bolt. If leveling nuts are used, the pole base should be directly supported in full contact by a high quality, structural, non-shrink grout with a minimum 28 day compressive strength of 8,000 psi. All bolt projections shown in this catalog are for single nut applications. Different amounts of bolt projection will be required for use with leveling nuts. NOTE: Hapco does not recommend double nut installations (See #4), and stilting the pole base with leveling nuts should never be used with breakaway devices. Leveling nuts interfere with the device’s proper performance, and if so mounted, Hapco will void certification that these devices meet AASHTO breakaway requirements.
3. For Double Nut Kits (Hardware Only, No Bolt), specify “DN” (Example 271-001DN).
4. Hapco recommends leveling shims in lieu of leveling nuts. No grouting is required with leveling shims. Order Part # 51432-001 (3-1/8”W x 3-1/2”L x 1/16”H). Contact Hapco Customer Service for information on Anchor Bolt options (SS – Stainless Steel, FG – Fully Galvanized, etc.).

### Additional Information

- **3/4” Anchor Bolts**
  - 273-001: 4 bolts, .75” diameter, 17” length, 3/4”-10NC thread, 3.5” projection, 10 (+2/-0) lbs.
  - 274-001: 3 bolts, .75” diameter, 17” length, 3/4”-10NC thread, 3.5” projection, 8 lbs.
  - 78242: 4 bolts, .75” diameter, 30” length, 3/4”-10NC thread, 3.5” projection, 17 lbs.

- **1” Anchor Bolts**
  - 271-001: 4 bolts, 1” diameter, 36” length, 1”-8NC thread, 6” projection, 10 (+2/-0) lbs.
  - 272-001: 4 bolts, 1” diameter, 48” length, 1”-8NC thread, 6” projection, 44 lbs.

- **1-1/4” Anchor Bolt**
  - 276-001: 4 bolts, 1.25” diameter, 48” length, 1-1/4”-7NC thread, 6” projection, 68 lbs.
Aluminum Light Pole Specifications

**Pole Shaft**
The shaft shall be constructed of seamless extruded tube of Aluminum Alloy 6063 (round shafts) or Aluminum Alloy 6XXX (square shafts) per the requirements of ASTM B221 of sufficient nominal thickness to meet the design requirements without the use of internal reinforcing sleeves. No longitudinal shaft welds shall be allowed. The shaft shall be full-length heat treated after welding to produce a T6 temper in round shafts and a T5 temper in square shafts. The heat-treating oven used shall be certified to meet the requirements of ASTM B597 and Mil-H-6088 specifications. An aluminum pole cap utilizing stainless steel attaching screws will be provided when required.

**Pole Arms**
The pole arms will be constructed of seamless extruded tube of Aluminum Alloy 6063 per the requirements of ASTM B221. Arms shall be full-length heat treated after welding to produce a T6 temper. Attachment pole plates shall be of Aluminum Alloy of T6 temper with stainless steel attaching hardware.

**Anchor Base – Round Shafts**
**4-Bolt Base**
The 4-Bolt base flange for attachment to the foundation or to the transformer base shall be of cast Aluminum Alloy 356-T6. Base flange shall be joined to pole shaft by means of complete circumferential welds; externally at the top of flange and internally at bottom of shaft tube. Four anchor bolt covers of cast Aluminum Alloy 356-F with stainless steel hex head attaching screws shall be provided.

**3-Bolt-Base**
The 3-Bolt base flange shall be of cast Aluminum Alloy 356-T6 with spun aluminum base cover and stainless steel hex head attaching screws. Base flange shall be joined to pole shaft by means of complete circumferential welds; externally at the top of flange and internally at bottom of shaft tube.

**Hinged Base**
Hinged cast aluminum base flange of Alloy 356-T6 with 2-piece cast aluminum base cover and stainless steel hex head attaching screws. Base flange shall be joined to pole shaft by means of complete circumferential welds; externally at the top of flange and internally at bottom of shaft tube. The hinge mechanism is engaged by removal of the 2-piece cover and two front anchor bolt nuts.

**Beehive Base**
The Beehive cast aluminum transformer base shall be of Alloy 356-T6 with an aluminum door and stainless steel attaching screws. Base shall be joined to pole shaft by means of complete circumferential weld.

**Direct Buried**
Direct Buried aluminum poles are designed for embed installations. Poles with butt diameters of 6” and larger shall be provided with an anti-rotational device by means of partial flattening the butt of the pole into an oval cross-section. A wiring provision will be provided 24” below ground line. Soil conditions vary by site, therefore foundation requirements should be determined by a qualified Structural Engineer with knowledge of jobsite soil conditions.

**Transformer Base (T-Base)**
The T-Base shall be a casting of Aluminum Alloy 356-T6 with removable access door held in place with one stainless steel screw. The base shall be 17” tall with an access door 11-3/4” high, 9-1/4” wide at the top and 9-3/4” wide at the bottom. It shall connect to 1” diameter anchorages. Three bases with bolt circles ranging from 10” to 17-1/4” can be used with shafts in size from 6” to 10” diameter (dependent on their proper application and specific loading restrictions). The bases shall meet 2009 AASHTO breakaway requirements. Four (4) 1” diameter galvanized steel hex-head machine bolts with nuts and washers shall be supplied to attach the transformer bases to the base flange of the pole shaft. Eight (8) 1/2” thick x 2-3/4” diameter galvanized steel heavy washers shall be provided to properly distribute the bolt forces in the top and bottom flanges of the transformer base.

**Anchor Base – Square Shafts**
**4-Bolt Base**
The 4-Bolt cast aluminum base flange shall be constructed of Alloy 356-T6 with aluminum snap-in bolt covers.

**Hinged Base**
The Hinged cast aluminum base flange shall be constructed of Alloy 356-T6 with three (3) stainless steel screws. Base flange shall be joined to pole shaft by means of complete circumferential welds; externally at the top of flange and internally at bottom of shaft tube. The Hinge mechanism is engaged by removal of the three (3) securing screws.

**Handhole – Round Shafts**
**4”-5” Butt Diameters**
4”-5” butt diameter poles shall feature a 2” x 4” handhole with curved lap style aluminum door and two (2) stainless steel self-tapping attaching screws. A grounding provision incorporating a tapped 1/4”-20NC hole is provided opposite the handhole.

**6” Butt Diameter**
6” butt diameter poles shall feature a reinforced, 3” x 5” curved cast aluminum frame (Alloy 356-T6) with aluminum door and two (2) stainless steel hex head screws. A grounding provision incorporating a 3/8” diameter hole is provided opposite the handhole.

**7”+ Butt Diameters**
7” and larger butt diameter poles shall feature a reinforced, 4” x 6” curved cast aluminum frame (Alloy 356-T6) with aluminum door and two (2) stainless steel hex head screws. Reinforced frame will contain a tapped 3/8”-16NC grounding provision.
Aluminum Light Pole Specifications

Handhole – Square Shafts
4”-5” Base Squares
4”-5” square poles shall feature a 2” x 4” handhole with square lap style aluminum door and two (2) Stainless Steel self-tapping attaching screws. A 1/4”-20NC grounding provision is provided opposite the handhole.

6”+ Base Squares
6” and larger square poles shall feature a 3” x 5” handhole with square lap style aluminum door and two (2) Stainless Steel self-tapping attaching screws. A 1/4”-20NC grounding provision is provided opposite the handhole.

Handhole – Poles with Arms
Poles with single arms will contain a handhole that is located 90 degrees clockwise from the plane of the bracket arm as viewed from the top of the pole. Twin arm poles will contain a handhole that is located 90 degrees from the plane of both bracket arms.

Anchorage
Each anchor base pole shall be supplied with anchor bolts. Steel bolts conforming to AASHTO M314-90 Grade 55 with the threaded end galvanized a minimum of 10” per ASTM A153 and a right angle hook at the unthreaded end. Each bolt shall include one (1) hex nut, lock washer, and flat washer, with all components being of galvanized steel. A bolt circle template will be provided.

Miscellaneous Hardware
Excluding anchorage hardware, all nuts, bolts, and washers used in the fabrication of the pole shall be Grade 18-8 stainless steel.

Grounding
Each pole shaft shall contain an internal ground provision for the purpose of attaching a grounding connector.

Welding
All welding is performed by gas metal arc welding in accordance with American Welding Society (AWS) Specification D1.2, Structural Welding Code – Aluminum, or Canadian Standards Association (CSA) W47.2 Certification of Companies for Fusion Welding of Aluminum.

Inspection and Packaging
Each coated part shall be inspected for appearance uniformity and appropriate coating mil thickness. Coated product shall be spiral wrapped with cross woven textile, polyethylene film or burlap material of sufficient tensile and elongation that exceed required characteristics to ensure protection during handling and shipping. The product shall be bundled with sufficient dunnage and strapping to prevent damage during shipment.

Satin Finish
Pole shafts specified with the -01 and -02 Satin finish designations shall be provided a uniform brushed aluminum natural finish achieved by utilizing specially formulated abrasives in a multi-pass, rotary sanding operation. Davit Arms shall match the shaft finish. Mast, Truss, Bullhorn, and Cross Arms shall be provided with a satin etched finish. All materials shall be cleaned and free from dents and unsightly scratches.

Note:
These specifications are intended for general information only. To facilitate our commitment to continuous improvement and providing industry-leading products, Hapco reserves the right to change materials and designs without prior notice.
**Conditions**

All orders or contracts are accepted with the understanding that they are subject to Hapco’s factory, unless otherwise stated. Method and route of shipment are at Hapco’s discretion, unless the Buyer supplies explicit shipping instructions. When Buyer specifies method of shipment, any additional shipping expense will be charged to Buyer. Shipment charges are not intended to guarantee the delivery at or to destination. Identification of goods to the contract shall occur as each shipment is placed in the hands of the carrier. Anchor Bolts shipped in advance of poles will be charged freight.

**Quotations**

Written quotations automatically expire thirty (30) calendar days from the date issued unless otherwise stated on the face of the quotation. Quotes are subject to termination by notice within that period. Quotations are subject to correction in the event of stenographic or clerical errors. Prices quoted are for specific quantities shown, released for manufacture and shipment at one time to one destination unless otherwise stated. Any change in the quantity of an order and/or split shipments are subject to price revision. Quotations are subject to change in the event complete specifications or requirements are not provided.

**Purchase Order**

If a quotation is accepted and Buyer’s order form is used for the purpose, it is expressly understood and agreed that the terms and conditions herein set forth shall prevail insofar as they may in any way conflict with the terms and conditions set forth in such order form, and the issuance of such order by Buyer shall be deemed to note Buyer’s assent to the foregoing.

**Prices**

Prices are subject to change without notice and orders calling for future shipment will be billed according to the price in effect at the time of shipment, unless otherwise specified.

**Taxes**

Prices on the specified products are exclusive of all city, state and federal excise taxes, including without limitation, taxes on manufacture, sales, receipts, gross income, occupation, use and similar taxes. Wherever applicable, any tax or taxes will be added to the invoice as a separate charge to be paid by the Buyer.

**Shipment**

All prices are F.O.B. Hapco’s factory (Abingdon, Virginia), unless otherwise stated. Method and route of shipment are at Hapco’s discretion, unless the Buyer supplies explicit shipping instructions. When Buyer specifies method of shipment, any additional shipping expense will be charged to Buyer. Shipment charges are not intended to guarantee the delivery at or to destination. Identification of goods to the contract shall occur as each shipment is placed in the hands of the carrier. Anchor Bolts shipped in advance of poles will be charged freight.

**Deliveries**

Deliveries shall be subject to, and contingent upon, strikes, labor difficulties, civil unrest, war, fire, delay or defaults of common carriers, failure or curtailment in Hapco’s usual sources of supply, governmental decrees or orders, or without limiting the foregoing, any other delays beyond Hapco’s reasonable control, and Hapco shall not be liable for any loss or damage arising therefrom. Hapco shall have the additional right, in the event of the happening of any of the above contingencies, at its option, to cancel this contract or any part thereof, without any resulting liability. Shipments made within twenty (20) days after specified date of delivery shall constitute a good delivery. Any delivery not in dispute shall be paid for regardless of other controversies relating to other delivered or undelivered merchandise.

**Packaging**

Unless otherwise stated on the face of the quotation, all packaging will be in accordance with Hapco’s standard practices for domestic shipments.

**Hapco’s Right of Possession**

Hapco shall have the right, in addition to all others it may possess, at any time, for credit reasons or because of Buyer’s default or defaults, to withhold shipments, in whole or in part, and to recall goods in transit, retake same, and repossess all good which may be stored with Hapco for Buyer’s account, without the necessity of taking any other proceedings, and Buyer consents that all the merchandise is so recalled, retaken or repossessed shall become Hapco’s absolute property, provided that the Buyer is given full credit therefor. The foregoing shall not be construed as limiting, in any manner, any of the rights or remedies available to Hapco because of any default of Buyer under the Uniform Commercial Code as in force and effect in the Commonwealth of Virginia on the date of signing this agreement.

**Payment Terms**

Net amount of invoice is due and payable in full within thirty (30) days of invoice date. If in Hapco’s opinion, the financial condition of the Buyer at any time does not justify continuance of production or shipment on the terms of payment specified, Hapco may require full or partial payment in advance of manufacture or shipment. Any indebtedness owing to Hapco for a period longer than thirty (30) days shall bear interest until paid at the current prime rate published in the Wall Street Journal. If Hapco finds it necessary to place any indebtedness hereunder in the hands of an attorney for collection, the Buyer shall pay all expenses and costs of collection, including reasonable attorney’s fees.

**Liability**

Hapco shall not be liable for loss or damage of any kind resulting from delay or inability to deliver on account of fire, labor troubles, accident, acts of civil or military authorities, or from any other cause beyond Hapco’s control.

**Cancellation**

An order once placed and accepted by Hapco can be canceled only with Hapco’s consent and upon terms that will indemnify Hapco against loss.

**Returned Material / Shortages**

In no case are goods to be returned without prior written consent. Only unused material as currently manufactured, which has been invoiced to Buyer, within ninety (90) days, will be considered for return. Material accepted for credit is subject to a minimum service charge of twenty-five percent (25%) plus all transportation charges. Material built to order is not subject to return for credit under any circumstances. Goods must be securely packaged to reach Hapco without damage. All claims for shortages must be made in writing within 30 days of receipt of shipment.
**Warranty – Aluminum Pole Assemblies**

Hapco warrants its aluminum pole assemblies for their lifetime to be free of defects in material and workmanship and to be free from corrosion, except those items normally consumed in service. This warranty does not cover failures or corrosion due to:

- Improper installation.
- Misapplication — product used outside of specified use.
- Damage from handling, transportation, installation, vehicular impact, abuse, or vandalism.
- Site specific wind induced or other vibration.
- Installation in soils with a pH under 5 or over 9.
- Improper grounding.

Hapco will, at its sole option, repair replace, or credit Buyer’s account for any product that does not conform to this warranty.

**HAPCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HAPCO SHALL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGE, INCLUDING BUT NOT LIMITED TO CONSEQUENTIAL DAMAGES, LIQUIDATED DAMAGES AND BACK CHARGES.**

This warranty does not include reimbursement for the expense of installation or removal of equipment, transportation, or any other expenses which may be incurred. This warranty applies to the pole assembly only and does not include anchor bolts, connecting hardware, or foundation. Authorization must be obtained from Hapco before any material is returned. This warranty excludes finishes such as powder coating, anodizing, and satin. “Lifetime” is defined as the lifetime of the products intended use. The foregoing states the Buyer’s sole remedy for any breach of warranty by Hapco.

This warranty applies only to Hapco aluminum pole assemblies shipped on or after January 1st, 2011.

**Warranty – Hardware and Accessories**

In addition to the lifetime warranty on its aluminum pole assemblies, all additional equipment, apparatus, and parts are warranted against defects in materials and workmanship for a period of one (1) year from the date of shipment, excepting those items normally consumed in service, unless failure is due to improper installation or misapplication.

Hapco will, at its sole option, repair replace or credit Buyer’s account for any equipment or part which proves defective under its warranty provided that the Buyer notifies Hapco in writing of such defect within the appropriate warranty period.

**HAPCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HAPCO SHALL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGE, INCLUDING BUT NOT LIMITED TO CONSEQUENTIAL DAMAGES, LIQUIDATED DAMAGES AND BACK CHARGES.**

This warranty does not include reimbursement for the expense of installation, removal of equipment, transportation or any other expenses that may be incurred. Authorization must be obtained from Hapco before any material is returned. The foregoing states the Buyer’s sole remedy for any breach of warranty by Hapco.

**Warranty – Powder Coat Finish Warranty**

HAPCO warrants its factory-applied powder coatings on Aluminum Poles will not fail or substantially deteriorate when the coated product is properly utilized and subjected to normal climatic exposure for a period of five years from the date of shipment (“Warranty Period”). If during the Warranty Period, the aluminum pole exterior coating exhibits any cracking, peeling or excessive fading, Hapco will repair or replace the defective coating, at its option, at no charge to the Purchaser, if the Purchaser promptly notifies Hapco in writing and furnishes proof of purchase when such failure or deterioration becomes evident.

**Warranty – Hardware and Accessories**

In addition to the lifetime warranty on its aluminum pole assemblies, all additional equipment, apparatus, and parts are warranted against defects in materials and workmanship for a period of one (1) year from the date of shipment, excepting those items normally consumed in service, unless failure is due to improper installation or misapplication.

Hapco will, at its sole option, repair replace or credit Buyer’s account for any equipment or part which proves defective under its warranty provided that the Buyer notifies Hapco in writing of such defect within the appropriate warranty period.

**HAPCO MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. HAPCO SHALL NOT BE LIABLE FOR ANY OTHER LOSS OR DAMAGE, INCLUDING BUT NOT LIMITED TO CONSEQUENTIAL DAMAGES, LIQUIDATED DAMAGES AND BACK CHARGES.**

This warranty does not include reimbursement for the expense of installation, removal of equipment, transportation or any other expenses that may be incurred. Authorization must be obtained from Hapco before any material is returned. The foregoing states the Buyer’s sole remedy for any breach of warranty by Hapco.

**Controlling Provisions**

These terms and conditions shall supersede any provisions, terms and conditions contained on any confirmation order, or other writing Buyer may give or receive, and the rights of the parties shall be governed exclusively by the provisions, terms and conditions hereof. Hapco makes no representations or warranties concerning this order except such as are expressly contained herein, and this order may not be changed or modified orally.

**General**

The provisions on the face hereof and these Terms and Conditions constitute the entire agreement among the parties and supersede the provisions of any purchase order, other communication between the parties or any statement or representation not included herein. This agreement may not be modified or amended except in a writing signed by the party intended to be bound thereby. This agreement shall be governed by the laws of the Commonwealth of Virginia.

www.hapco.com
Proven Performance

Hapco standard and decorative aluminum products are used in various applications in the Commercial, Utility, Municipality, and Department of Transportation markets. For over 60 years, Hapco has been considered a leader in the light pole industry and has products in every state of the US, Puerto Rico, and several international countries. Our history of proven performance, coupled with our exclusive Lifetime Warranty on aluminum pole assemblies, make Hapco the trusted industry source.

A partial listing of our customers is shown below:

**Venetian Causeway**
Miami, FL
Installed Circa 1951

**Light Fixture Manufacturers**
Cooper
GE Lighting
Holophane
Hubbell
Lithonia

**Department of Transportation**
Alabama
Arizona
California
Colorado
Connecticut
Florida
Georgia
Hawaii
Illinois
Indiana
Kansas
Kentucky
Louisiana
Maine
Massachusetts
Michigan
Minnesota
Mississippi
Nevada
New Jersey
New Mexico
New York
North Carolina
Ohio
Oregon
Pennsylvania
Rhode Island
South Carolina
Texas
Virginia
Wisconsin

**Municipalities**
Albuquerque, New Mexico
Atlanta, Georgia
Austin, Texas
Baltimore, Maryland
Birmingham, Alabama
Champaign, Illinois
Charleston, South Carolina
Chattanooga, Tennessee
Chicago, Illinois
College Station, Texas
Colorado Springs, Colorado
Columbus, Ohio
Dayton, Ohio
Des Moines, Iowa
Eau Claire, Wisconsin
Fargo, North Dakota
Fort Wayne, Indiana
Grand Forks, North Dakota
Greenville, South Carolina
Gulfport, Mississippi
Huntsville, Alabama
Indianapolis, Indiana
Jacksonville, Florida
Kansas City, Kansas/Missouri
Knoxville, Tennessee
Las Cruces, New Mexico
Lexington, Kentucky
Louisville, Kentucky
Madison, Wisconsin
Milwaukee, Wisconsin
Minneapolis, Minnesota
Mobile, Alabama
Nashville, Tennessee
New York, New York
Ocala, Florida
Ogden, Utah
Orlando, Florida
Park City, Utah
Pensacola, Florida
Philadelphia, Pennsylvania
Savannah, Georgia
Seattle, Washington
Tampa, Washington
Numerous Co-Ops and Metered Municipalities

**Utility**
Alabama Power
Alliant Energy
American Electric Power
Austin Energy
Baltimore Gas & Electric
Bristol Tennessee Essential Services
Bristol Virginia Utilities
Brownstown Electric
Chattanooga Power Board
Colorado Springs Utility
Consumers Energy
Dayton Power & Light
Detroit Edison
Dominion Power
Duke Energy
Electric Services
Energy
Excel
First Energy
Harrisonburg Electric Commission
Huntsville Utilities
Indiana Power & Light
Indianapolis Power & Light
Jackson Electric Authority
Johnson City Power Board
Kentucky Utilities
Knoxville Utility Board
Louisville Gas & Electric
Mississippi Power Company
Nashville Electric Commission
National Grid
Niagara Mohawk
Northeast Utilities
Ocala Utilities Board
Orlando Utilities Commission
Pacific Gas & Electric
Progress Energy
PSE & G
Public Services of New Mexico
Puget Sound Energy
South Carolina Electric & Gas
Southern Company
Tampa Electric Company
Virginia Tech Electric

**Military Bases**
Brookley AFB
Camp Lejeune
Elgin AFB
Fort Benning
Fort Bliss
Fort Bragg
Fort Campbell
Fort Carson
Fort Drum
Fort Gordon
Fort Huachuca
Fort Jackson
Fort Lee
Fort Riley
Fort Rucker
Fort Sill
Fort Stewart
Grand Forks AFB
Kings Bay Naval Base
MacDill AFB
White Sands Missile Base
Hapco Aluminum provides an environmentally responsible choice of material and approach with the burgeoning green movement, allowing specifiers to aggressively pursue a design based upon sustainable principles.

Hapco Aluminum resists the ravages of time, temperature, corrosion, humidity, and warping, creating an incredibly long life cycle when compared to alternative materials. This results in a far lower environmental impact through reduced material replacement energy.

Our products are engineered to be efficiently and durably built using materials and processes that are kind to our environment. Aluminum production, unlike the galvanization process of steel which emits zinc chloride and ammonium chloride into the atmosphere, has a low impact on the environment, making it especially appealing when both environmental and economic criteria are considered.

The longevity and durability of aluminum pole products manufactured by Hapco can be validated by our industry-leading Lifetime Warranty on Aluminum Pole Assemblies, making Hapco Aluminum "The Green Choice" for today’s environmentally-conscience designer.

- Aluminum is 100% recyclable. In fact, 70% of aluminum produced since the year 1886 is still in use today.
- Recycling aluminum saves 95% of the energy it would take to produce new material from Bauxite Ore.
- Every ton of recycled aluminum saves 4 tons of the raw Bauxite required to produce new aluminum.
- Using recycled aluminum in place of raw materials reduces air pollution by 95% and water consumption by 97%.
- Aluminum is naturally corrosion-resistant, eliminating the use of toxic chemicals to maintain its appearance.
- Aluminum recycling benefits present and future generations by conserving energy and other natural resources.

Hapco Aluminum, a sustainable material for now and the future!