

Satin Aluminum or Powder Coated Finish per Customer Specification.

C BUTT DIA.	D TOP DIA.
4	4
5	5
6	6
7	7
8	8
9	9
10	10

C and D Dimensions in Inches

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 to produce a T6 temper.

Handhole

4" Butt Diameter - 2" x 4" 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.

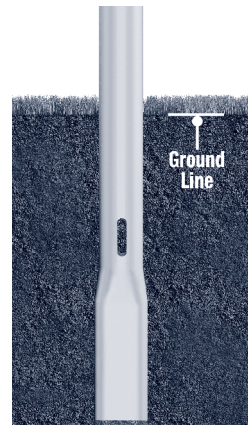
5" Butt Diameter - 2-1/2" x 5" Handhole with curved Lap Style Aluminum Door and two (2) SS Self-Tapping Attaching Screws. A Grounding Provision is provided as part of the handhole.

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.



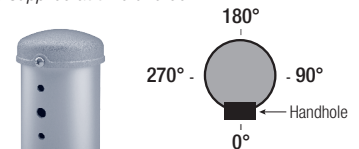
Vibration Damper

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

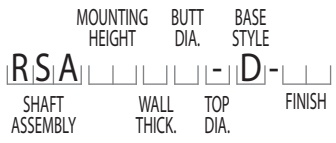
For Tenon Mount applications specify both Tenon diameter (2.375", 2.875", 3.5", etc.) and length (3", 4", etc.).



A MTG. HGT.	B WALL THK.	C BUTT DIA.	E EMBED DEPTH	TOTAL LUM. WT.	MAXIMUM EPA								CATALOG NUMBER
					120	130	140	150	160	170	180		
8	0.125	4	4	223	5.7	4.7	3.9	3.2	2.8	2.4	2.1	RSA08B4-D-**-	
10	0.125	4	4	143	3.9	3.1	2.5	2.0	1.7	1.4	1.2	RSA10B4-D-**-	
10	0.125	5	4	283	6.7	5.6	4.7	4.1	3.5	3.1	2.7	RSA10B5-D-**-	
12	0.125	4	4	100	2.7	2.0	1.5	1.0	0.8	0.7	-	RSA12B4-D-**-	
12	0.125	5	4	198	4.8	4.0	3.3	2.8	2.4	2.1	1.8	RSA12B5-D-**-	
12	0.156	5	4	242	6.5	5.4	4.5	3.9	3.3	2.9	2.5	RSA12C5-D-**-	
12	0.188	5	4	286	8.1	6.8	5.7	4.9	4.2	3.7	3.2	RSA12D5-D-**-	
14	0.125	4	4	74	1.6	1.1	0.6	-	-	-	-	RSA14B4-D-**-	
14	0.125	5	4	146	3.3	2.7	2.2	1.8	1.5	1.2	1.0	RSA14B5-D-**-	
14	0.156	5	4	179	4.7	3.9	3.2	2.7	2.3	1.9	1.7	RSA14C5-D-**-	
14	0.188	5	4	211	6.1	5.1	4.2	3.6	3.1	2.6	2.3	RSA14D5-D-**-	
16	0.125	5	4	112	2.1	1.6	1.2	0.9	0.7	0.6	-	RSA16B5-D-**-	
16	0.156	5	4	137	3.3	2.6	2.1	1.7	1.4	1.2	1.0	RSA16C5-D-**-	
16	0.188	5	4	162	4.5	3.6	3.0	2.5	2.1	1.8	1.5	RSA16D5-D-**-	
16	0.156	6	5	248	16.8	14.1	12.0	10.4	9.0	7.9	6.9	RSA16C6-D-**-	
16	0.188	6	5	294	20.6	17.4	14.9	12.8	11.2	9.8	8.7	RSA16D6-D-**-	
18	0.125	5	4	89	1.0	0.6	-	-	-	-	-	RSA18B5-D-**-	
18	0.156	5	4	109	2.0	1.5	1.1	0.9	0.6	-	-	RSA18C5-D-**-	
18	0.188	5	4	128	3.1	2.4	1.9	1.5	1.2	1.0	0.8	RSA18D5-D-**-	
18	0.188	6	5	232	17.2	14.5	12.3	10.6	9.2	8.1	7.1	RSA18D6-D-**-	
20	0.156	5	4	88	0.9	0.6	-	-	-	-	-	RSA20C5-D-**-	
20	0.188	5	4	104	1.9	1.3	1.0	0.7	-	-	-	RSA20D5-D-**-	
20	0.125	6	5	129	8.5	7.0	5.9	5.0	4.2	3.6	3.1	RSA20B6-D-**-	
20	0.156	6	5	158	11.4	9.5	8.0	6.9	5.9	5.1	4.5	RSA20C6-D-**-	
20	0.188	6	5	188	14.4	12.1	10.2	8.8	7.6	6.6	5.8	RSA20D6-D-**-	
20	0.156	7	5	254	17.5	14.7	12.5	10.8	9.3	8.2	7.0	RSA20C7-D-**-	
20	0.188	7	6	300	21.6	18.2	15.6	13.4	11.7	10.2	8.9	RSA20D7-D-**-	
20	0.156	8	5	300	24.7	20.8	17.8	15.4	13.2	11.3	9.8	RSA20C8-D-**-	
20	0.188	8	6	300	30.4	25.7	22.0	19.0	16.4	14.2	12.4	RSA20D8-D-**-	
25	0.156	6	5	101	6.8	5.6	4.6	3.8	3.2	2.7	2.3	RSA25C6-D-**-	
25	0.188	6	5	120	9.1	7.5	6.3	5.3	4.5	3.8	3.3	RSA25D6-D-**-	
25	0.156	7	5	162	11.6	9.6	8.1	6.9	5.9	5.1	4.3	RSA25C7-D-**-	
25	0.188	7	5	193	14.8	12.3	10.4	8.9	7.7	6.7	5.7	RSA25D7-D-**-	
25	0.156	8	5	245	17.0	14.3	12.1	10.4	8.7	7.3	6.2	RSA25C8-D-**-	
25	0.188	8	6	291	21.3	17.9	15.2	13.1	11.1	9.4	8.1	RSA25D8-D-**-	
25	0.219	8	6	300	25.4	21.4	18.3	15.7	13.4	11.5	9.9	RSA25E8-D-**-	
25	0.250	8	6	300	29.5	24.9	21.3	18.4	15.7	13.5	11.7	RSA25F8-D-**-	
30	0.188	6	5	83	5.3	4.2	3.3	2.7	2.2	1.8	1.4	RSA30D6-D-**-	
30	0.156	7	5	112	7.4	6.0	4.9	4.1	3.4	2.9	2.2	RSA30C7-D-**-	
30	0.188	7	5	133	9.9	8.2	6.8	5.7	4.8	4.1	3.3	RSA30D7-D-**-	
30	0.156	8	5	169	11.9	9.8	8.2	7.0	5.6	4.5	3.6	RSA30C8-D-**-	
30	0.188	8	6	202	15.2	12.7	10.7	9.1	7.6	6.2	5.1	RSA30D8-D-**-	
30	0.219	8	6	232	18.5	15.5	13.1	11.2	9.4	7.8	6.5	RSA30E8-D-**-	
30	0.250	8	6	262	21.6	18.2	15.4	13.2	11.2	9.4	7.9	RSA30F8-D-**-	
30	0.188	9	6	290	21.2	17.8	14.9	12.4	10.3	8.6	7.2	RSA30D9-D-**-	
30	0.250	9	6	300	29.7	25.1	21.1	17.8	15.1	12.8	11.0	RSA30F9-D-**-	
30	0.188	10	6	300	28.2	23.3	19.4	16.2	13.6	11.5	9.7	RSA30D1-D-**-	
35	0.156	8	5	124	7.9	6.4	5.3	4.4	3.3	2.3	1.6	RSA35C8-D-**-	
35	0.188	8	6	148	10.7	8.8	7.3	6.2	4.8	3.7	2.8	RSA35D8-D-**-	
35	0.219	8	6	170	13.4	11.1	9.3	7.9	6.3	5.1	4.0	RSA35E8-D-**-	
35	0.250	8	6	192	16.0	13.3	11.2	9.5	7.8	6.4	5.2	RSA35F8-D-**-	
35	0.188	9	6	212	15.8	13.1	10.8	8.7	7.0	5.6	4.4	RSA35D9-D-**-	
35	0.250	9	6	276	22.6	18.9	15.8	13.0	10.8	9.0	7.4	RSA35F9-D-**-	
35	0.188	10	6	294	21.4	17.4	14.2	11.6	9.4	7.7	6.2	RSA35D1-D-**-	
35	0.219	10	6	300	25.8	21.1	17.4	14.4	11.9	9.9	8.2	RSA35E1-D-**-	
35	0.250	10	7	300	30.2	24.9	20.6	17.2	14.4	12.1	10.1	RSA35F1-D-**-	
35	0.312	10	7	300	38.8	32.2	27.0	22.7	19.3	16.4	14.0	RSA35G1-D-**-	
40	0.188	8	6	112	7.1	5.7	4.6	3.7	2.6	1.7	0.9	RSA40D8-D-**-	
40	0.219	8	6	129	9.4	7.6	6.3	5.2	3.9	2.8	1.9	RSA40E8-D-**-	
40	0.250	8	6	146	11.6	9.5	7.9	6.6	5.2	3.9	2.9	RSA40F8-D-**-	
40	0.188	9	6	162	11.5	9.4	7.5	5.7	4.3	3.1	2.1	RSA40D9-D-**-	
40	0.250	9	6	211	17.3	14.4	11.7	9.4	7.5	6.0	4.7	RSA40F9-D-**-	
40	0.188	10	6	224	16.4	12.9	10.2	8.0	6.2	4.7	3.5	RSA40D1-D-**-	
40	0.219	10	6	258	20.0	16.1	12.9	10.4	8.3	6.5	5.1	RSA40E1-D-**-	
40	0.250	10	7	292	23.6	19.1	15.6	12.7	10.3	8.3	6.7	RSA40F1-D-**-	
40	0.312	10	7	300	30.8	25.3	20.9	17.3	14.4	12.0	9.9	RSA40G1-D-**-	

Catalog Number System

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



Catalog Number Example -

RSA 30 D 8 - D - 01

Round Straight Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, No Taper, FBC Direct Buried, 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"
- 1 = 10"

Top Diameter

- = No Taper

Base Style

D = FBC 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 Note:

EPA's based on side mounted fixture(s) not exceeding the height of the pole.

Embed Note:

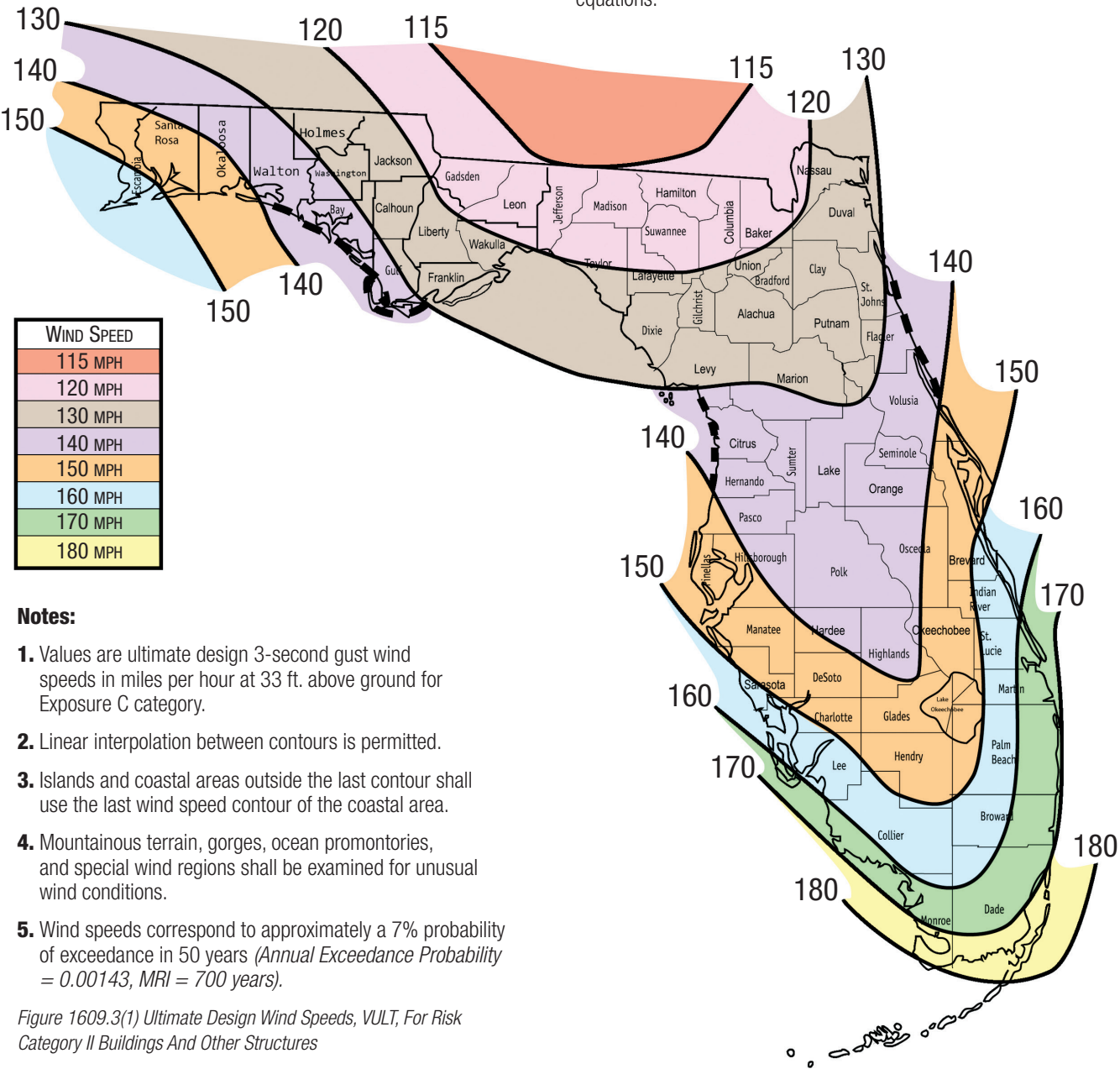
Embed depths shown are calculated using the weight, EPA, and wind speed combination corresponding to the maximum loads for each pole. The calculation is in accordance with Chapter 18 of the 2023 FBC. The calculation uses an assumed Class 3 Soil Type per Table 1806.2 of the 2023 FBC and assumes that backfill is done in accordance with 1807.3.3 of the 2023 FBC. Embed depths are subject to change if the weight, EPA, or wind speed changes. Please contact Hapco for help in determining the appropriate embed depth.



This Hapco Florida Building Code Guide has been developed to provide a quick reference for EPAs (Effective Projected Areas) meeting the 2023 FBC.

The EPAs in this publication are based on the 3-second gust wind map taken from the 2023 Florida Building Code (Figure 1609.3(1); Wind map shown below). These EPAs cannot be used with older or newer maps.

This wind map is to be used in conjunction with ASCE 7 Wind Pressure and AASHTO LTS-6 Design Equations. Wind regions from maps other than the one shown below may not represent the EPA values listed in this catalog. Please contact Hapco for more detailed information about EPA equations.



- Notes:**
1. Values are ultimate design 3-second gust wind speeds in miles per hour at 33 ft. above ground for Exposure C category.
 2. Linear interpolation between contours is permitted.
 3. Islands and coastal areas outside the last contour shall use the last wind speed contour of the coastal area.
 4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
 5. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (*Annual Exceedance Probability = 0.00143, MRI = 700 years*).

Figure 1609.3(1) Ultimate Design Wind Speeds, VULT, For Risk Category II Buildings And Other Structures

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.

LUMINAIRE CONFIGURATION	EPA	SHIELDING FACTOR	TOTAL EPA
2 @ 180°	1.5	X 2.0	= 3.0
3 @ 180°	1.5	X 3.0	= 4.5
4 @ 180°	1.5	X 4.0	= 6.0
3 @ 120°	1.5	X 2.3	= 3.45 (Shielded)
4 @ 90°	1.5	X 3.2	= 4.8 (Shielded)

Example assumes a single luminaire EPA of 1.5.

- ASCE 7 Wind Load Design Assumptions:
- Risk Cat. II, MRI = 700 yrs., Exp. And Surface Roughness Cat. "C"
 - $K_{zt} = 1.0, K_d = 1.0, G = 1.14, V_{ASD} = \sqrt{0.6} \cdot V_{ULT}$ (2024 FBC 1609.3.1)
 - C_f = Drag Coefficients calculated per AASHTO LTS-6 (ASCE 7-16 C29.4)
 - Strength Equations per AASHTO LTS-6 Allowable Stress Increase = 1.33 (ASCE 7-16 C29.4)

FLORIDA BUILDING CODE GUIDE 2023 FBC EPA's

