

**ANCHOR BOLTS**

Anchor Bolts are fabricated from carbon steel bar conforming to AASHTO M314 Grade-55 or ASTM F1554 Grade-55. Bolts have an “L” bend on one end and are galvanized a minimum of 12 inches on the threaded end. Four anchor bolts are provided per pole. Each anchor bolt is furnished with two hex nuts and two flat washers.

**ANCHOR BASE**

The anchor base (base plate) is fabricated from structural quality hot rolled carbon steel plate conforming to ASTM A36. The base plate telescopes the pole shaft and is circumferentially welded top and bottom. The base is provided with bolt slots to accommodate a bolt circle range from 7" to 9".

**POLE SHAFT**

Pole shafts are fabricated from hot rolled welded steel tubing of one-piece construction with a full length longitudinal high frequency electric resistance weld. The cross-section is round with no taper. Shaft material shall have a minimum yield strength of 42,000 psi.

**HANDHOLE**

The reinforcing handhole rim consists of a nominal 2.5" x 5" rectangular shaped tubing material. The handhole is provided with a steel attachment bar, steel cover, and one round head zinc plated machine screw.

**ELECTRICAL GROUND**

A nut holder is welded near the handhole and includes a 0.5"-13UNC hex head bolt and nut.

**FULL BASE COVER (STANDARD)**

The full base cover is fabricated from ABS plastic. The covers are two-piece assemblies secured together with two fasteners.

**STANDARD FINISH**

Standard finishes available are galvanized, prime coat (powder), and finish coat (powder). For information regarding the scope and application of these coatings please refer to page 2.

**POLE TOP CAP (STANDARD)**

A removable top cap is provided and is used in conjunction with drilled pole shafts for accommodation of a direct mounted luminaire arm attachment.

**POLE TOP TENON (OPTIONAL)**

Pole top tenons are fabricated from structural quality hot rolled carbon steel with a guaranteed minimum yield strength of 30,000 psi. A pole top plate and tenon of weldable grade hot rolled commercial quality carbon steel is circumferentially welded to the top of the pole shaft. This plate provides an internal weather resistant wiring raceway into the pole top tenon. Standard sizes are of either 2.38" O.D. x 4" long (P2) or 4" O.D. x 6" long (P4) steel tubing. See page 1 for other available sizes.

**FASTENING HARDWARE**

All structural fasteners are galvanized high strength carbon steel. All other fasteners are galvanized or zinc plated carbon steel or stainless steel.

**DESIGN**

The standards as shown in this section are designed to withstand dead loads and theoretical dynamic loads developed by variable wind speeds, as charted, with an appropriate gust factor under the following conditions:

The luminaire(s) and/or mounting bracket(s) center of gravity is assumed to be located at the pole top for all designs. For purposes of design, effective projected area (EPA) is considered to be the product of the actual projected area and the drag coefficient.

The listed weights include luminaire(s) and/or mounting bracket(s).

The wind velocities are based on 10 mph increments from 80 mph through 100 mph (reference wind map). Standards to be located in areas of known abnormal conditions require special consideration. For example: coastal areas, airports, and areas of special winds such as the Chinook type along the eastern slope of the Rocky Mountains.

Standards are designed for ground mounted applications. Standards mounted on structures, such as bridges and buildings, also necessitate special consideration requiring Valmont's recommendation.

Height correction factors and drag coefficients are applied to the entire structure. An appropriate safety factor is maintained based on the minimum yield strength of the material incorporated in the standard. Secondary moments are considered on all designs.

Valmont Industries, Inc. reserves the right to install various, engineer approved, material hanging accommodations to facilitate the manufacturing process. If this method is not acceptable, Valmont Industries, Inc. must be notified by the customer prior to manufacturing.

Nominal Mounting Height (ft)	Shaft				80 MPH w/1.3 Gust		90 MPH w/1.3 Gust		100 MPH w/1.3 Gust	
	Designation Number	Pole O.D. (in)	Wall Thk. (in)	Structure Weight (lbs)	Max. EPA (fft2)	Max. Weight (lbs)	Max. EPA (fft2)	Max. Weight (lbs)	Max. EPA (fft2)	Max. Weight (lbs)
10	300V100	3.00	0.120	55	10.00	250	7.70	190	6.00	175
	400V100	4.00	0.120	70	19.10	480	15.00	375	12.20	305
	450V100	4.50	0.120	75	24.50	615	19.50	490	15.80	395
12	300V120	3.00	0.120	60	7.70	195	5.80	145	4.40	130
	400V120	4.00	0.120	80	15.00	390	11.80	300	9.50	240
	450V120	4.50	0.120	85	19.80	495	15.70	395	12.70	320
14	300V140	3.00	0.120	70	6.00	175	4.40	130	3.30	90
	400V140	4.00	0.120	90	12.20	305	9.40	250	7.60	195
	450V140	4.50	0.120	95	16.20	405	12.80	320	10.30	260
16	300V160	3.00	0.120	80	4.60	125	3.20	100	2.30	60
	400V160	4.00	0.120	100	9.60	250	7.40	185	5.90	150
	450V160	4.50	0.120	105	13.10	330	10.20	265	8.20	205
18	300V180	3.00	0.120	90	3.40	90	2.30	60	1.40	70
	400V180	4.00	0.120	110	7.60	190	5.70	180	4.50	130
	450V180	4.50	0.120	115	10.50	265	8.20	210	6.50	165
20	300V200	3.00	0.120	100	2.40	100	1.40	75	-	-
	400V200	4.00	0.120	120	6.00	150	4.45	150	3.45	125
	450V200	4.50	0.120	130	8.50	215	6.60	165	5.20	130
	500V200	5.00	0.120	145	11.75	300	9.10	230	7.25	180
25	400V250	4.00	0.120	145	2.85	100	1.95	75	1.35	75
	450V250	4.50	0.120	155	4.80	130	3.60	90	2.70	90
	500V250	5.00	0.120	180	7.25	180	5.50	150	4.25	150
	5006250	5.00	0.180	260	12.10	300	9.40	250	7.45	200
30	450V300	4.50	0.120	185	2.30	80	1.50	75	1.00	60
	500V300	5.00	0.120	210	4.20	150	3.00	125	2.25	100
	5006300	5.00	0.180	305	8.00	200	6.50	160	4.75	125

**DS340 NOTES:**

1. All designs utilize 0.75" x 17" x 3" anchor bolts.
2. All designs are provided with 2.5" x 5" nominal handhole.
3. Structure weight is a nominal value which includes the pole shaft and base plate only.
4. Pole base plate dimensions are the same for all designs. See pole base detail drawing for dimensions.
5. Maximum weight and EPA values are based on side mounting fixtures only. Consult Valmont on loading criteria for pole top mounted luminaires and/or brackets.

