



# Shakespeare

A valmont BRAND

19845 US HIGHWAY 76  
 NEWBERRY, SC 29108  
 P:800.800.9008  
 F:803.276.8940  
 www.skp-cs.com

## 8' DEADEND CROSSARM ASSEMBLY

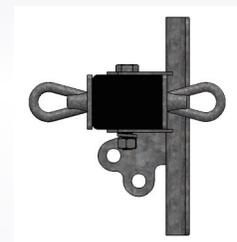
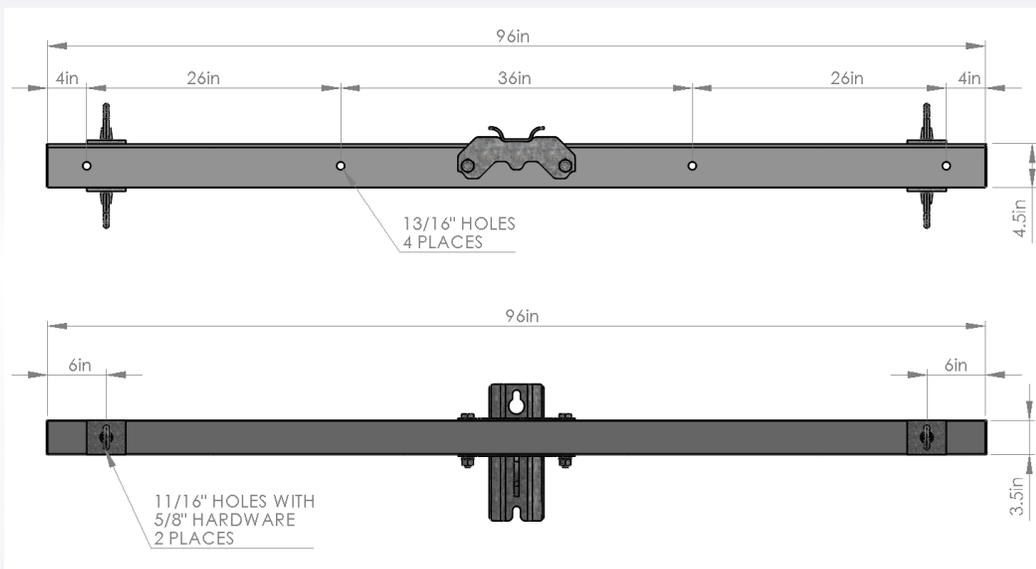
### MODEL—HDB096-150686

(Formerly HDB096-180068 and HDB096G12242PSG)

### *Strong, Durable Composite Deadend Crossarm Assembly*

Engineered for robust performance, Shakespeare fiberglass composite deadend crossarm assemblies serve as the anchoring points along transmission and distribution lines. Shakespeare crossarms are a great choice for use on composite, concrete, steel or wood utility poles. Often, composite crossarms are twice the strength and half the weight of their wood counterparts.

- 3.5" x 4.5" x 96" Deadend Assembly
- Lightweight—Easy to Install
- Environmentally Safe
- Triple UV Protection
- Gray in Color
- Will not Rot, Splinter or Corrode
- Impervious to Insects, Woodpeckers
- Excellent Dielectric Properties
- Excellent Toughness and Impact Strength
- Standard Installation No Special Tools Needed



	ULTIMATE LOAD PER WIRE (LBS)	DEFLECTION PER 1000 (in)	WEIGHT (lbs)	GUY WIRE RATING EACH (lbs)	MOMENT OF INERTIA ABOUT THE NEUTRAL AXIS (in <sup>4</sup> )	SECTION MODULUS ABOUT THE NEUTRAL AXIS (in <sup>3</sup> )	BENDING STRESS (psi)	MOMENT @ FAILURE (in/lbs)	FLEXURAL MODULUS (psi)
2 WIRE RATING	11,600	.33"	66	30,000	14.37	6.39	67,167	429,200	4.55X10 <sup>6</sup>

TESTING PER ASTM D8019-15



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## HDB096-150686 8' DEADEND CROSSARM ASSEMBLY

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### REFERENCE STANDARDS

ASTM A153 (Zinc Coating); ADTM D635 (Burning of Self Supporting Plastics); ASTM G154 (Operating light and water exposure apparatus for non-metallic materials); ASTM D8019-15 (Determining the full section flexural modulus and bending strength of fiber reinforced polymer crossarms assembled with center brackets).

### WEATHER AND UV PROTECTION

UV inhibitors shall be added to the resin system and the outside surface of the crossarm shall be covered with a polyester surface veil to prevent fiber bloom. Also, the arm shall be coated with a minimum of 1.5 mils of UV resistant coating. Crossarms shall be tested for a minimum of 15,000 hrs. on the veil surface and 15,000 hrs. on the coated surface for a combined test of 30,000 hrs. with QUV-A per ASTM G154 with 4 hour light cycle and 4 hour humidity cycle.

### FOAM FILLING

Crossarms shall be foam filled with a closed cell high density foam to prevent water ingress and must completely fill the crossarm and adhere to the inside walls.

### MOUNTING BRACKET OR HARDWARE

Mounting brackets shall be manufactured from hot dipped galvanized steel using 50,000 psi steel. All bolts, nuts and other hardware to be hot dipped galvanized.

### END CAPS

Crossarm shall be sealed with non-removable flush mounted endcaps. External caps are not acceptable.

### MECHANICAL STRENGTHS

The ultimate strengths should be listed per ASTM D8019-15. Compressive strength in both the vertical and horizontal directions shall be a minimum of 500 psi without permanent deformation or damage to the fiber/resin matrix.

### ELECTRICAL CHARACTERISTICS

Fiberglass crossarms shall have an average 60 Hz BIL of no less than 15kV/in and an average wet 60 Hz BIL of no less than 12 kV/in.

### IDENTIFICATION

Each fiberglass crossarm shall be permanently marked with the manufacturer's name or logo and the date of manufacture

### PACKAGING

Fiberglass crossarm shall be shipped fully assembled.

