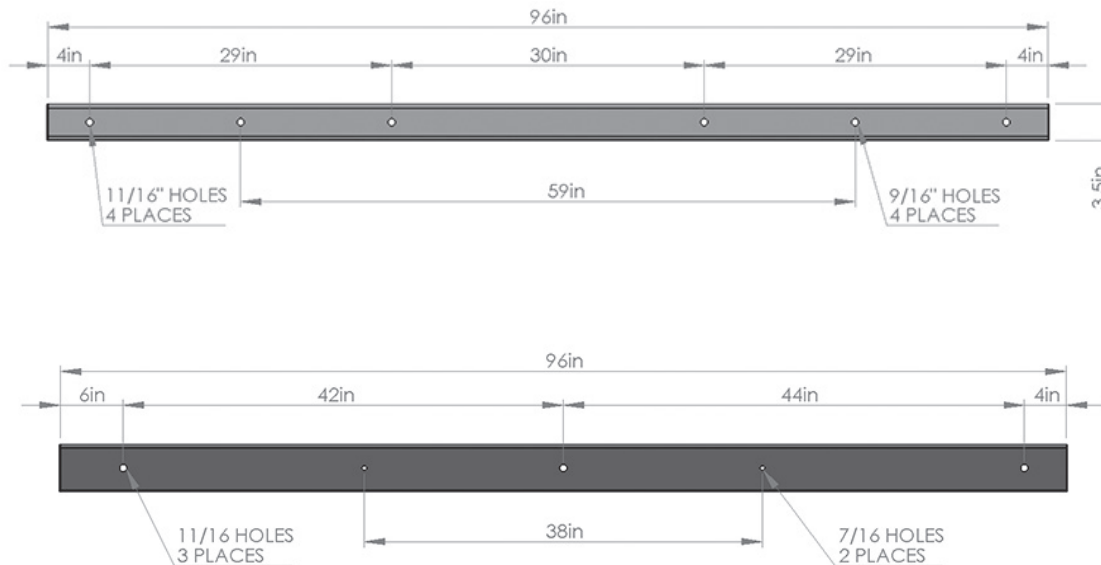


## TT-SERIES TANGENT CROSSARM MODEL - TTN096N00402REA

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

Engineered for robust performance, Shakespeare fiberglass composite tangent crossarms support conductors along transmission and distribution lines. Shakespeare crossarms are a great choice for use on composite, concrete, steel, aluminum or wood utility poles. Often, composite crossarms are twice the strength and half the weight of their wood counterparts.

- 3-1/2" x 4-1/2" x 8' Tangent Assembly
- Lightweight - Easy to Install
- Environmentally Safe
- No Preservatives
- Triple UV Protection
- Grey in Color
- Optimal Deflection Mitigation Design
- 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)	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 RATINGS	7500	0.34"	39	14.37	6.39	45,775	292,500	4.97E + 06

TESTING PER ASTM D8019-15

## TT-SERIES TANGENT CROSSARM - TTN096N00402REA

### REFERENCE STANDARDS

ASTM A153 (Zinc Coating); ASTM 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 or 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 inserts. 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 15 kV/inch and an average wet 60 Hz BIL of no less than 12 kV/inch.

### 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.

