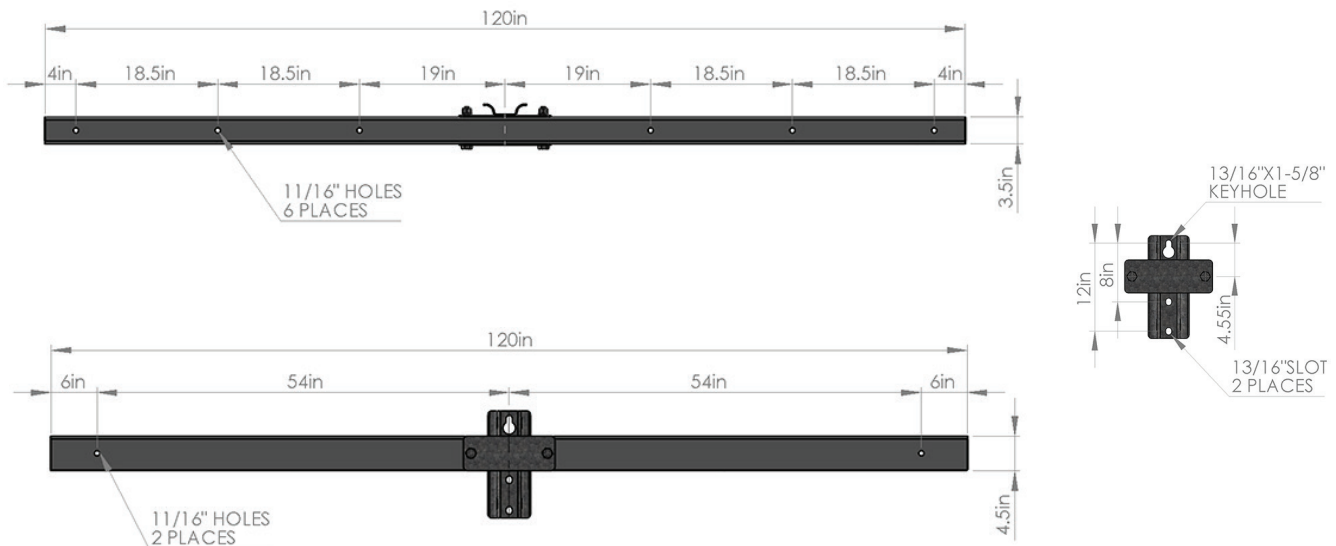


## M-SERIES TANGENT CROSSARM MODEL - MTB120N12602

### *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 10' 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 | 5570                         | .85"                     | 55           | 12.10   | 7.65  | 52,835               | 284,070                   | 5.63E + 06             |

TESTING PER ASTM D8019-15

RUS LISTED

## M-SERIES TANGENT CROSSARM - MTB120N12602

### 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.

