THERMOLIGN® Support

Be sure to read and completely understand this procedure before applying product. Be sure to select the proper PREFORMED™ product before application.

NOMENCLATURE

1. Structural Reinforcing Rods
2. THERMOLIGN Support Rods
3. THERMOLIGN Support Inserts (2)
4. Cap Screws with Lock Washers (2)
5. Keeper (top)
6. Body (bottom)

Inner Rod Application

Step #1 Plumb stringing block and mark conductor at center of sheave. Use a felt marker pen or crayon - do not scratch conductor which may cause a stress riser affecting conductor fatigue life. Suspend the conductor beyond the end of the rods to clear the insulator and stringing block.

NOTE: For extremely corrosive coastal environments, the application of a liberal amount of a conductive oxide inhibitor to the conductor under the AGS inserts will minimize the possibility of corrosive contaminant build-up.

Step #2 Plumb support and mark conductor at center of sheave. Use felt marking pen or lumber crayon; do not scratch conductor. Lift the cable beyond the ends of the rods to allow sufficient clearance for the application.

Step #3 Apply the factory-marked centerline of the first Inner Rod to the center of the cable. Wrap the first rod around the cable.

NOTE: Leave last 10-14” (254-356 mm) on both ends of the Inner Rods loose. This will enable you to check that a rod has not shifted, or “walked,” on the cable, and will allow simplified final make-up.
Step #4  Apply all remaining Inner Rods around the cable. When most of the rods are applied and most gaps are closed, the remaining rods will push between rods already applied to assure a strong, armored reinforcement. (Figure 3) MAKE SURE THAT NO RODS ARE CROSSED AND THAT ALL RODS ARE EVENLY SPACED.

PLP TIP:  Be sure that the alignment of all rod ends is maintained with 2” (51 mm). Remove and reapply any that exceed this limit.

Step #5  To complete application, use both hands to wrap inner rods simultaneously into position. First do one end bundle, then the other end.

NOTE: Inner Rods are not interchangeable with standard Armor Rods or ARMOR-GRIP® Support. Because the sets are factory matched, do not intermix rods from different sets or attempt to apply more rods than supplied.

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Step #6  Align the center marks of the inserts with the centerline of the applied Inner Rods. Be sure to position inserts so that the joining faces are parallel to the ground. Tape in place with a thin layer of tape.

Step #7  Align center mark of one outer rod with center of the inserts. Align the rod so it is parallel with the conductor as shown. DO NOT DISTORT ANY ROD AT ANY TIME.

Step #8  Make sure that the center mark of the outer rod faces up and the curve of the rod lies down into the contour of the inserts as shown.

Step #9  Improper application of outer rod shown below. Do not wrap rods around the inserts as shown.

Step #10  Wrap the rod on the inner rods for two wraps on each side of the inserts in order to keep the rod in place and avoid accidental unwrapping.
Step #11 Apply all remaining rods in the same manner. Space the rods more or less evenly around the insert to avoid a large gap buildup on the insert as the final rods are applied. Make sure that no rods are crossed or distorted.

Step #12 Complete application by wrapping rods into place either individually or as a group (shown below). Make sure that all ends are snapped into place completely around the inner rods.

Step #13 Install Body (bottom unit) on trunnion cap and tighten trunnion cap screw until lock washer is flat or in accordance with the insulator manufacturer's recommendations.

Step #14 Set conductor into Body, aligning the center of the rods with the center of the Body. Install Keeper (top unit) over the rods and insert cap screws and lock washers into the holes. Tighten the cap screw only until lock washer is flat (see insert photo). A relatively low torque value of 10 to 15 ft-lbs is enough to secure the keeper to the housing, and further tightening may cause damage to the unit.

Step #15 Completed application of THERMOLIGN® Support.

Installation Guidelines:

1. This procedure is an aid to installation and does not imply any line design recommendations.

2. The THERMOLIGN Support should be used only on the size and type conductor for which it is designed. Lay direction of the rods and the conductor should be the same: right-hand lay for aluminum based conductors and left-hand lay for strand. Consult PLP for use of THERMOLIGN Support on conductors other than those sizes and types listed in the THERMOLIGN Support catalog section.

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3. The THERMOLIGN® Support is a precision device and should be stored and handled carefully to prevent damage. Special care should be given to the THERMOLIGN Support rods to avoid distortion and damage.

4. THERMOLIGN Support rods are not interchangeable with either standard Armor Rods or ARMOR-GRIP® Support rods.

5. On certain sizes of THERMOLIGN Support there will appear to be enough gap between the rods to insert and extra rod, but all THERMOLIGN Support rods are packed in sets. Apply only the number of rods in the set. In case of doubt, consult the THERMOLIGN Support catalog section for the correct number of rods per set. **DO NOT ADD EXTRA RODS.**

6. These same procedures should be followed for application on vertical or horizontal line post insulators.

7. A maximum line angle of 30° is recommended for use with a single THERMOLIGN® Support unit. A special double THERMOLIGN Support unit is available for line angles between 31° and 60°. Consult PLP for application and installation information for Double THERMOLIGN Support.

8. The THERMOLIGN Support cap screws should be tightened only until the lock washer is flat. A relatively low torque value of 10 to 15 ft-lbs is enough to secure the Keeper to the housing. Further tightening may cause damage to the unit.

9. Special Note:

Each component of the THERMOLIGN Support assembly is identified by size for the conductor diameter range for which it is designed. These identifications are located on each component in the following location:

- **Body:** Cast into the inside edge of the lip
- **Keeper:** Cast into the outside surface on the top
- **Insert:** Molded on the inside of each insert
- **Rods:** Listed on the I.D. tag.

**CAUTION:**

Each Housing Unit (Keeper and Body) has a wide conductor range and is an overlapping design that incorporates several different pairs of inserts and sets of rods. Each pair of inserts has a narrow conductor range and will accommodate a few different sets of rods. Each set of rods has a very narrow conductor range and is designed for use only on the size conductor listed on the I.D. tag. **Be sure to select the correct combination of Rods, Inserts, Body and Keeper before installation.**