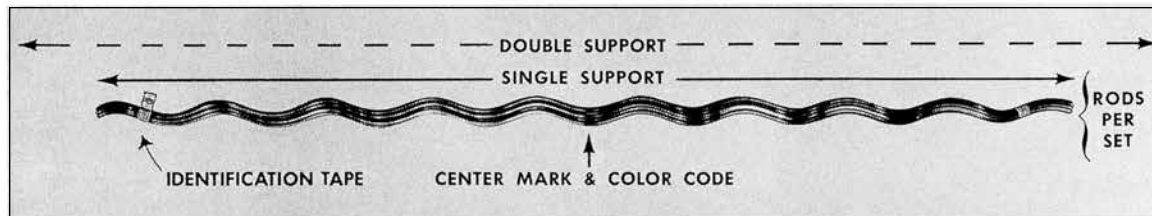


Armor Rods

NOMENCLATURE



Single Support and Double Support Length: Identified by “S” and “D” appearing in the length column on the catalog page. Should the maximum distance between tied supports exceed 12 inches on double crossarm construction, consult PLP.

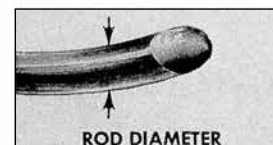
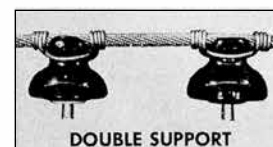
Rod Diameter: Added to conductor O.D., assists in arriving at applied overall diameter.

Rods Per Set: Indicate the proper number of rods for each application.

Center Mark: Establishes recommended alignment of rods during application.

Color Code and Length: Assist in identification of conductor size, corresponding to tabular information appearing on catalog page.

Identification Tape: Shows catalog number, nominal sizes.



Thermal Rating (Continuous)
Within a high temperature
Suspension Clamp 250°C
ACSS Repair 250°C
ACSR Repair 125°C

GENERAL RECOMMENDATIONS

PROTECTION. PREFORMED™ Armor Rods are intended to protect against bending, compression, abrasion, arc-over, and to provide repair. The degree of protection needed on a specific line depends upon a number of factors such as line design, temperature, tension, exposure to wind flow, and vibration history on similar construction in the same area. As a general guide, the following recommendations may be adopted to the specific conditions.

Armor Rods are recommended as minimum protection for clamp-type supports or suspensions.

Line Guards are recommended as minimum protection for hand-tied spans.

The use of supplementary damping devices, such as Spiral Vibration Dampers, should be considered when conductor vibration is present or expected.

PLP® Factory Formed Ties are recommended as being superior to armor-hand tie combinations in providing protection from abrasion, and equivalent in providing protection from vibration fatigue.

ARMOR-GRIP® Suspension is recommended as being superior to armor-clamp combinations in providing protection from bending stress, compression stress and abrasion.

ARMOR RODS RESTORATIVE-REPAIR. Armor Rods may be used to restore full conductance and strength to ACSR and aluminum conductors where damage does not exceed approximately 50 percent of the outer strand layer. Consult Factory for repair capability of specific strandings.

For standard catalog numbers damage should be located at the “point of support” or within the “midspan area”. For damage 6” to 36” (152 to 914 mm) from the support point contact PLP for recommendations.

NOTE: When Armor Rods are used to repair damaged aluminum-based conductors, the following application steps are required for optimum **electrical** repair:

- Step 1:** Thoroughly wire-brush damaged conductor for the full length of the Armor Rods to be applied.
- Step 2:** Apply a gritted inhibitor to the full length of this area before applying the Armor Rods.



Armor Rods

GENERAL RECOMMENDATIONS CONTD.

TAPPING. Tapping over applied aluminum *Armor Rods* is permissible. Where it is known that tapping clamps will be installed over *Armor Rods*, it is recommended that the conductor be thoroughly wire brushed clean, then an inhibitor be applied.

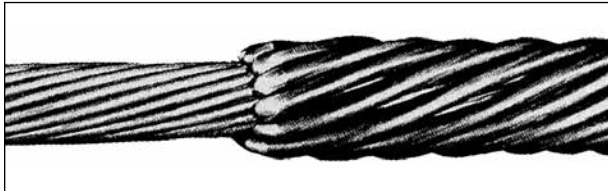
APPLICATION-INSPECTION. After application of the correct number of rods per set, a slight gap between rods should be present. Consult the General Information Section for detailed explanation.

Apply no more than one-half the number of rods per set at a time on smaller sizes. On conductors 4/0 and larger, do not attempt to apply more than 4 rods at a time. The alignment of the ends of the rods should be maintained within 2 inches for voltages of 230 KV and lower.

MATERIAL SELECTION. For copper or Copperweld® conductor, Copperweld® or Phosphor Bronze, Armor Rods are recommended when electrical requirements such as tapping or repair are not involved.

DESIGN MODIFICATION

Armor Rods: PARROT-BILL® Ends



To meet the corona onset and RIV requirements for most extra-high-voltage applications, PARROT-BILL® Ends are to be used instead of the standard ball-end rods. Consult the Factory for an engineering recommendation.

O.D. CALCULATIONS

Applied overall diameter computed as follows:

The rod diameter can be obtained from the catalog page tables. Conductor/Strand O.D. can be found in the Conductor Chart, General Information Section.

Rod Diam.,	.167" x 2 =	.334"
Conductor Diam.		+ .398"
Total Applied O.D.		.732"

SAFETY CONSIDERATIONS

1. This product is intended for a single (one-time) use and for the specified application. CAUTION: DO NOT REUSE OR MODIFY THIS PRODUCT UNDER ANY CIRCUMSTANCES.
2. This product is intended for use by trained craftspeople only. This product SHOULD NOT BE USED by anyone who is not familiar with and trained in the use of it.
3. When working in the area of energized lines with this product, EXTRA CARE should be taken to prevent accidental electrical contact.
4. For PROPER PERFORMANCE AND PERSONAL SAFETY be sure to select the proper size PREFORMED™ Armor Rods before application.
5. PREFORMED Armor Rods are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



Armor Rods: Galvanized Steel

**For use on:
Steel Reinforced Copper Conductors with
Right-Hand Lay**

Catalog Number	Diameter Range (Inches)		Nominal Conductor Size	Units	Wt/lbs	Length (Inches)	Rod Diameter (Inches)	Rods Per Set	Color Code
	Min.	Max.		Per Carton					
AR-1154 AR-1354	.244	.259	6/1 #4-7/1	50 50	38 48	40 (S) 52 (D)	.070	12	Orange
AR-1158 AR-1358	.309	.326	6/1 #2-7/1	50 50	60 75	44 (S) 56 (D)	.086	12	Red
AR-1160 AR-1360	.347	.373	#1-6/1	50 50	70 88	48 (S) 60 (D)	.086	13	Black
AR-1162 AR-1362	.390	.413	1/0-6/1	25 25	50 62	52 (S) 64 (D)	.100	13	Yellow
AR-1164 AR-1364	.437	.463	2/0-6/1	25 25	70 84	54 (S) 66 (D)	.119	12	Blue
AR-1166 AR-1366	.491	.521	3/0-6/1	20 20	62 75	56 (S) 68 (D)	.119	13	Orange
AR-1168 AR-1368	.552	.585	4/0-6/1	15 15	66 80	60 (S) 72 (D)	.138	13	Red

Right-hand lay standard

**For use on:
Galvanized Steel Strand
with Left-Hand Lay**

Catalog Number	Diameter Range (Inches)		Nominal Conductor Size	Units	Wt/lbs	Length (Inches)	Rod Diameter (Inches)	Rods Per Set	Color Code
	Min.	Max.		Per Carton					
AR-1123	.229	.243	1/4-7W	50	37	40	.086	10	Black
AR-1124	.244	.259	1/4-3W	50	37	40	.086	10	Yellow
AR-1128	.309	.326	5/16-3W 5/16-7W HS, & EHS	50	60	44	.100	11	Black
AR-1130	.347	.373	3W 3/8-7W	50	70	48	.100	12	Orange
AR-1133	.414	.436	7/16-7W	20	52	52	.119	12	Green
AR-3139	.491	.521	1/2-7W 19W	20	62	56	.138	12	Blue

Left-hand lay standard

EXPLANATORY NOTES:

- (1) Nominal Conductor size indicates one of various conductors within each range.
- (2) Single Support Length (S) and Double Support Length (D) are described on the first page of the Armor Rod section.
- (3) Galvanized Steel Armor Rods may be suitable for application on materials other than Galvanized Steel. Consult the Factory for specific information.